City of Alameda

Pedestrian Plan

(component of the City's Transportation Master Plan)

January 2009

Prepared by

City of Alameda Public Works Department

Funded by

Alameda County Transportation Improvement Authority (ACTIA)

Acknowledgements – Pedestrian Task Force

Nancy Gormley	Housing Commission
John Knox White	Transportation Commission
Rebecca Kohlstrand Parsons	Planning Board
Michael Krueger	Transportation Commission
Audrey Lord-Hausman	Commission on Disability Issues
Mike McMahon	Board of Education
Gail Wetzork	Economic Development Commission
Bill Sonneman	Recreation and Parks Commission

Table of Contents

List of Figures

List of Tables

Executive Summary

Introduction

The purpose of the Pedestrian Plan is to provide guidance to City staff, residents, developers and decision makers on how to improve pedestrian access in the City of Alameda. The Pedestrian Plan covers streets and trails within the public right-of-way for pedestrian improvements. The purpose of an accompanying document, the Pedestrian Design Guidelines, is to provide recommendations to City staff, residents, developers and decision makers on building pedestrian facilities. The City of Alameda's Pedestrian Plan will be a component of a comprehensive citywide Transportation Master Plan.

The Plan is divided into the following chapters:

- **Introduction**: Covers the purpose of the Pedestrian Plan, the study area and related plans, projects and programs.
- **Vision, Goals and Policies**: Discusses an overall vision for the Pedestrian Plan, and then provides more details as to how the vision will be achieved through goals, objectives, guiding policies and implementing policies or action items.
- **Outreach**: Describes the outreach efforts that were used.
- **Existing Conditions**: Provides an overview of the pedestrian environment in the City of Alameda.
- **Implementation Plan**: Describes the implementation process, the prioritization criteria, pedestrian project categories and available funding sources.

Vision, Goals and Policies

The overarching vision statement for the Pedestrian Plan is as follows:

> Plan, construct and adequately maintain a functional, comfortable and convenient pedestrian network throughout the City of Alameda that addresses pedestrians' mobility needs in a manner that enhances community identity and livability.

The goals and objectives were recommended by the Transportation Commission in February 2005 as part of the Transportation Master Plan (TMP) effort. A number of more specific, pedestrian-related guiding policies were recommended in May 2006. The plan lists these guiding policies along with implementing policies to help ensure the guiding policies will be achieved.

Outreach

Public participation for the Pedestrian Plan study included the following outreach efforts:

- **Pedestrian Task Force Meetings**: Were open to the public and were comprised of representatives from various commissions and boards.

- **Public Workshop**: Allowed for public review of the Draft Pedestrian Plan.
- **Public Hearings and Other Meetings**: City staff prepared for and presented the Draft Pedestrian Plan at the City's commission and board meetings.
- **Website**: A Pedestrian Plan web page was developed and can be accessed from the Transportation Master Plan web page: http://www.ci.alameda.ca.us/tmp/pedestrian_plan.html
- **Pedestrian and Bicyclist Public Input Survey**: The purpose of the public input survey was to identify pedestrian and bicycling infrastructure needs.

Existing Conditions

Existing conditions highlight pedestrian education programs, infrastructure, demand and pedestrian-involved collisions. This information was used to help determine and rank pedestrian enhancement projects.

Pedestrian Education Programs

The City of Alameda as well as Alameda Walks and Pedestrian-Friendly Alameda sponsored several pedestrian education programs. The Public Works Department has developed a school safety pamphlet. In addition, the Public Works Department and the Police Department staff in concert with the·Collaborative for Children, Youth and their Families and Pedestrian Friendly Alameda provide educational materials and actively participate in Walk and Roll to School Day (early October of each year) where Safe Routes to School maps, Walking School Buses and Bike Trains are highlighted. Alameda Walks also sponsors one-hour Saturday walks to help encourage exercise and community awareness.

Pedestrian Infrastructure

The existing pedestrian facilities in the City of Alameda include island access, lighting, public walkways, safe routes to schools, sidewalks, street crossings and trails.

- **Island Access**: Alameda, an island city, is presently accessible along the Oakland/Alameda estuary by three drawbridges and the Posey Tube under-crossing and at the San Leandro Channel by two bridges – one for bicyclists/pedestrians and one for motor vehicles and pedestrians.
- **Lighting**: Alameda Power & Telecom (AP&T), a department of the City of Alameda, is the municipal utility in charge of the 6,360 streetlights. AP&T has a program to replace deteriorated streetlights. For new developments, developers are required to install the streetlights according to AP&T standards.
- **Public Walkways**: Public walkways, which total 25 in the City of Alameda, are under the jurisdiction of the City of Alameda and consist of pedestrian walkways between properties.
- **Safe Routes to Schools**: The Public Works and Police Departments work with the Alameda Unified School District to formalize Safe Routes to School maps for the District's school children. The Police Department manages the City's crossing guard program, which covers 10 schools and 16 intersections.

- **Sidewalks**: The City estimates that a total of 260 miles of sidewalks exist in the City of Alameda.
- **Street Crossings**: Street crossings in the City of Alameda have a variety of traffic controls and pedestrian access enhancements that help provide a more comfortable walking environment including: accessible pedestrian signals, curb bulb-outs or extensions, crosswalks, in-pavement crosswalk lights, in-street pedestrian crossing signs, midblock crossings and pedestrian countdown signals.
- **Trails**: Trails that exist within the street right-of-way are maintained by the City of Alameda. Trails that are separate from vehicular facilities such as shoreline paths and the Bay Trail are maintained by East Bay Regional Park District (EBRPD), adjacent property owners or the City of Alameda.

Pedestrian Demand

The major factors that influence pedestrian demand include:

- Adjacent land uses that generate pedestrian activity
- Community residents who are more apt to walk such as children and lower-income individuals
- Attractiveness and comfort level of walking
- Availability of and access to transit mode

Information on the travel characteristics of pedestrians originates from the US Census journey to work, AC Transit bus stop boardings and alightings and pedestrian counts. This information helps the City of Alameda better understand how and where to provide adequate pedestrian infrastructure. Some key pedestrian demand data from the 2000 U.S. Census include:

- About one quarter of City of Alameda's employed residents work within the City of Alameda, and another one quarter work in Oakland. San Francisco commuters represent almost 20 percent of the employed population.
- Commuters who walk to/from work total almost 3 percent.
- Transit trips, which total about 16 percent, involve walking so a combined transit and walk percent is a more accurate account of commuters traveling by foot.

Pedestrian-involved Collisions

Pedestrian-involved motor vehicle collisions have remained relatively stable in the City of Alameda from 2002 to 2007. The average number of pedestrian injury collisions is 35 per year; and the average number of reported non-injury pedestrian collisions is over 5 per year. Pedestrian-involved motor vehicle collisions equaled five percent of total collisions. These data are obtained from the City of Alameda Police Department.

Implementation Plan

The Implementation Plan section focuses on describing the proposed pedestrian enhancement projects and the process that was used to recommend them.

Primary Pedestrian Network

A primary pedestrian network was created to help focus the proposed projects on the streets with the highest potential pedestrian demand. The network was determined using geographic information system (GIS) tools, street functional classification system, bus routes, land uses, pedestrian count data and pedestrian-involved collision data.

Prioritization Criteria

To balance the demand for pedestrian improvement projects with available resources, a prioritization process was established. Prioritization criteria were used to screen and rank pedestrian projects. Geographic equity and the primary pedestrian network also were considered in deciding which projects were included as high priority. The Pedestrian Plan's screening and evaluation criteria take into account the Transportation Element's four policy goals: Circulation, Livability, Transportation Choice and Implementation.

Pedestrian Projects

The Pedestrian Plan groups projects into three priority levels – high, medium and remaining. The time horizon for the Pedestrian Plan is up to ten years. An explanation of the three priority levels is as follows:

- **High-priority projects**: Are expected to be funded and completed within five to ten years given the current levels of pedestrian-related funding.
- **Medium-priority projects**: Are expected to be funded as early as five years from plan adoption. To fund the medium-priority projects, the City plans to aggressively pursue nontraditional funding sources.
- **Low-priority projects**: Are considered beyond the scope of the Pedestrian Plan. Insufficient funds do not make it possible to pursue these lower ranking projects in the Plan's time horizon.

The high-priority pedestrian projects and programs are estimated to cost $5.2 million; medium-priority projects are estimated to cost $75.1 million; the low-priority pedestrian projects are estimated to cost an additional $13.6 million (Table 1). More details about the projects and programs are shown below (Figures 1 thru 6).

Table 1: Pedestrian Plan Project and Program Cost Summary

Project/Program Category	High-priority Projects	Medium-priority Projects	Low-priority Projects
Expected Time Horizon	5 to 10 years	5+ years	beyond plan
Education Programs	$160,000	NA	NA
Island Access (includes new estuary crossing)	$1,000,000	$58,000,000	$75,000
Pedestrian Districts/Corridors	$500,000	$1,200,000	$3,630,000
Public Walkways	$375,000	NA	NA
Safe Routes to Schools	$600,000	NA	NA
Sidewalk Installations and Maintenance	$1,333,000	$585,000	$130,000
Street Crossings	$1,114,000	$4,107,000	$8,710,000
Trails (includes the Cross Alameda Trail)	$100,000	$11,242,000	$1,079,000
Total	**$5,182,000**	**$75,100,000**	**$13,624,000**

Funding

Over the next 10 years, the City of Alameda could expect to obtain an estimated $5 million from dedicated funding sources such as Measure B and Transportation Development Act monies and from the most common competitive sources such as Safe Routes to School, Safe Routes to Transit and Bay Trail grants. Additionally, developers will provide funding for pedestrian infrastructure in new developments such as Alameda Point and redevelopment projects. The City will aggressively pursue additional and nontraditional funding sources to fund the remainder of the plan's projects and programs. This analysis is consistent with the one used in the Alameda Countywide Strategic Pedestrian Plan (2006).

Figure 1: High-priority Pedestrian Projects (Main Island - West)

Figure 2: High-priority Pedestrian Projects (Main Island - East)

Figure 3: High-priority Pedestrian Projects (Bay Farm Island)

Figure 4: Medium priority Pedestrian Projects (Main Island - West)

Figure 5: Medium-priority Pedestrian Projects (Main Island - East)

Figure 6: Medium-priority Pedestrian Projects (Bay Farm Island)

Introduction

The introduction covers the purpose of the Pedestrian Plan, the study area and related plans, projects and programs.

Purpose

Pedestrian Plan

The purpose of the Pedestrian Plan is to provide guidance to City staff, residents, developers and decision makers on how to improve pedestrian access in the City of Alameda. The City of Alameda's Pedestrian Plan is a component of a comprehensive citywide Transportation Master Plan. The Transportation Commission is the presiding commission for the Pedestrian Plan's creation. The Pedestrian Task Force was established by the Transportation Commission to help guide the development of the Plan.

Pedestrian Design Guidelines

The purpose of an accompanying document, the Pedestrian Design Guidelines, is to provide recommendations to City staff, residents, developers and decision makers on how to build pedestrian facilities. The design guidelines includes illustrations and descriptions of measures as well as their applicability, advantages and disadvantages, and planning level cost estimates.

Public Health and Physical Activity

Physical inactivity plays a significant role in exacerbating public health issues such as obesity, diabetes, heart disease and stroke. Furthermore, automobile emissions contribute to air pollution and associated illnesses such as asthma. Increased physical activity through walking and other exercise could help improve overall health of the City's residents. Some key health statistics are as follows:

California

- According to a 2005 California Center for Physical Activity study, the cost of physical inactivity in California totals $16 billion annually, which includes workers compensations costs, worker productivity loses and medical care.

Alameda County

- In 2005, 50 percent of Alameda County adults were considered overweight or obese.
- A California Department of Education fitness gram data study found that out of the three grades tested in Alameda County, 68 percent were not considered physically fit. [1]

[1] Alameda County Health Status Report 2006, Alameda County Public Health Department.

City of Alameda

- The leading causes of death are heart disease (32 percent), cancer (23.2 percent), stroke (6.8 percent), chronic lower respiratory diseases (4.6 percent) and influenza and pneumonia (3.8 percent).[2]
- In the 2005-2006 school year, the proportion of children considered overweight in the City of Alameda totaled 22.4 percent, which is lower than the Alameda County average of 30.5 percent. The percent of 5th graders in the City who are overweight total 18.2 percent; the percent of 7th graders total 25.3 percent; and the percent of 9th graders total 23.6 percent. [3]
- Between 2003 and 2005, there were almost 600 children under 18 years old hospitalized for asthma per 100,000 children in Alameda, which is the third highest ranked City in Alameda County after Oakland and Berkeley.[4]
- Between 2002 and 2004, the death rate for coronary heart disease was 185 per 100,000 population in the City, which is above the California Health Department objective of 166 or fewer per 100,000 population and the second highest in the County after the unincorporated area of Cherryland.

Survey Responses – Pedestrian-Friendly City Requested

Alameda residents want the City to be more pedestrian friendly as shown in the public input surveys conducted for the Pedestrian Plan and the Transportation Master Plan. Out of the 250 respondents of the Pedestrian Plan's 2007 public input survey, almost one-half stated that intersection improvements would encourage them to walk more frequently and almost one-third stated that pedestrian districts/corridors and sidewalk repairs would encourage them to walk more frequently.

Over one-half of the Economic Development Strategic Plan (EDSP) survey respondents stated that a top priority of the Transportation Master Plan (TMP) should be to improve pedestrian and bicycle connectivity between Alameda and Oakland. Almost two-thirds of the EDSP survey respondents stated that a top priority of the TMP should be to complete a public access trail for the shoreline. This survey was conducted in January/February 2007 by Strategy Research Institute.

In 2004, the Transportation Master Plan mail-in survey revealed that although City residents acknowledge that driving is the primary mode of transportation, they want to encourage walking to local destinations and improve pedestrian access (Table 2). Out of the 300 respondents who replied, 93 percent stated that walking should be encouraged for local trips and 94 percent stated that Alameda as a walkable city is important to the respondent.

[2] Alameda County Public Health Department, Community, Assessment, Planning and Education Unit, with data from Alameda County vital statistics files 2002-2004, Census 2000, Department of Finance.
[3] California Fitness Gram, California Department of Education, 2005-2006.
[4] Alameda County Public Health Department, Community, Assessment, Planning and Education Unit, with data from OSHPD hospitalization files 2003-2005, Census 2000, Department of Finance.

Table 2: Transportation Master Plan 2004 Survey Responses

Question	Agree	Disagree	No Opinion / No Response
Many types of transportation – motor vehicles, transit, bicycles, and pedestrians – use the City's street network. In planning for Alameda's future, how do you feel about each of the following statements?			
a. Reducing driving time to destinations within and outside Alameda should be the highest priority for our transportation system.	56%	35%	9%
b. Driving should be recognized as the primary mode of transportation in Alameda, and the City should ensure that transit, bicycling, and ***walking*** are safe and convenient options.	*79%*	*18%*	*3%*
c. Driving alone (single occupancy vehicles) should be discouraged in order to reduce traffic volumes.	43%	49%	8%
d. ***Walking*** to local destinations should be encouraged.	*93%*	*6%*	*1%*
e. Biking as a form of transportation should be encouraged for short and medium range trips (5 miles or less).	*84%*	*11%*	*5%*
f. Use of ferries, buses and BART should be encouraged.	*95%*	*3%*	*2%*
g. The City should pursue light rail as a transit option to serve destinations within Alameda and Oakland, including BART.	55%	31%	14%
Alameda is attractive to many residents because it is a walkable city that has a moderate climate and is flat, with corner stores, and neighborhood schools.			
a. The fact that Alameda is a ***walkable*** city is important to me.	94%	2%	4%
b. More should be done to improve the safety of ***pedestrians***.	73%	17%	10%
c. Traffic congestion should be relieved even if it means that ***pedestrians*** have to wait longer to cross the street.	56%	33%	11%

Source: Transportation Master Plan Mail-in Survey, 2004.

Plan Area

The Plan area is the City of Alameda, which is an island community of 12.4 square miles (Figures 7 and 8). Note that pedestrian improvement projects in Alameda Point and Alameda Landing will be considered as part of this area's redevelopment process. The City is separated by the Oakland Estuary from the City of Oakland, and includes part of a peninsula called Bay Farm Island, which is connected to the main island by a bicycle/pedestrian bridge and a vehicular bridge over the San Leandro Channel. According to the 2000 US Census, the population of Alameda is 71,182. The number of households totals 30,226, and the average household size is 2.35 persons.

The City of Alameda is primarily a residential community of tree-lined streets. Commercial areas are located primarily along Park and Webster Streets, the former passenger rail stations and the shopping centers: Alameda Towne Centre, Bridgeside and Harbor Bay Landing. The industrial areas are located primarily on the north side and at Alameda Point. Other major destinations in the City include the Robert Crown Memorial State Beach, the College of Alameda, the Chuck Corica Memorial Golf Course and the

shoreline trails that line the San Francisco Bay, which are part of the San Francisco Bay Trail.

The main island's historic street grid system allows travelers to choose multiple paths for most trips on the island, which in turn disperses the traffic. Bay Farm Island's street system consists of tree-lined arterials and collectors that connect to local streets, which include cul-de-sacs. AC Transit is the main bus system that serves Alameda with transbay buses (O, OX and W), school buses (631 and 632) and local lines (19, 50, 51/851 and 63). Ferries operate from both the main island's Main Street Terminal and Bay Farm Island's Harbor Bay Terminal. Other ways on/off the island consist of the Webster and Posey Tubes in the west end and three bridges on the east end: Park Street, Miller-Sweeney and High Street. Bridges also connect the main island with Bay Farm Island including a bridge specifically for pedestrians and bicyclists.

Related Plans, Projects and Programs

Plans, projects and programs related to the Pedestrian Plan were assessed to ensure proper coordination and consistency. Pedestrian Plans from other jurisdictions also were consulted to ensure that best practices are adopted.

The Pedestrian Plan covers streets and trails within the public right-of-way for pedestrian improvements. For projects that are related to yet are not covered in the Pedestrian Plan, refer to the following plans or agencies:

- Accessibility projects: ADA Transition Plan (update in progress)
- Bicycle infrastructure projects: Bicycle Master Plan (update in progress)
- Street tree projects: Master Tree Plan (update in progress)
- Transit projects: Transit Plan (update in future)

Figure 7: Pedestrian Plan Area – City of Alameda – Main Island

Figure 8: Pedestrian Plan Area – City of Alameda – Bay Farm

Vision, Goals and Policies

This section discusses an overall vision for the Pedestrian Plan, and then provides more details as to how the vision will be achieved through goals, objectives, guiding policies and implementing policies or action items.

Pedestrian Plan Vision Statement

The overarching vision statement for the Pedestrian Plan is as follows:

> Plan, construct and adequately maintain a functional, accessible and convenient pedestrian network throughout the City of Alameda that addresses pedestrians' mobility needs in a manner that enhances community identity and livability.

Goals, Guiding Policies and Implementing Policies

Transportation goals and objectives were recommended by the Transportation Commission in February 2005 as part of the Transportation Master Plan (TMP) effort. A number of more specific, pedestrian-related guiding policies were recommended in May 2006. Table 3 lists these policies along with implementing policies that help ensure the guiding policies will be achieved. The City's Local Action Plan for Climate Protection (February 2008) supports the TMP pedestrian-related goals, objectives and policies in that it lists as a high-priority initiative "Develop and fund alternative transportation strategies in the City s budget."

Table 3: TMP's Recommended Pedestrian-related Goals, Objectives and Policies

Policy #	TMP's Goal, Objective or Guiding Policy	Implementing Policy (e.g., Action Item)
4.1 Circulation Goal		
Objective 4.1.1: Provide for the safe and efficient movement of people, goods and services.		
4.1.1.a	Continue to identify and improve **pedestrian crossings** in areas of high pedestrian use where safety is an issue.	Pedestrian Plan Project Category: Street Crossings
4.1.1.b	Identify and mitigate impediments and obstacles to walking to **locations that attract pedestrians**, such as business districts, schools, transit stops, recreational facilities, and senior facilities.	Pedestrian Plan Project Category: Pedestrian Districts/Corridors
	Develop needed connections that **maximize direct access** for walking. Examples include legs of intersections where crossing is currently prohibited	Pedestrian Plan Project Category: Street Crossings, Sidewalk Installations
	Modify **signal timing** as required to provide pedestrians with sufficient crossing time and minimize pedestrian/vehicle conflicts.	Pedestrian Plan Project Category: Street Crossings

Policy #	TMP's Goal, Objective or Guiding Policy	Implementing Policy (e.g., Action Item)
	Identify locations where **lighting** should be enhanced to provide better visibility and a more comfortable nighttime environment for pedestrians.	Coordinate with Alameda Power & Telecom (AP&T)
4.1.1.f	Upgrade existing **pedestrian signals** by adding countdown, audible, and tactile/ vibrational signals. New signals should include these as standard features.	Pedestrian Plan Project Category: Street Crossings Incorporate into the Pedestrian Plan's Design Guidelines
4.1.1.i	Design transportation facilities to accommodate **current and anticipated transportation use**.	Pedestrian Plan Project Category: Pedestrian Districts/Corridors, Sidewalk Installations
4.1.1.k	Minimize the creation of improvements that would physically interrupt existing **grid systems**, such as cul-de-sacs or diverters.	Incorporate into the Pedestrian Plan's Design Guidelines
4.1.1.m	Develop a set of design criteria for safe passage of transit users, bicyclists, pedestrians, and people with disabilities through or around **construction sites**.	Incorporate into the Pedestrian Plan's Design Guidelines
4.1.1.n	Develop **criteria** for prioritizing specific transportation projects or types of projects to make the most effective use of resources.	Develop Prioritization Criteria as part of Pedestrian Plan (See Implementation Plan)
Objective 4.1.2: Protect and enhance the service level of the transportation system.		
4.1.2.a	Develop **multimodal level of service** (LOS) standards that development will be required to maintain by encouraging the use of non-automotive modes.	Coordinate with the proposed Transportation Element multimodal Threshold of Significance efforts
4.1.2.b	Monitor **the multimodal level of service** at major intersections to identify priorities for improvement.	Coordinate with the proposed Transportation Element multimodal Threshold of Significance efforts
4.1.2.e	Work with regional, state, and federal agencies to develop plans for design, phasing, funding, and construction of facilities to enhance **multimodal cross-estuary travel**, such as increased access to Interstate 880 (bridge, tunnel or other vehicle connection) bike/pedestrian shuttles or high occupancy vehicle-only crossing (e.g. transit or carpool lane) to Oakland.	Pedestrian Plan Project Category: Island Access
Objective 4.1.3: Preserve mobility for emergency response vehicles and maintain emergency access to people and property.		
4.1.3.c	Develop a network of **emergency response routes**, balancing emergency service needs with vehicular, pedestrian and bicyclist safety consistent with the adopted street classification system.	Coordinate Pedestrian Plan projects with City Police and Fire Departments

Policy #	TMP's Goal, Objective or Guiding Policy	Implementing Policy (e.g., Action Item)
Objective 4.1.4: Encourage, promote and facilitate proactive citizen participation to determine the long-term mobility needs of our community.		
4.1.4.a	Maintain a **public forum**, such as the Transportation Commission, to facilitate citizen input on transportation policy.	Provide Transportation Commission with ongoing opportunities to review Pedestrian Plan implementation efforts
4.1.4.b	Assist in efforts to facilitate **dialogue** between City departments, residents, and neighborhood organizations.	Conduct Pedestrian Plan survey as part of Pedestrian Plan; Participate in Board, Commission and public workshop meetings; Provide information on web site
4.2 Livability Goal		
Objective 4.2.1: Design and maintain transportation facilities to be compatible with adjacent land uses.		
4.2.1.a	**Buffer land uses** adjacent to high volume streets without the use of soundwalls. Where sound walls or buffers exist, breaks for pedestrian access should be provided wherever pedestrian routes would normally occur.	Incorporate into the Pedestrian Plan's Design Guidelines
4.2.1.b	Include **landscaping** in transportation projects to enhance the overall visual appearance of the facility.	Incorporate into the Pedestrian Plan's Design Guidelines Coordinate with the City's Master Street Tree Plan update
Objective 4.2.2: Plan, develop and implement a transportation system that enhances the livability of our residential neighborhoods.		
4.2.2.c	Support **programs** that increase the number of people transported without increasing the number of vehicles.	Implement the Pedestrian Plan
4.2.2.f	Encourage the inclusion of **amenities**, such as benches or art, in pedestrian improvement projects.	Incorporate into the Pedestrian Plan's Design Guidelines
Objective 4.2.3: Plan, develop and implement a transportation system that protects and enhances air and water quality, protects and enhances views and access to the water, and minimizes noise impacts on residential areas.		
4.2.3.c	Identify and pursue opportunities to enhance **shoreline access** for pedestrians.	Incorporate into the Pedestrian Plan's Design Guidelines
Objective 4.2.4: Develop a Transportation plan based on existing and projected land uses and plans. Encourage land use decisions that facilitate implementation of this transportation system.		
4.2.4.a	Encourage **development patterns and land uses** that promote the use of alternate modes and reduce the rate of growth in region-wide vehicle miles traveled.	Use Pedestrian Plan's Design Guidelines in the City's development review process

Policy #	TMP's Goal, Objective or Guiding Policy	Implementing Policy (e.g., Action Item)
4.3 Transportation Choice Goal		
Objective 4.3.2: Enhance opportunities for pedestrian access and movement by developing, promoting, and maintaining pedestrian networks and environments.		
4.3.2.a	Include improvements to **pedestrian facilities** as part of City transportation improvement projects (streets, bridges, etc.).	Use the Pedestrian Plan's Design Guidelines in the Citywide project approval process
4.3.2.b	Review City sidewalk design standards to ensure continued compliance with requirements of the **Americans with Disabilities Act** and to better serve pedestrian needs. Evaluate existing sidewalks for compliance with ADA requirements, and to identify possible improvements.	Coordinate Pedestrian Plan projects with the City's ADA Transition Plan update
4.3.2.c	Identify **gaps and deficiencies** in the City's existing pedestrian network and develop strategies to rectify them. • Wherever possible, establish facilities on all **natural pedestrian routes** (both sides of streets and drives, along visually direct lines to major destinations, etc.). • Establish a program to plan for **future pedestrian paths** to connect streets, alleys, paths, etc., that are cut off from others (e.g., at the end of a cul-de-sac). • Use observations of common **pedestrian behavior**, from general studies or direct evidence such as informal paths in Alameda, to improve connections where feasible.	Conduct pedestrian public input survey and existing conditions field work as part of Pedestrian Plan to better understand: • Gaps • Preferred pedestrian routes • Pedestrian behavior Incorporate these elements into the Pedestrian Plan's Design Guidelines Pedestrian Plan Project Category: Public Walkways (for future pedestrian paths)
4.3.2.d	Develop and implement a **Pedestrian Master Plan** with regard to physical system improvements, as well as programs and policies relating to encouragement, education and enforcement • Develop criteria to identify intersections where **signal priority** could be given to pedestrians to improve and encourage pedestrian trips. • Produce and distribute brochures and other **materials to educate** residents, especially children and seniors, on walking safely, and encourage walking as an alternative to car trips, including walking to school. • City should work with public and private **schools** to identify needs and roles in addressing infrastructure, education and encouragement.	Proposed Pedestrian Plan Project Categories: • Education Program • Pedestrian Districts/ Corridors • Safe Routes to Schools • Street Crossings
Objective 4.3.6: Coordinate and integrate the planning and development of transportation system facilities to meet the needs of users of all transportation modes.		

Policy #	TMP's Goal, Objective or Guiding Policy	Implementing Policy (e.g., Action Item)
4.3.6.a	Review and update multimodal **design standards** for lane widths, parking, planting area, sidewalks, and bicycle lanes to guide construction, maintenance, and redevelopment of transportation facilities consistent with the street classification system.	Incorporate into the Pedestrian Plan's Design Guidelines
4.3.6.b	Identify **areas of conflict and of compatibility between modes** (e.g. walking, bicycling, transit, automobiles, and people with disabilities). Pursue strategies to reduce or eliminate conflicts, increase accessibility, and foster multimodal compatibility.	Prioritization Criterion "Reduce Incompatibilities"
4.3.6.d	Coordinate efforts with **regional funding agencies** in order to address Alameda's regional transportation issues.	Pedestrian Plan Project Category: Island Access
	4.4 Implementation Goal	
	Objective 4.4.1: Require developers to reserve and construct (if nexus exists) rights of way, transportation corridors and dedicated transportation facilities through the development process and other means.	
4.4.1	• Develop design guidelines for **pedestrian access** in new development and redevelopment areas, including shopping centers, residential developments, and business parks. • In any new development or re-development, safe and convenient **pedestrian connections** between major origins and destinations, including connections within the development and between the development and adjacent areas, should be a high priority in evaluating the site plan. • Develop **shoreline access** design guidelines.	Incorporate into the Pedestrian Plan's Design Guidelines
	Objective 4.4.3: When considering improvements to transportation facilities, the following issues should be addressed: traffic demand, preservation of neighborhood character, impacts to traffic operations including all modes of transportation, protection of historic and natural resources, utility and stormwater needs, the conservation of energy, and maintenance costs when considering improvements to transportation facilities.	
4.4.3.a	Utilize **alternative paving materials** and/or root barriers to help prevent sidewalk deterioration.	Incorporate into the Pedestrian Plan's Design Guidelines

Outreach

Public participation for the Pedestrian Plan included the following outreach efforts:

- Pedestrian Task Force Meetings
- Public Workshop
- Public Hearings and Other Meetings
- Website dedicated to the Pedestrian Plan
- Pedestrian and Bicyclist Public Input Survey

These outreach efforts are further described in more depth below.

Pedestrian Task Force Meetings

The Pedestrian Task Force held four meetings, which were open to the public and were comprised of representatives from the following commissions and boards:

- Board of Education, Alameda Unified School District
- Commission on Disability Issues
- Economic Development Commission
- Housing Authority
- Planning Board
- Recreation and Parks Commission
- Transportation Commission

The Pedestrian Task Force met at key milestones to discuss the work scope (June 2007), Preliminary Draft Pedestrian Plan (November 2007), Administrative Draft Pedestrian Plan (April 2008) and Design Guidelines (anticipated in early 2009).

Public Workshop

The purpose of the workshop was to educate community members about the planning effort and to obtain their feedback on the Draft Pedestrian Plan. The workshop was held on Thursday, April 24, 2008, and had the following format:

- Open House
- Project Overview with questions and answers

The City publicized the public workshop via a press release, City's website, various City events such as the Farmers' Market, Earth Day and the Estuary Crossing Feasibility Study community meeting, Transportation Master Plan's email list serv and mailings to public input survey respondents.

Public Hearings and Other Meetings

City staff presented the Draft Pedestrian Plan at the following meetings:

- Board of Education (June 10, 2008)
- Commission on Disability Issues (April 28, 2008)
- Economic Development Commission (May 15, 2008)
- Housing Authority (June 18, 2008)
- Planning Board (May 27, 2008)
- Recreation and Park Commission (May 8, 2008)
- Transportation Commission (April 23, 2008 and May 28, 2008)
- City Council – for approval of Pedestrian Plan (Fall/Winter 2008 – will be combined with the approval of the Transportation Master Plan)

Presentations to the Transportation Commission occurred at three different stages:

- Work Scope (as an off agenda report) (July 2007)
- Draft Pedestrian Plan (April 23, 2008 and May 28, 2008)
- Draft Design Guidelines (anticipated in early 2009)

Website

A Pedestrian Plan web page was developed and can be accessed from the Transportation Master Plan web page: http://www.ci.alameda.ca.us/tmp/pedestrian_plan.html

The website displayed the following materials:

- Pedestrian Plan Background Information
- Public Input Survey (also on City's home page) – Completed July 13, 2007
- Draft/Final Pedestrian Plan
- Public Workshop Notifications and PowerPoint of the Draft Pedestrian Plan
- Method to obtain contact information

Pedestrian and Bicyclist Public Input Survey

Input from residents who walk their community's streets on a daily basis is critical. The purpose of the public input survey was to help identify and prioritize pedestrian infrastructure enhancement projects for both the Pedestrian Plan and the upcoming Bicycle Plan update, which is scheduled to be completed in 2009. Another reason that the City conducted the Pedestrian Plan public input survey was to educate and inform community members about the Pedestrian Plan effort, and to ensure that these interested parties could be contacted for upcoming public workshops.

The City received over 150 completed hard copy surveys and almost 100 completed electronic surveys totaling about 250 surveys.

Distribution

With assistance from Bike Alameda and other interested organizations and individuals, City staff distributed the survey between April 21 to July 13, 2007 to the following groups, individuals and events:

- Advocacy groups: Pedestrian Friendly Alameda, Bike Alameda and Alameda Transit Advocates
- Business and Homeowners Associations
- Chamber of Commerce (inserted into newsletter)
- Climate Protection Task Force (April 2007 Open House)
- Collaborative for Children, Youth and their Families
- Community facilities such as libraries, schools (public and private), parks and the Mastick Senior Center
- Email list for the Transportation Master Plan
- Events
    - Farmers Market – multiple Tuesday mornings
    - Earth Day on Saturday, April 21 in Washington Park
    - Mother's Day Spring Street Fair on Saturday, May 12 and Sunday, May 13 at Park Street
    - Sand Castle and Sand Sculpture Contest, Saturday, June 9 at Robert Crown Memorial State Beach
    - Mayor's Fourth of July Parade – finishing area at Rittler Park
- Parent Teacher Association (PTA) Presidents
- Public Counters at City offices
- Stores: shops and cafes
- Website of City of Alameda (http://www.ci.alameda.ca.us/) using Survey Monkey application

Background

The public input survey addressed the following issues:

- Purpose of walking trip
- Time spent on average walking trip
- Walking concerns along specific stretches of road, path or at intersections
- Desired walking improvements
- Information about the respondent such as name, address, email, age, sex and car ownership

The respondents were given the opportunity to be added to the Pedestrian Plan mailing list, which was used to notify interested parties of the upcoming public workshop and the review of the draft Pedestrian Plan. Appendix A presents the public input survey.

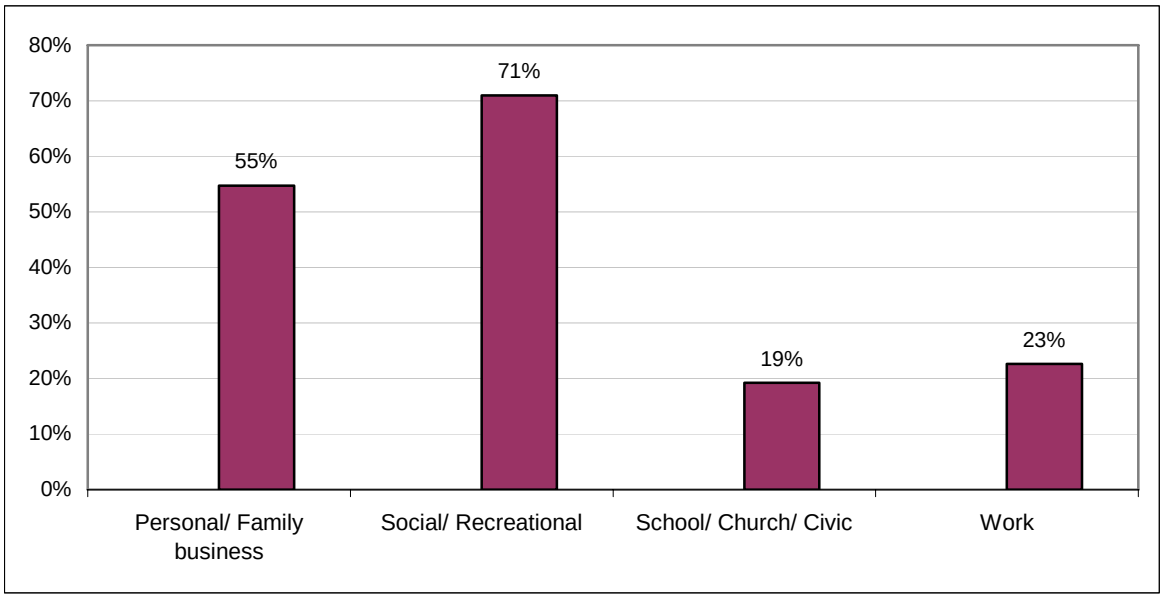
Results

Statistically valid results cannot be drawn from the survey findings because the respondents were not randomly selected. The following discussion outlines key observations regarding the respondents' profile, walking habits and concerns.

Purpose of Walking Trips

Survey respondents reported that they mainly walk for social and recreational purposes (Figure 9). Personal and family business trips were the second most commonly reported trips.

Figure 9: Purpose of Walking Trips



Time Spent on Average Walking Trip

Table 4 shows the average time in minutes that the respondents reported to walk per trip. The 2001 Nationwide Personal Transportation Survey (NPTS) results are shown to compare Alameda's survey results with pedestrians throughout the country. Alameda respondents took longer trips for work and school/church/civic than the NPTS respondents and took shorter trips for personal/family business and social/recreational. According to the U.S. Census Bureau's 2005 American Community Survey, the mean travel time to work totaled 25.8 minutes.

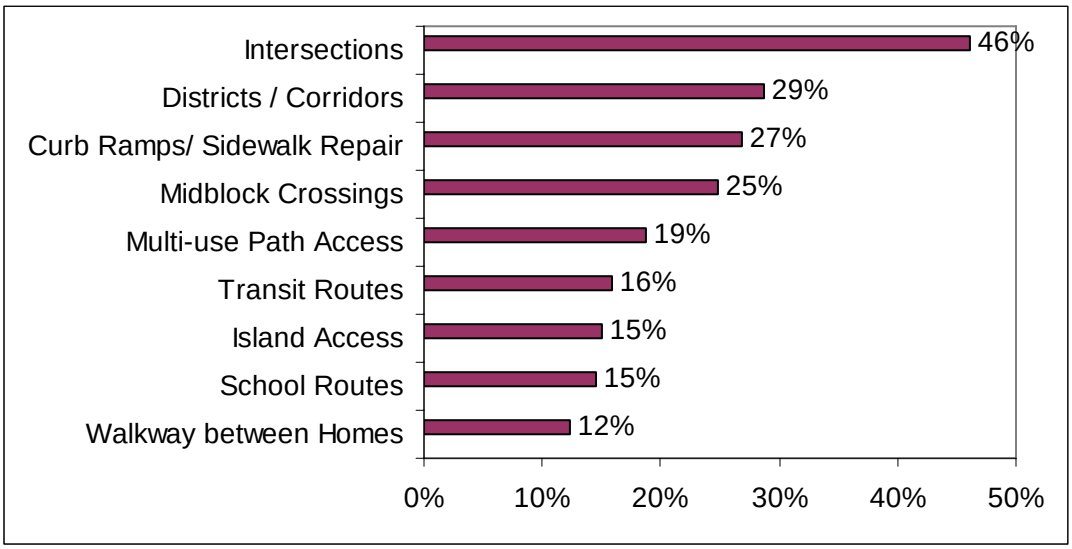
Table 4: Average Walking Trip Times (minutes – one way)

	Personal / Family Business	Social / Recreational	School / Church / Civic	Work
Walking (Alameda Survey)	22	34	16	18
Walking (National Survey)	36.6	45.5	11.1	6.8

Walking Improvements

Respondents stated that the improvements shown in Figure 10 would encourage them to walk more often.

Figure 10: Walking Improvements Requested by Respondents



Top Walking Concerns

Respondents were asked to describe specific locations of walking concerns. Table 5 shows intersections that were most often stated by respondents as being a walking concern. The walking concerns included street crossings (50 percent of responses), sidewalks (26 percent of responses), traffic congestion (15 percent of responses), curb ramps (5 percent of responses) and street lighting (4 percent of responses). Some respondents stated multiple concerns.

Table 5: Top Walking Concerns

Street Name	To/From	Survey Responses
Central Avenue	Webster Street	9
Towne Centre	Private internal streets	9
Otis Drive	Willow Street	7
Buena Vista Avenue	Tilden Way	7
Central Avenue (SR 61)	Encinal Avenue / Sherman Street	7
Central Avenue (State Route 61)	Sixth Street	6
Central Avenue (SR 61)	Ninth Street	6
Park Street	Lincoln Avenue/Tilden Way	6
Park Street	Buena Vista Avenue	6
Park Street	Otis Drive	6
Central Avenue	Chestnut Street	5
Park Street	Eagle Avenue	5
Park Street	Encinal Avenue	5
Tubes - Posey/Webster		5
Fernside Blvd	Garfield Avenue	4

Street Name	To/From	Survey Responses
High Street	Lincoln Avenue	4
Ralph Appezzato Memorial Parkway	Main Street	4
Santa Clara Avenue	Sherman Street	4
Shoreline Drive	Towne Centre	4
Tilden Way	Blanding Ave./Fernside Blvd.	4
Webster Street	Atlantic Ave.	4

Respondent Information

The majority of respondents (92 percent) owned cars. The median age of respondents was 47, which is higher than the median resident age of 39 according to the U.S. Census Bureau's 2005 American Community Survey. The maximum age was 93 and the youngest age was 14. A total of 85 respondents requested to be added to the mailing list, which will be used for upcoming public outreach efforts on the development of the Pedestrian Plan.

Existing Conditions

This section is intended to provide an overview of the pedestrian environment in the City of Alameda. The Existing Conditions section highlights the pedestrian education programs, infrastructure, demand and pedestrian-involved collisions. This information was used to help determine and rank pedestrian enhancement projects.

Education Programs

The City of Alameda as well as Alameda Walks and Pedestrian-Friendly Alameda sponsor several pedestrian education programs. The Public Works Department has developed a school safety pamphlet. The pamphlet targets parents and students, and focuses on walking, bicycling and driving tips. The Public Works Department and the Police Department staff in concert with the·Collaborative for Children, Youth and their Families and Pedestrian Friendly Alameda provide educational materials and actively participate in Walk and Roll to School Day (early October of each year) with Safe Routes to School maps, Walking School Buses and Bike Trains. Alameda Walks sponsors one-hour Saturday walks to help encourage exercise and community awareness. Each fall, the Alameda Police Department and the Alameda Fire Department conduct a Safety Town event for all kindergarten students and many first graders in the Alameda Unified School District. Students from across Alameda are brought by bus to a course set up at Alameda Point, where they are trained in pedestrian safety and bicycle helmet use.

Pedestrian Infrastructure

The existing pedestrian facilities in the City of Alameda have been divided into the following categories: island access, lighting, public walkways, safe routes to schools, sidewalks, street crossings and trails. Figures 11, 12 and 13 show the existing pedestrian facilities. For information on designing pedestrian facilities, please refer to the companion document titled Pedestrian Design Guidelines.

Figure 11: Existing Pedestrian Facilities (Main Island - West)

Figure 12: Existing Pedestrian Facilities (Main Island - East)

Figure 13: Existing Pedestrian Facilities (Bay Farm Island)

Island Access

Alameda, an island city, is presently accessible by pedestrians along the Oakland/Alameda estuary by three drawbridges and a tube under-crossing (Posey Tube), and at the San Leandro Channel by one motor vehicle bridge and one bicyclist/pedestrian bridge. Posey Tube is the only pedestrian/bicycle access between Oakland and Alameda along the west end of the island. A description of the pedestrian access on each of these facilities is as follows:

- **Bay Farm Island Bridge**: Pedestrians may use the five-foot wide walkway, which is on the west side of the bridge.
- **Bay Farm Island Bicycle Bridge**: Pedestrians and bicyclists share this eight-foot wide drawbridge, which is east of the motor vehicle bridge.
- **High Street Bridge**: Pedestrians and bicyclists share four-foot wide paths on each side of the bridge.
- **Miller-Sweeney Bridge**: Pedestrians and bicyclists share four-foot wide paths on each side of the bridge. Stairs exist that connect the bridge and Marina Drive; however, the stairs are closed.
- **Park Street Bridge**: Pedestrians and bicyclists have five-foot wide paths on each side of the bridge. Pedestrian-scaled lighting exists above the paths.
- **Posey Tube Under-crossing**: The narrow less than four-foot wide walkway requires a bicyclist meeting a pedestrian to dismount.

Lighting

Alameda Power & Telecom (AP&T), a department of the City of Alameda, is the municipal utility in charge of the 6,360 streetlights. AP&T has a program to replace deteriorated streetlights. This program installs new streetlight poles that match the old, historical ones. The program replaces the older steel street lights with fiberglass poles. For new developments, developers are required to install the streetlights according to AP&T standards.

Public Walkways

Public walkways consist of pedestrian walkways between properties that are under the jurisdiction of the City of Alameda. Twenty-five public walkways exist in the City of Alameda, as shown in Table 6, and mainly occur between homes and businesses.

Table 6: Public Walkways

ID	Walkway Name	Street1	Street2	Adjacent Land Use Description	Length (Feet)
A	Bayview Walk	Bayview Drive	San Francisco Bay	Residential; shoreline access	115
B	Blossom Walk	Fair Haven Road	Sand Beach Road	State beach, residential; Lum and Wood Schools; shoreline access	185
C	Candy Tuft Walk	Kitty Hawk Road	Wood School	Between 333 and 337 Kitty Hawk Road; residential; Lum and Wood Schools; Rittler Park; Towne Centre	100
D	Central Avenue Walk	Eastshore Drive	San Leandro Bay	Residential; Lincoln Park; shoreline access	200
E	Cherry Walk	Shell Gate Road	Shore Walk	State beach, residential; Lum and Wood Schools; Rittler Park; shoreline access	90
F	Coral Bell Walk	Sunset Road	Grand Street	Residential; Lum and Wood Schools; Rittler Park; shoreline access	195
G	Doolittle Walk	Doolittle Drive	Bay Farm Island Bridge	Main island; golf complex; shoreline access; Doolittle Landfill	380
H	Fairview Avenue Walk	Fernside Blvd.	Tidal Canal	Residential; shoreline access	150
I	Ferndell Walk	Greenbrier Road	Yorkshire Road	Residential; Lum and Wood Schools; Rittler Park; Towne Centre shopping center	190
J	Fernside Blvd Walk	Fernside Blvd.	Tidal Canal	Residential; located between 3227 and 3229 Fernside Blvd.; shoreline access	150
K	Heather Walk – Section 1	Sand Beach Pl	Rosewood Way	Residential; Lum and Wood Schools; Rittler Park; state beach	200
L	Heather Walk – Section 2	Rosewood Way	Otis Drive	Residential; Lum and Wood Schools; Rittler Park; state beach	200
M	Ivy Walk – Section 1	Yorkshire Road	Sandcreek Way	Residential; Lum and Wood Schools; Rittler Park; Towne Centre shopping center	200

ID	Walkway Name	Street1	Street2	Adjacent Land Use Description	Length (Feet)
N	Ivy Walk – Section 2	Sandcreek Way	Otis Drive	Residential; Lum and Wood Schools; Rittler Park; Towne Centre shopping center	195
O	Liberty Avenue Walk	East Shore Drive	San Leandro Bay	Residential; shoreline access	200
P	Meadow Walk	Harbor Light Road	Coral Reef Road	Residential; Lum and Wood Schools; Rittler Park; state beach; shoreline access	185
Q	Meyers Avenue Walk	East Shore Drive	San Leandro Bay	Residential; shoreline access	150
R	Monte Vista Avenue Walk	Fernside Drive	Tidal Canal	Residential; shoreline access	150
S	Myrtle Walk	Camden Road	Whitehall Road	Residential; Lum and Wood Schools; Rittler Park; Towne Centre shopping center	180
T	Park Walk	Park Street	Park Avenue	Park Street Business District between Central Avenue and Santa Clara Avenue; multi-unit housing	250
U	Post Office Court	Park Street	Back parking lot	Park Street Business District between Central Avenue and Encinal Avenue; multi-unit housing	150
V	Powell Walk	Powell Street	Otis Drive	Towne Centre shopping center; residential	40
W	Snowberry Walk	Kitty Hawk Road	Lum School	Residential; Lum and Wood Schools; Rittler Park; Towne Centre shopping center	85
X	Storybook Walk	Shore Walk	Rosewood Way	State beach, residential; Lum and Wood Schools; Rittler Park; shoreline access	210
Y	Westline Drive Stairs	Westline Drive	Portola Avenue	Residential; state beach	100

Safe Routes to School

The Public Works and Police Departments work with Alameda Unified School District officials to formalize Safe Routes to Schools maps for the District's school children. Safe Routes to School education programs are covered in the abovementioned Education Programs section. The Police Department manages the City's crossing guard program. This program was expanded by three positions in early 2007. The crossing guards are at the following 10 schools and 16 intersections during the school times:

- Bay Farm Elementary – Aughinbaugh Way and Robert Davey Jr. Drive
- Amelia Earhart - Robert Davey Jr. Drive and Packet Landing, Island Drive and Mecartney Road
- Edison School - Lincoln Avenue and Gibbons Drive, Lincoln Avenue and High Street
- Franklin School - Encinal Avenue and Paru Street, Grand Street and San Jose Avenue
- Haight School - Santa Clara Avenue and Chestnut Street
- Lum School - Otis Drive and Sandcreek Way
- Otis School - High Street and Fillmore Street
- Paden School - Central Avenue and 5th Street
- Ruby Bridges - 3rd Street/Mosley Avenue and Ralph Appezzato Memorial Parkway, Poggi Street and Ralph Appezzato Memorial Parkway
- Washington School - Santa Clara Avenue and 9th Street, Lincoln Avenue and 9th Street, 8th Street and Taylor Avenue

Sidewalks

The majority of the streets in the City of Alameda have sidewalks with an estimated total of 260 miles. The City funds a sidewalk repair program to maintain access and to provide a more comfortable walking experience. The main issues occur from City street trees, which are planted in planter strips between the curb and the sidewalk. The City maintains between 12,000 and 13,000 street trees. Tree roots uplift sidewalks, raise the curb and gutters, and cause ponding issues. The City repairs sidewalks when the cause is City street trees. Adjacent property owners repair the sidewalk when it is old or cracked or an uplift occurs from a tree located on the adjacent owner's property. For sidewalk issues related to the adjacent property owner, the City contacts the property owner in response to community concerns. The City budget for sidewalk repair has totaled almost $1 million annually for the past few years. The average sidewalk repair costs about $800.

Street Crossings

Street crossings in the City of Alameda have a variety of traffic features that help provide a more comfortable walking environment for pedestrians including:

- Accessible pedestrian signals
- Crosswalks
- Curb bulb-outs or extensions
- In-pavement crosswalk lights
- In-street pedestrian crossing signs

- Midblock crossings
- Pedestrian countdown signals

These facilities are described in more detail below.

To improve travel flow and safety, the City has prohibited pedestrians from crossing at the locations listed in Table 7.

Table 7: Pedestrian Crossing Prohibitions

Primary Street	Secondary Street	Crossing Prohibition
Central Avenue	Webster Street	East XING of Central Avenue
Main Street	Pacific Avenue	North XING of Main Street
Main Street	West Midway Avenue	South XING of Main Street
Otis Drive	Fernside Blvd.	South XING of Otis Drive
Otis Drive	South Shore Center W	West XING of Otis Drive
Westline Drive	Otis Drive	North XING of Westline
Willow Street	Otis Drive	West XING of Willow Street on Hospital leg
Willow Street	Otis Drive	East XING of Willow Street on beach leg
Park Street	Blanding Avenue	East XING of Park Street
Ralph Appezzato Memorial Parkway	Poggi Street / Coral Sea Street	East XING of Appezzato
Ralph Appezzato Memorial Parkway	Fifth Street	East XING of Appezzato
Ralph Appezzato Memorial Parkway	West Campus Drive	East XING of Appezzato
Tilden Way	Fernside Blvd.	West XING of Tilden Way
Wilver Willie Stargell Avenue	Coral Sea Street	West XING of Stargell
Wilver Willie Stargell Avenue	Fifth Street	West XING of Stargell
Wilver Willie Stargell Avenue	Mosley Avenue	West XING of Stargell

Accessible Pedestrian Signals

Accessible pedestrian signals have locator and audible walk interval tones, and can have vibrating surfaces to assist individuals with visual or hearing impairments to cross the street. Table 8 shows the 21 signalized intersections that have accessible pedestrian signals out of the 78 signalized intersections citywide. These intersections, which total 27 percent of all signalized intersections, were selected based on reported collisions and transit use.

Table 8: Signalized Intersections with Accessible Pedestrian Signals

Street1	Street2
Constitution Way	Marina Village Pkwy
Encinal Avenue	Walnut Street
Grand Street	Central Avenue
Grand Street	Lincoln Avenue
Grand Street	Santa Clara Avenue
Marshall Way / Lincoln Ave.	Fifth Street

Street1	Street2
Oak Street	Encinal Avenue
Oak Street	Lincoln Avenue
Otis Drive	South Shore Drive
Park Street	Encinal Avenue
Park Street	Otis Drive
Park Street	Santa Clara Avenue
Park Street	Tilden Way/Lincoln Avenue
Ralph Appezzato Memorial Pkwy	Fifth Street
Ralph Appezzato Memorial Pkwy	Poggi Street
Ralph Appezzato Memorial Pkwy	Third Street
Webster Street	Central Avenue
Webster Street	Santa Clara Avenue
Westline Drive	Otis Drive
Willow Street	Encinal Avenue
Willow Street	Otis Drive
Total	**21**

Crosswalks

The California Vehicle Code states that a street crossing or crosswalk is the portion of street at an intersection that represents extensions of the sidewalk lines, or any portion of the street distinctly indicated for pedestrian crossing. Pedestrians are allowed to cross streets at intersections with unmarked crosswalks as long as no crossing prohibitions exist. Marked crosswalks help channelize pedestrians and help enhance motorists' awareness. The Public Works Department installs marked crosswalks based upon traffic engineering analyses in accordance with Manual of Uniform Traffic Control Devices (MUTCD) standards and City's guidelines.

Curb Bulb-outs

Curb bulb-outs or extensions are located at intersections and midblock crossings to:

- Reduce the crossing distance for pedestrians.
- Improve the sight distance between motorists and pedestrians.
- Slow the turning movements of motorists.
- Prevent motorists from parking in the crosswalk area.

Curb bulb-outs are at the following locations:

- Chestnut Street at San Antonio Avenue
- Chestnut Street at San Jose Avenue
- Fernside Blvd. at Madison Street
- Fernside Blvd. at San Jose Avenue
- Park Street between Central Avenue and Santa Clara Avenue
- Park Street at Santa Clara Avenue

- Park Street at Webb Avenue
- Webster Street at Central Avenue
- Webster Street at Haight Avenue
- Webster Street at Lincoln Avenue
- Webster Street at Pacific Avenue
- Webster Street at Santa Clara Avenue
- Webster Street at Taylor Avenue

In-Pavement Crosswalk Lights

Source: www.walkinginfo.org

In-pavement crosswalk lights alert motorists to the presence of a pedestrian crossing the street. When a pedestrian is detected either by push button or an automated device, lights located in the crosswalk flash at a constant rate in the direction of on-coming motorists. The City of Alameda has installed 11 in-pavement crosswalk lights at the following locations:

- Eighth Street at Portola Street
- Eighth Street at Taylor Avenue
- Encinal Avenue at Paru Street
- Fernside Blvd at San Jose Avenue
- Otis Drive at Sandcreek Way
- Pacific Avenue at Fourth Street
- Park Street at Pacific Avenue
- Park Street at Webb Avenue
- Park Street between Santa Clara Avenue and Central Avenue (midblock crossing)
- Santa Clara Avenue at Willow Street
- Webster Street at Taylor Avenue

In-Street Pedestrian Crossing Signs

In-street pedestrian crossing signs or paddles are installed in the centerlines of intersections adjacent to a marked crosswalk to help enhance crossing visibility. These devices are installed based upon a traffic engineering analysis. The California MUTCD recommends installing in-street pedestrian crossing signs at uncontrolled locations, if it meets specified criteria.[5] Table 9 shows the intersections with in-street pedestrian crossing signs. A total of 27 in-street signs exist at 23 intersections.

[5] California Department of Transportation, California Manual on Uniform Traffic Control Devices (MUTCD), 2006, Part 2, Chapter 7.

Table 9: Intersections with In-Street Pedestrian Crossing Signs

Street	Cross-Street	Location	Quantity
4th Street	Pacific Avenue	Chipman School	2
6th Street	Central Avenue	St. Barnabas School	1
6th Street	Lincoln Avenue	Longfellow Park	1
6th Street	Santa Clara Avenue	near St. Barnabas School	1
Atlantic Avenue	Triumph Drive	office park	2
Atlantic Avenue	1020 & 1145 Atlantic Avenue	office park	1
Aughinbaugh Way	Sheffield Way	Bay Farm School	1
Broadway	Lincoln Avenue	near Edison School	1
Buena Vista Avenue	Willow Street	near Haight School	1
Central Avenue	Chestnut Street	near Haight School	2
Chestnut Street	Santa Clara Avenue	Haight School	1
Constitution Way	Eagle Avenue	major road	1
Encinal Avenue	Lafayette Street	St. Joseph's School	1
Encinal Avenue	Park Avenue	Jackson Park	1
Encinal Avenue	Paru Street	Franklin School	1
Fernside Boulevard	Versailles Avenue	near Bridgeside shopping center	1
Fillmore Street	High Street	Otis school	1
Grand Street	Wood Middle School	Wood Middle School	1
High Street	Van Buren Street	St. Phillip near School	1
Mound Street	Otis Street	Krusi Park & Otis School	1
Park Street	San Antonio Avenue	Park Street Busi. District	1
Roxburg Lane	Sheffield Road	school pedestrian route	1
Santa Clara Avenue	Willow Street	Near Haight School	2
Total			**27**

Midblock Crossings

The City of Alameda has formalized a few midblock crossing locations such as at:

- Atlantic Avenue between 1020 and 1145 Atlantic Avenue
- Grand Street at Wood School and the public walkway
- Park Street between Central Avenue and Santa Clara Avenue

Pedestrian Countdown Signals

Pedestrian countdown signals display the amount of time remaining to cross the street to help pedestrians decide whether to cross or to wait until the next interval. Recent studies by the City of San Francisco suggest that countdown signals significantly reduce vehicle and pedestrian collisions. Recent proposed changes to the national MUTCD would require that all new signals provide countdown signals and all existing signals must be upgraded within ten years. Table 10 shows the 30 signalized intersections that have pedestrian countdowns out of the 78 signalized intersections citywide. These intersections, which total 39 percent of all signalized intersections, were selected based on the number of reported collisions and transit use.

Source: www.walkinginfo.org

Table 10: Signalized Intersections with Pedestrian Countdown Signals

Street1	Street2
Blanding Avenue / Fernside Blvd.	Tilden Way
Broadway	Central Avenue
Constitution Way	Marina Village Pkwy
Eighth Street	Central Avenue
Eighth Street	Santa Clara Avenue
Encinal Avenue	Walnut Street
Grand Street	Central Avenue
Grand Street	Lincoln Avenue
Grand Street	Santa Clara Avenue
Marshall Way / Lincoln Ave.	Fifth Street
Oak Street	Encinal Avenue
Oak Street	Lincoln Avenue
Oak Street	Santa Clara Avenue
Otis Drive	South Shore Drive
Park Street	Buena Vista Avenue
Park Street	Encinal Avenue
Park Street	Otis Drive
Park Street	San Jose Avenue
Park Street	Santa Clara Avenue
Park Street	Tilden Way/Lincoln Avenue
Ralph Appezzato Memorial Pkwy	Fifth Street
Ralph Appezzato Memorial Pkwy	Poggi Street
Ralph Appezzato Memorial Pkwy	Third Street/Mosley Avenue
Webster Street	Buena Vista Avenue
Webster Street	Central Avenue
Webster Street	Lincoln Avenue
Webster Street	Santa Clara Avenue
Westline Drive	Otis Drive
Willow Street	Encinal Avenue
Willow Street	Otis Drive
Total	**30**

Trails

A trail or a shared-use path is a facility that is designed to accommodate pedestrians, bicyclists and other non-motorized users. Trails are physically separated from motorized vehicular travel by a barrier or open space. These facilities are provided as alternatives to sidewalks and on-street bicycle lanes. Trails typically exist parallel to vehicular facilities or link important destinations within their own independent alignment. Table 11 shows the key trails in the City of Alameda.

Trails within Street Right-of-Way

Trails that exist within the street right-of-way are maintained by the City of Alameda's Public Works Department. The Public Works Department recently has improved and extended the multi-use trail between the Bay Farm Island Bicycle/Pedestrian Bridge and Encinal Avenue via Lincoln Middle School. Measure B grant monies are being used for this enhancement project.

Required Public Access Shoreline Trails

The San Francisco Bay Conservation and Development Commission (BCDC) requires new development within 100 feet of the shoreline to provide sufficient public access. The amount of public access that is required by BCDC is based on the projected future public access use and demand of the site. For example, if 100 people are expected to use the location at a time then the public access along the shoreline should be designed to accommodate the 100 individuals so that they have Bay access. The maintenance of the shoreline public access is the responsibility of the property owner unless a separate agreement is made between the property owner and another public agency. The City will work with BCDC to support improved public access along the shoreline using the City's and BCDC's public access shoreline guidelines.

Table 11: Trail Segments

Location	End Points	BCDC Required (#)	Responsible Party
Bay Farm Island			
Lagoon and Park Paths	West of Island Drive and north of Mecartney Road	No	adjacent homeowner association
Harbor Bay Parkway	State Route 61/Doolittle Drive and the Shoreline Park	No	City of Alameda
Island Drive	Veterans Ct. and Mecartney Rd.	No	City of Alameda
Mecartney Road	Aughinbaugh Way and Island Dr.	No	City of Alameda
Doolittle Landfill	San Leandro Bay to the north and east, Doolittle Dr. to the south, and Island Dr. to the west	BCDC Permit # M87-8	City of Alameda
Bay Farm Island Bicycle Bridge	Main island and Bay Farm	BCDC Permit # 5-92	City of Alameda/Caltrans
Veterans Court	Shoreline Park and Island Drive	No	City of Alameda
Wood Bridge Boardwalk	Veterans Ct. and Bay Farm Island Bicycle Bridge	BCDC Permit # M82-51	East Bay Regional Park District

Location	End Points	BCDC Required (#)	Responsible Party
Shoreline Park (Tract 3773)	Veterans Ct. and Packet Landing Rd – Harbor Bay Isle Club	BCDC Permit # AL.OA. 6509.5	City of Alameda
Packet Landing Rd	Shoreline Park and Robert Davey Jr. Drive	No	City of Alameda
Shoreline Park (Tract 3810)	Packet Landing Rd. and Creedon Circle	BCDC Permit # AL.OA. 6509.4 and 19-78	City of Alameda
Harbor Bay Isle Shoreline Park (Tract 5905)	Creedon Circle and Ratto Road terminus	BCDC Permit # AL.OA. 6509.6	City of Alameda
Harbor Bay Ferry Terminal	At the foot of Mecartney Road	BCDC Permit #9-90	City of Alameda
Harbor Bay Business Park – Shoreline Park (Tract 4500)	Mecartney Rd. and southern end of Shoreline Park	BCDC Permit # AL.OA. 6509.7	City of Alameda
Main Island – Southern Shoreline			
San Leandro Channel Trail	Lincoln Middle School and Fernside Blvd.	BCDC Permit # 1-80	Waterford Owners Association
Aeolian Yacht Club Shoreline Path	northeast of the north end of the Bay Farm Island Bridge	BCDC Permit # M82-41	Aeolian Yacht Club
Aeolian Yacht Club Fernside Path	Aeolian Yacht Club and Washington Ct. /Fernside Blvd.	BCDC Permit # 13-82	Aeolian Yacht Club / City of Alameda
Lincoln Middle School	school boundary – 600 feet	BCDC Permit # M75-88	Alameda Unified School District
Bay Farm Island Bridge Bike Path	beneath and immediately adjacent to the north end of the Bay Farm Island Bridge	BCDC Permit # M82-10	City of Alameda
3320 Bridgeview	Bay side of Bridgeview Isle Dr.	BCDC Permit # M76-107	current owner
3312 Bridgeview	Bay side of Bridgeview Isle Dr.	BCDC Permit # M76-95	current owner
Bay Farm Bridge Cable Crossing	Between Bay View Isle and the Bay shoreline	BCDC Permit # M83-24	Alameda Power & Telecom
3300 Bridgeview	Bridgeview Isle to Bay and along Bay betw Driftwood and SR 61	BCDC Permit # M76-26	current owner
Ravenwood Townhomes	Bridgeview Isle and Bayview Drive along bay via Driftwood	BCDC Permit # 7-72	Knuppe Development Co.
Bayview Shoreline	Shoreline access docks (two total)	BCDC Permit # 13-87	City of Alameda
Robert Crown St. Beach	Broadway and Crown Dr. terminus	BCDC Permit # 9-81	East Bay Regional Park District
Central Ave.	Crown Dr. terminus and Central Ave. (520-530 Central Ave.)	BCDC Permit # 19-77	Common Area Tract 3883; Homeowner Association
Paden Elementary	444 Central Avenue	BCDC Permit	Alameda Unified

Location	End Points	BCDC Required (#)	Responsible Party
School		# M91-2	School District
Ballena Bay	Porta Ballena and Ballena Bay	BCDC Permit # 28-71	Ballena Isle Marina
Pan-Pacific Agreement Ballena Bay	Ballena Isle Marina and peninsula paths	BCDC Permit # 30-71	City of Alameda
Encinal High School	Southeast of Encinal High School between Third St. terminus and bay	BCDC Permit # M90-96	Alameda Unified School District
Boat Launch	Between Alameda Park and Encinal High School	BCDC Permit # 32-79	City of Alameda
Alameda Point – Western Shoreline			
Alameda Park Trail	Ferry Point and Alameda Park	BCDC Permit # M07-2	East Bay Regional Park District
Pier 3	Entire Pier 3	BCDC Permit # 1-98	USS Aircraft Carrier Hornet F or current owner
Alameda Naval Station - Pier 1	Area between W. Oriskany Ave. and W Ticonderoga Ave.	BCDC Permit # M96-26	Nelson Marine, Inc.
Seaplane Lagoon	Runways to W. Atlantic Ave. (periodically open)	BCDC Permit # M98-36	Antiques by the Bay, Inc. and Alameda Reuse and Redevelopment Authority
Alameda Gateway Ferry Terminal	Main Street (Pier 5 – 2990 Main Street)	BCDC Permit # 1-91	City of Alameda
Main Street Linear Park	Singleton Avenue and Ralph Appezzato Memorial Parkway	No	City of Alameda Recreation and Parks Department
Main Street	Main Street Ferry Terminal and W. Pacific Ave. (west side of street)	No	City of Alameda
Bay Ship and Yacht	East of the Main Street Ferry Terminal	BCDC Permit # 13-94	Bay Ship and Yacht
Central Avenue	W. Pacific Ave. and Hancock St.	No	City of Alameda
Main Island – Northern Shoreline			
Constitution Way	Stewart Court and Mariner Square Drive	No	City of Alameda
Rusty Pelican Restaurant	Alameda Point and west of Mariner Square Drive	BCDC Permit # 5-72	Mariner Square & Associates
Mariner Square Drive	Constitution Way and Marina Village Parkway	No	City of Alameda
Mariner Square Marina	West and east of Webster Tube; Foot of Mariner Square Drive	BCDC Permit # 17-74	current owner
Restaurant at foot of Mariner Square Dr.	Mariner Square Dr. terminus	BCDC Permit # 9-74	current owner
Barnhill Marina	West and east of Posey Tube	BCDC Permit # 10-99	Barnhill Marina

Location	End Points	BCDC Required (#)	Responsible Party
Marina Village	East of Posey Tube and Kingsbury Ct.	BCDC Permit # 39-79	City of Alameda / Legacy Partners
Tied House #8 Pacific Marina	At foot of Kingsbury Ct.	BCDC Permit # M95-17	Carousel LLC
Encinal Yacht Club	Foot of Triumph Dr. along the west shore of the Oakland Estuary	BCDC Permit # M87-36	Encinal Yacht Club
Wind River (1010 Atlantic Avenue)	Encinal Yacht Club and Entrance Rd./Sherman St.	BCDC Permit # 9-97	Wind River Systems, Inc.
Fortmann Marina	Fortmann Marina	BCDC Permit # 2-85, 4-72 and M81-134	Fortman Basin Limited Partner
Alameda Marina Park	Fortmann Marina and Ohlone St.	BCDC Permit # 17-00	City of Alameda
Grand Marina	Alameda Marina Park and Grand St. (south easterly one-quarter of Alaska Basin	BCDC Permit # 5-83, M03-29	Encinal Marina Limited / City of Alameda
Grand Street Boat Launch	Grand St. terminus	BCDC Permit # M82-24	City of Alameda
Alameda Marina	Alameda Marina (2033 Clement Avenue)	BCDC Permit # 25-88	City of Alameda / Pacific Shops, Inc.
Northwest of Park Street Bridge	Northwest of Park Street Bridge off Blanding Avenue	BCDC Permit # 13-85	current owner
Alameda Bridgeside Center	Tilden Way and Blanding Avenue	BCDC Permit # M83-86	Crea Bridgeside
Fruitvale Bridge	Miller-Sweeney Bridge	BCDC Permit # 16-71	Cities of Alameda and Oakland

Pedestrian Demand

This section provides information on walking patterns in the City of Alameda. The major factors that influence pedestrian demand include:

- Adjacent land uses that generate pedestrian activity
- Community residents who are more apt to walk such as children and lower-income individuals
- Attractiveness and comfort level of walking
- Availability of and access to transit mode

Information on the travel characteristics of pedestrians originates from the US Census journey to work, AC Transit bus stop boardings and alightings and pedestrian counts. This information helps the City of Alameda better understand how and where to encourage more walking by providing adequate pedestrian facilities.

Commute to Work Statistics

According to the US Census, City of Alameda residents work mainly within Alameda County totaling about 69 percent (Table 12). About one quarter of Alameda's employed residents work within the City, and another one quarter work in Oakland. San Francisco commuters represent almost 20 percent of the employed population.

Table 12: Where City of Alameda Residents Work

%	Work Destination
25.2%	City of Alameda
24.4%	Oakland
18.7%	San Francisco
9.5%	Other Alameda County
4.2%	Contra Costa County
3.8%	San Leandro
3.7%	Berkeley
3.2%	San Mateo County
2.9%	Hayward
2.6%	Santa Clara County
1.7%	Other

Source: Census Transportation Planning Package, 2000

The majority of City of Alameda residents travel alone by automobile to/from work at 63 percent (Table 13). Commuters who walk to/from work total almost 3 percent; however, the walking commute underestimates the amount of walking because it represents a commute that only involves walking. All transit trips involve walking so a combined transit and walk percent is a more accurate account of commuters traveling by foot, which totals about 16 percent.

Table 13: Mode Split for City of Alameda Resident Work Commute

Mode	Mode Split	Percent
Drive Alone	23,005	63.0%
Carpool	4,340	11.9%
Bus/BART	4,905	13.4%
Ferry	855	2.3%
Bike	519	1.4%
Walk	971	2.7%
Taxi	38	0.1%
Motorcycle	142	0.4%
Work at home	1,505	4.1%
Other	213	0.6%
Total	**36,493**	**100%**

Source: Census Transportation Planning Package, 2000

Over one-third of Alameda employees live in the City of Alameda and almost 15 percent live in Oakland (Table 14).

Table 14: Where City of Alameda Employees Live

Location	Percent
City of Alameda	37.6%
Oakland	14.8%
San Leandro	3.4%
Hayward	2.5%
Berkeley	2.3%
Other Alameda County	12.8%
Contra Costa County	11.3%
San Francisco	4.1%
Santa Clara County	2.5%
San Mateo County	1.7%
Other	7.2%

Source: Census Transportation Planning Package, 2000

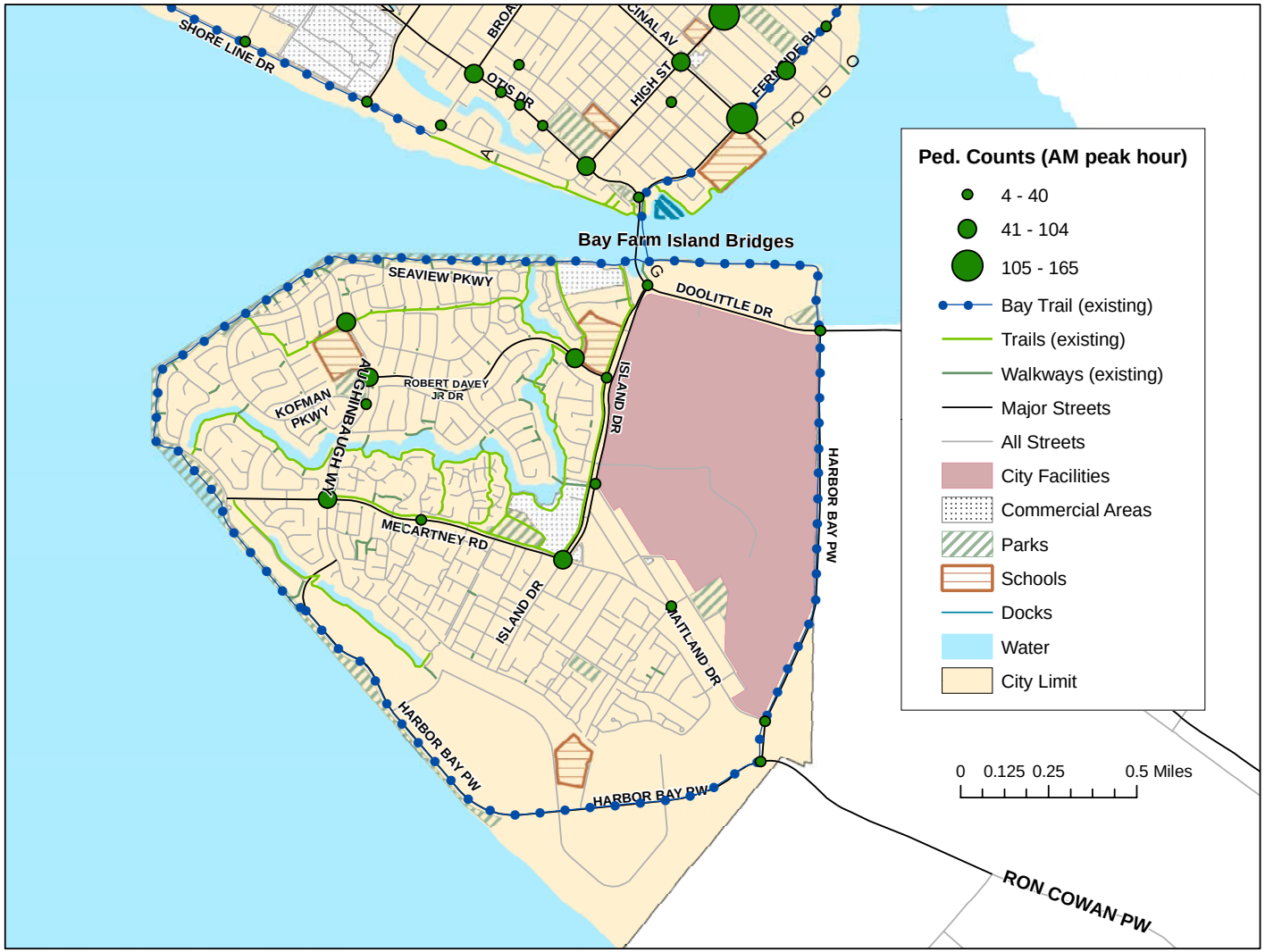
Pedestrian Counts

The City of Alameda conducts pedestrian counts as part of the City's transportation modeling efforts, warrant investigations for traffic operations and changes to traffic operations such as lane additions at an intersection. Figures 14, 15 and 16 show pedestrian counts at intersections with existing data between 2004 and 2007. These data show pedestrian street crossings so one pedestrian may be counted multiple times. The peak morning hour for pedestrians usually is 7:30 a.m. to 8:30 a.m. and the peak afternoon hour usually is 2:30 p.m. to 3:30 p.m. Data are mainly available for the peak morning hour for pedestrians; however, the peak afternoon hour tends to have more pedestrian activity.

Figure 14: Pedestrian Counts - Morning Peak Hour (Main Island - West)

Figure 15: Pedestrian Counts - Morning Peak Hour (Main Island - East)

Figure 16: Pedestrian Counts - Morning Peak Hour (Bay Farm Island)



Bus Stop Boardings and Alightings

AC Transit conducts on-board travel surveys that record the number of passenger boardings and alightings at each stop. Table 15 and Figures 17, 18 and 19 show the City intersections with bus rider boarding and alighting data for a typical weekday. The data for all the intersections where buses travel in the City will be used to help prioritize pedestrian improvement projects.

Table 15: AC Transit Bus Riders – Highest Volume Intersections

LOCATION1	LOCATION2	ON/OFF	ROUTES			
PARK ST	SANTA CLARA AV	1644	51	50	O/OX	
SANTA CLARA AV	WEBSTER ST	1102	51	63/632	W	O
ATLANTIC AV	WEBSTER ST	875	63	51	W	O
LINCOLN AV	WEBSTER ST	597	51	632	O	W
ENCINAL AV	PARK ST	575	50	63	632	O/OX
BUENA VISTA AV	WEBSTER ST	560	51	O	W	
GRAND ST	SANTA CLARA AV	449	51	O		
CHESTNUT ST	SANTA CLARA AV	419	51	O		
BAY ST	SANTA CLARA AV	413	51	O		
SANTA CLARA AV	WILLOW ST	403	51	O		
SANTA CLARA AV	WALNUT ST	371	51	O		
TOWNE CENTRE AT WALGREENS		361	50			
BLANDING AV	BROADWAY	352	51	19	W	
OAK ST	SANTA CLARA AV	342	51			
TOWNE CENTRE AT MERVYNS		328	50			
9TH ST	SANTA CLARA AV	324	51	O		
BROADWAY	SANTA CLARA AV	239	51	O		
BUENA VISTA AV	PARK ST	231	19	50	OX	
SANTA CLARA AV	STANTON	213	51	O		
8TH ST	SANTA CLARA AV	174	51			
MORTON ST	SANTA CLARA AV	158	51	O		
HARBOR BAY FERRY TERMINAL		146	50			
PAN AM WY	W MIDWAY AV	144	63			
ENCINAL AV	PARK AV	137	63	OX	631	632
WHITEHALL PL	WILLOW ST	135	50	63	W	
3RD ST	CENTRAL AV	127	631	632		
AUGHINBAUGH WY	MECARTNEY RD	122	631	50	OX	
OTIS DR	PARK ST	109	50	632	W	
GRAND ST	OTIS DR	108	63	632	W	
FERNSIDE BLVD	SAN JOSE AV	106	631			
CENTRAL AV	WEBSTER ST	105	631	63	632	W

Source: Automatic Passenger Counters, AC Transit, Summer 2006

Figure 17: AC Transit Daily Bus Ridership (Main Island - West)

Figure 18: AC Transit Daily Bus Ridership (Main Island - East)

Figure 19: AC Transit Daily Bus Ridership (Bay Farm Island)

Pedestrian-involved Collisions

Pedestrian-involved motorist collisions in the City of Alameda were used to prioritize pedestrian enhancement projects. Pedestrian-involved motor vehicle collisions have remained relatively stable in the City of Alameda from 2002 to 2007 (Table 16). The average number of pedestrian injury collisions totals 35 per year; and the average number of reported non-injury pedestrian collisions totals over 5 per year. Pedestrian-involved motor vehicle collisions equaled five percent of total collisions. These data most likely represent the more severe collisions, since the collisions that are reported tend to involve injuries or law enforcement personnel.

Table 16: Pedestrian-Involved Motor Vehicle Collisions (2002 – 2007)

Year	Fatalities	Injuries	Non-injuries
2002	0	33	3
2003	0	39	3
2004	2	36	3
2005	2	34	4
2006	0	39	9
2007	0	26	11
Total	4	207	33
Average	0.8	34.5	5.5

Source: City of Alameda Police Department, 2002-2007

Implementation Plan

The Implementation Plan section includes the following components:

- Project Implementation Process
- Primary Pedestrian Network
- Prioritization Criteria
- Pedestrian Project Categories
- Funding

Project Implementation Process

The steps that are needed to implement a pedestrian project from design to construction and evaluation are as follows:

- Project listed in the Pedestrian Plan
- Neighborhood input
- Board and Commission recommendations as appropriate
- City Council and Capital Improvement Program approvals
- Funding secured
- Detailed engineering or feasibility study
- Construction
- Construction inspections
- Maintenance (on-going)
- Evaluation / monitoring

Primary Pedestrian Network

The purpose of creating a primary pedestrian route network is to focus the inventory effort and the proposed projects on the corridors with the highest potential pedestrian demand. The Pedestrian Plan concentrates on identifying projects to enhance pedestrian travel on the high pedestrian demand areas in the City of Alameda. Future updates of the plan could address the lower demand areas.

The primary pedestrian network consists of streets with key origins and destinations as well as routes that have the highest demand (or potential demand) for pedestrian activity (Figures 20, 21 and 22). The network was determined using geographic information system (GIS) tools, street functional classification system, bus routes, land use, pedestrian count data and pedestrian-involved collision data. High pedestrian demand land uses include commercial corridors, major business districts, parks, schools, libraries, community buildings and public parking facilities.

Figure 20: Existing Primary Pedestrian Network – West Alameda

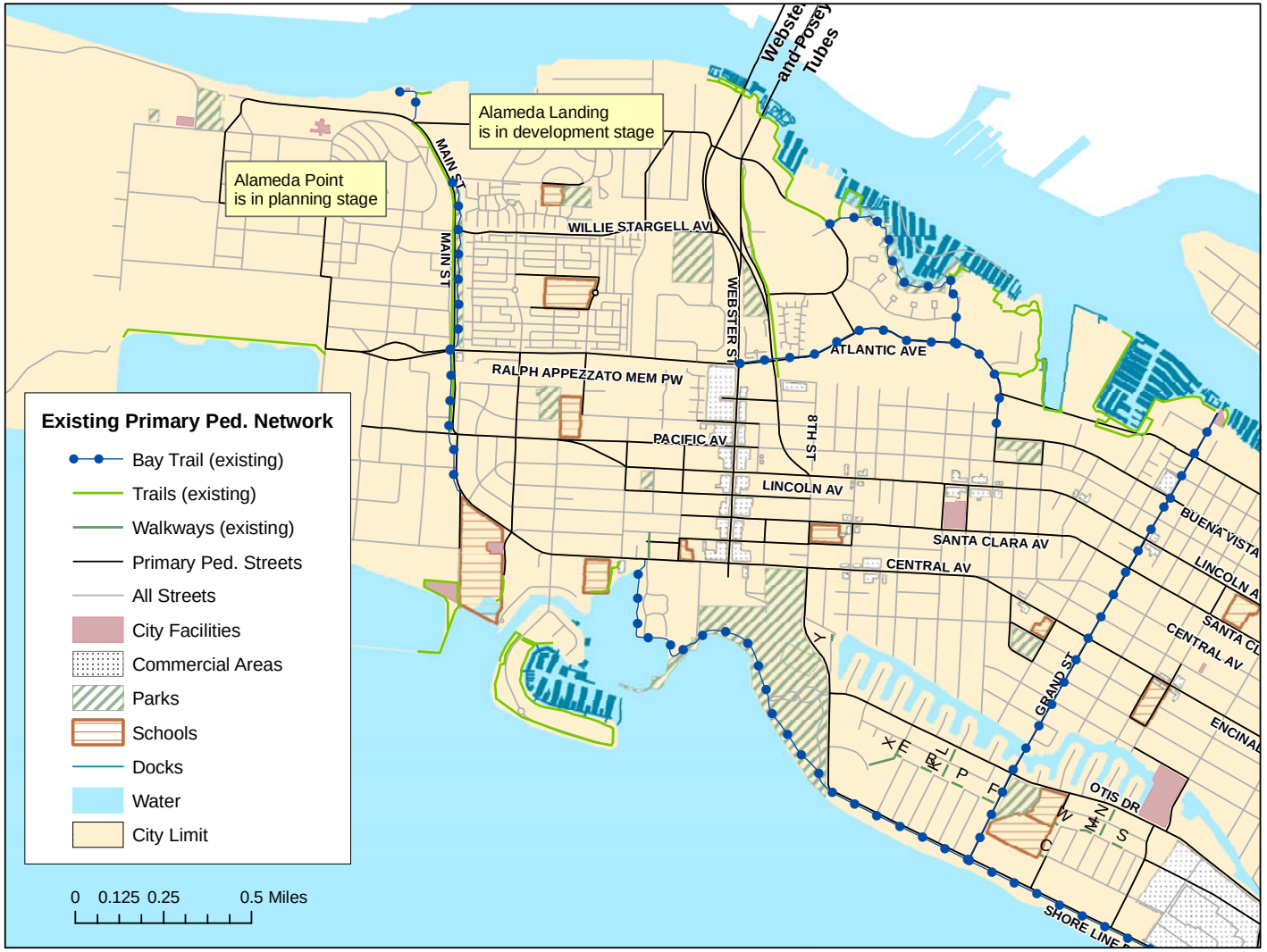


Figure 21: Existing Primary Pedestrian Network – East Alameda

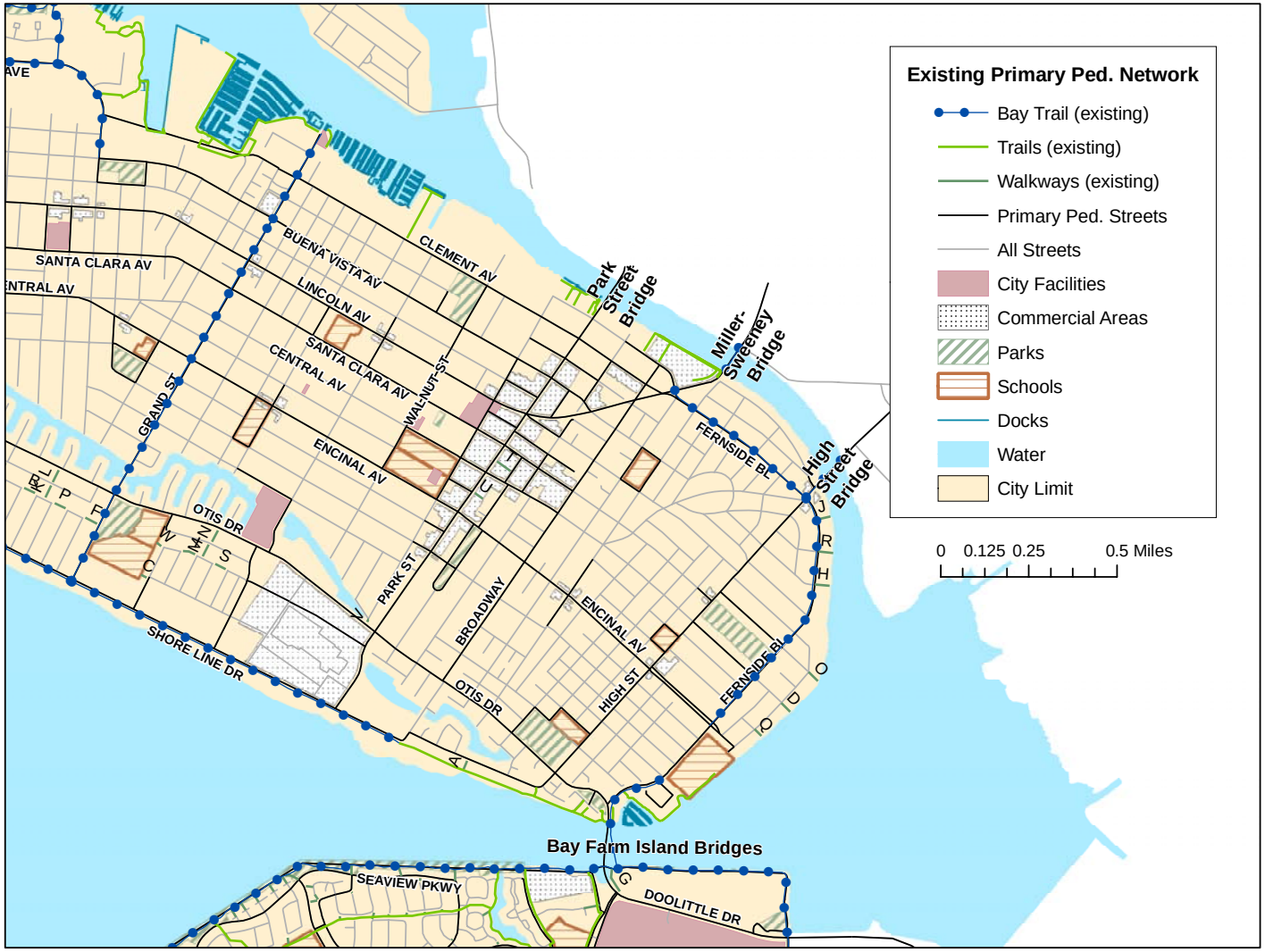


Figure 22: Existing Primary Pedestrian Network – Bay Farm

Prioritization Criteria

To balance the demand for pedestrian improvement projects with available resources, a prioritization process was established. Prioritization criteria were used to screen and rank pedestrian projects as stated in the above section. Geographic equity and the primary pedestrian network also were considered in determining which projects were included as high priority.

The Pedestrian Plan's screening and evaluation criteria were developed based on the Transportation Element's four goals, and are shown in the bulleted text under each proposed Transportation Element goal. ***The maximum total points possible are 100.*** The point range allotted for each criterion is shown in parentheses.

Circulation Goal: Plan, develop and maintain a safe, barrier-free and efficient transportation system to provide the community with adequate present and future mobility. (Maximum Total Points = 30)

- Interconnectivity / Gap closure (0-15 points)
- Existing or potential pedestrian volume based on counts (0-15 points) or Land Use Street Types: reflects the function of the street based on adjacent land uses (0-15 points)
    - Residential Corridor Street (5 point)
    - Gateway Street (10 points)
    - General Commercial and Industrial Street (10 points)
    - School and Recreational Zone (15 points)
    - Commercial Main Street (15 points)

Livability Goal: Balance the mobility needs of the community with the overall community objective of creating a livable human and natural environment. Coordinate the interaction of transportation systems development with land use planning activities. (Maximum Total Points = 20)

- Street Types: reflects the function of the street relative to the rest of the network (0-10 points)
    - Local Street (1 point)
    - Transitional Collector (1 point)
    - Island Collector (5 points)
    - Transitional Arterial (5 points)
    - Island Arterial (10 points)
    - Regional Arterial (10 points)
- Preserves, improves or creates new recreational, utilitarian, cultural, environmental, educational or historic benefits (0-10 points)
    - Preserves (10 points)
    - Enhances/improves (8 points)
    - Creates new (6 points)

Transportation Choice Goal: Encourage the use of transportation modes, especially at peak-period, other than the single-occupant automobile in such a way as to allow all

modes to be mutually supportive and to function together as one transportation system. (Maximum Total = 20 points)

- Reduces incompatibilities between pedestrians, motorists or bicyclists, including improving accessibility (0-10 points with maximum points given to locations with fatalities or with four or more pedestrian-involved collisions in previous five years)
- Benefits multimodal circulation and improves pedestrian access to transit – (0-10 points with maximum points given to projects that improve multiple modes)

Implementation Goal: Implement and maintain the planned transportation system in a coordinated and cost-effective manner. (Maximum Total = 30 points)

- Community input (0-5 points)
- Broad community interest and impact (0-5 points)
- Addresses multiple goals, objectives and policies of the Transportation Element of the General Plan (0-5 points)
- Project readiness / environmental clearance (0-10 points)
- Cost effectiveness – (0-5 points includes right-of-way acquisitions, grant availability and guaranteed funding for on-going maintenance)

Pedestrian Projects

Project categories are recommended to ensure that the City meets a wide range of pedestrian needs. The recommended project categories are based on the Pedestrian Plan's goals, objectives and policies, and are grouped as follows:

- Education Programs
- Island Access
- Pedestrian Districts/Corridors
- Public Walkways
- Safe Routes to Schools
- Sidewalk Installations
- Street Crossings
- Trails

The Pedestrian Plan groups projects into three priority levels – high, medium and low. The time horizon for the Pedestrian Plan is up to ten years. An explanation of the three priority levels is as follows:

- **High-priority projects**: Are expected to be funded and completed within five to ten years given the current levels of pedestrian-related funding.
- **Medium-priority projects**: Are expected to be funded as early as five years from plan adoption. To fund the medium-priority projects, the City plans to aggressively pursue additional and nontraditional funding sources.
- **Low-priority projects**: Are considered beyond the scope of the Pedestrian Plan. Insufficient funds do not make it possible to pursue these lower ranking projects.

The high-priority pedestrian projects and programs are estimated to cost $5.2 million; medium-priority projects are estimated to cost $75.1 million; the low-priority pedestrian projects are estimated to cost an additional $13.6 million (Table 17). Table 18 lists the projects in each priority level. More details about them are shown in Figures 23 thru 28.

Table 17: Pedestrian Plan Project and Program Cost Summary

Project/Program Category	High-priority Projects	Medium-priority Projects	Low-priority Projects
Expected Time Horizon	5 to 10 years	5+ years	beyond plan
Education Programs	$160,000	NA	NA
Island Access (includes new estuary crossing)	$1,000,000	$58,000,000	$75,000
Pedestrian Districts/Corridors	$500,000	$1,200,000	$3,630,000
Public Walkways	$375,000	NA	NA
Safe Routes to Schools	$600,000	NA	NA
Sidewalk Installations and Maintenance	$1,333,000	$585,000	$130,000
Street Crossings	$1,114,000	$4,107,000	$8,710,000
Trails (includes the Cross Alameda Trail)	$100,000	$11,242,000	$1,079,000
Total	**$5,182,000**	**$75,100,000**	**$13,624,000**

Table 18: Pedestrian Plan Projects

Projects	Costs
High-priority Projects	
Education Programs	
• Driver and Pedestrian Education and Enforcement Programs	$20,000
• Individualized Marketing	$90,000
• Organized Walks	$5,000
• Walking Maps	$45,000
Island Access	
• Estuary Crossing PSR/EIR and Local Matching Bank	$1,000,000
Pedestrian Districts (Park and Webster Streets)	$875,000
Public Walkways (25 total)	$375,000
Safe Routes to School (SRTS)	
• SRTS Route Mapping Program	$25,000
• School Route Enhancements	$500,000
• SRTS Striping and Signing Maintenance Program	$50,000
• Walking School Bus Program	$15,000
• International Walk to School Day	$10,000
Sidewalk Installations and Maintenance	$1,333,000
Street Crossings	
• Enhanced Pedestrian Signals (12 Accessible Signals and 7 Countdown Signals)	$214,000
• Intersection Enhancement Projects (8 intersections)	$800,000
• Street Crossing Maintenance	$100,000
Trails – Maintenance and Enhancements	$100,000
High-priority Project Total (excludes project costs funded through larger projects such as redevelopment)	$5,182,000
Medium-priority Projects	
Island Access	
• Estuary Crossing Project	$48,000,000
• Miller-Sweeney Bridge Improvements	$10,000,000
Pedestrian Districts (Otis Drive, Santa Clara Avenue and Central Avenue)	$1,200,000
Sidewalk Installations and Maintenance	$584,800
Street Crossings	
• Enhanced Pedestrian Signals (19 Accessible Signals and 16 Countdown Signals)	$407,000
• Intersection Enhancement Projects (37 intersections)	$3,700,000
Trails	
• Cross Alameda Trail	$3.65-$7.1 million
• Shoreline Drive Trail Widening and Resurfacing Project	$1.6 million
• Central Avenue Bay Trail Gap Closure	$42,308
• Trail Access Projects	$100,000
• Main Street Trail Extension	$100,047
• Shoreline Park Trail Widening and Resurfacing Project (Bay Farm Island)	$2.3 million
Medium-priority Project Total	$75,100,000

Projects	Costs
Low-priority Projects	
Island Access	
• Bay Farm Island Bridge Improvements	$5,000
• Bay Farm Island Bicycle Bridge Improvements	$35,000
• High Street Bridge Improvements	$25,000
• Park Street Bridge Improvements	$10,000
Pedestrian Districts (11 total)	$3,630,000
Sidewalk Installations and Maintenance	$129,600
Street Crossings	
• Enhanced Pedestrian Signals (27 Accessible Signals and 25 Countdown Signals)	$610,000
• Intersection Enhancement Projects (81 intersections)	$8,100,000
Trails	
• Hancock Street Trail	$142,925
• Bayview Drive Shoreline Trail Eastward Extension	$592,317
• Ballena Isle Peninsula Trail	$262,257
• Paden School Trail Improvements	$81,983
Low-priority Project Total	$13,624,000

Figure 23: High-priority Pedestrian Projects (Main Island - West)

Figure 24: High-priority Pedestrian Projects (Main Island - East)

Figure 25: High-priority Pedestrian Projects (Bay Farm Island)

Figure 26: Medium priority Pedestrian Projects (Main Island - West)

Figure 27: Medium-priority Pedestrian Projects (Main Island - East)

Figure 28: Medium-priority Pedestrian Projects (Bay Farm Island)

Education Programs

Description

The primary goals of education programs are to instill walking habits for the long term by replacing vehicle trips with walking trips and to educate roadway users about pedestrian laws. The below potential opportunities are recommended to educate pedestrians and motorists about the benefits of walking and the rules of the road and to provide information about pedestrian concerns. Safe Routes to School (SRTS) education programs are covered under the SRTS project category shown below.

Driver and Pedestrian Education and Enforcement Programs: Create educational media spots for Alameda's public access television channel and other media outlets. The education campaigns will focus on following the rules of the road and on understanding new pedestrian-related features such as in-pavement crosswalk lights. Coordinate with the Police Department to target select areas throughout the City based on special events, collision data or community interest for sting operations or speed awareness trailers.

Individualized Marketing: Establish an on-going dialogue and provide information to residents about alternatives to driving. "Transit ambassador" or "travel trainers" will assist residents in determining the most efficient bus, ferry or walking routes. The City will work with hotels, motels and tourist attractions in Alameda to provide visitors with information on transit, bicycling and walking. This concept originated in Europe where it has been applied to almost 40 locations in Germany, Austria and Sweden. A local non-profit example is the Transportation and Land Use Coalition's program called TravelChoice, which provides households with personalized transportation information.

Organized Walks: Promote through a marketing campaign senior and other community member walk encouragement programs to focus on exercise, safety and education.

Walking Maps: Develop a pedestrian map using the Bike Alameda as a potential base map. Create and promote a historic walking tour, which could include a self-guided brochure and map.

Potential Funding Sources

- Measure B
- Office of Traffic Safety
- Transportation Enhancement Activities

Order of Magnitude Cost

The below costs reflect the monies needed for high-priority programs lasting five to ten years. No medium- or low-priority education projects are listed.

- Driver and Pedestrian Education and Enforcement Programs: $20,000
- Individualized Marketing: $90,000
- Organized Walks: $5,000
- Walking Maps: $45,000
- **Total Program Costs**: $160,000

Island Access

Description

The City will consider several island access strategies including improvements to existing bridges and tubes as well as new facilities and programs to encourage pedestrian crossings onto or off the island. The County owns and maintains all the main estuary bridges except for the Bay Farm Island Bicycle Bridge, which is owned by Caltrans and maintained by the County.

High-priority Project

Estuary Crossing Project Study Report / Environmental Impact Report and Local Matching Bank

The Estuary Crossing Feasibility Study for an alternative pedestrian/bicyclist crossing of the estuary between west Alameda and downtown Oakland is currently underway. The goal of an enhanced estuary crossing is to create an easy-to-use, safe and enjoyable crossing to enhance the Bay Area's regional bicycle, pedestrian and transit networks. An enhanced crossing would provide bicyclists and pedestrians with easier access to Jack London Square, Bay Area Rapid Transit (BART) stations, Oakland Amtrak train station, Alameda/Oakland ferry terminals, the Bay Trail and the future Alameda Landing development.

Once the Estuary Crossing Feasibility Study is completed by early 2009, a Project Study Report (PSR) / Environmental Impact Report (EIR) will be needed before project construction can proceed. The PSR/EIR only will be funded if the Feasibility Study recommends that one or more project alternatives are feasible.

The Estuary Crossing project will need a substantial amount of funding beyond what is currently available. The City will create a local matching fund account to ensure readiness when other funding sources become available, and will pursue outside funding during the EIR phase.

Medium-priority Project

Estuary Crossing Project

The actual construction of the Estuary Crossing project is placed as a medium-priority project primarily because the City recognizes that a significant amount of outside funds will be needed to complete the project. This project only will be funded if the Feasibility Study and EIR recommend that one or more project alternatives are feasible.

Miller-Sweeney Bridge Improvements

This project will improve access between the City of Alameda and Fruitvale BART and the Fruitvale area of Oakland. This project will provide pedestrian amenities such as pedestrian-scaled lighting directed on the paths and emergency callboxes. This project will open the rail bridge for bicyclists and pedestrians as an interim measure until rail

returns to Alameda. The City of Alameda would need to obtain an easement from the railroad company. The bridge project will be consistent with Surface Transportation Board rail operations and any future joint rail-trail use projects. This project also will improve the pedestrian connection between the bridge and Bridgeside Shopping Center and between the Marina Drive/Fernside Blvd. area on the east side.

Low-priority Projects

Bay Farm Island Bicycle Bridge Improvements
This project provides path enhancements on the Bay Farm Island side of the bridge. The following features could be included: lighting, emergency callboxes, fencing, security cameras, path resurfacing, artwork, benches and landscaping/trees. A feasibility study also will consider on-going maintenance and operations of enhanced treatments and features.

Bay Farm Island Bridge Improvements
This project provides path enhancements on the walkway that is located on the southwest side of the bridge. The following features could be included: lighting, emergency callboxes, enhanced approaches to bridge, artwork and general upgrades. A feasibility study also will consider on-going maintenance and operations of enhanced treatments and features.

High Street Bridge Improvements
This project will provide pedestrian amenities such as pedestrian-scaled lighting directed on the paths and emergency callboxes as well as pedestrian enhancements at the adjacent intersection (Marina Drive/High Street). A feasibility study also will consider on-going maintenance and operations of enhanced treatments and features.

Park Street Bridge Improvements
This project will provide improved pedestrian access to Park Street Landing and the shoreline by providing improved paths to these two destinations. Other improvements could include pedestrian-scaled lighting directed on the paths, emergency callboxes and general upgrades. A feasibility study also will consider on-going maintenance and operations of enhanced treatments and features.

Potential Funding Sources

- ACTIA Measure B funds
- Disaster preparedness funds such as Homeland Security monies
- Regional Bicycle and Pedestrian Program
- Safe Routes to Transit
- State Transportation Improvement Program
- Transit funding
- Transportation Enhancement Activities
- Transportation Fund for Clean Air

Order of Magnitude Cost

High-priority Project Cost

Estuary Crossing EIR Study and Local Matching Bank: $1 million

Medium-priority Project Costs

Estuary Crossing Project: $48 million (based on the most expensive potential alternative)
Miller-Sweeney Bridge Improvements: $10 million
Medium-priority Project Total: $58 million

Low-priority Project Costs

Bay Farm Island Bridge Improvements: $5,000
Bay Farm Island Bicycle Bridge Improvements: $35,000
High Street Bridge Improvements: $25,000
Park Street Bridge Improvements: $10,000
Low-priority Project Total: $75,000

Pedestrian Districts/Corridors

Description

The main purpose of pedestrian districts is to emphasize pedestrian needs along sections of streets where pedestrian demand is or could be high, based on adjacent land uses and transit activity. No formal designations of pedestrian districts/corridors currently exist. The Pedestrian Plan recommends specific street segments as pedestrian districts/corridors. Pedestrian districts/corridors are a subset of the primary pedestrian network. Street segments qualify as pedestrian districts/corridors if they have the following components, which are similar to the pedestrian district components outlined in the City of Portland's Pedestrian Plan:

- Primary pedestrian network as designated by the Pedestrian Plan
- Length: more than 400 feet
- Transit service
- Mix of land uses that encourage walking
- Size: 2 to 200 acres in size

Pedestrian enhancements that could be considered must be consistent with each street's functional classification system. Potential enhancements include:

- Art (functional art: utility features in sidewalk area, drinking fountains, trash containers)
- Benches
- Bike lanes – to provide an increased lateral separation between pedestrians and motor vehicles, which helps to provide a more comfortable walking experience
- Bus bulb-outs
- Bus shelters or enhanced bus stops
- Crosswalks: high visibility markings where significant crossings occur
- Curb extensions
- Driveways: minimize and narrower, while ensuring adequate vehicle and truck access
- Gateways: welcome signage, landscaping or art display
- In-street pedestrian signs or lighting
- Medians or pedestrian refuge islands
- Narrower travel lane width
- Narrower turning radii while ensuring adequate vehicle and truck access
- Landscaped sidewalk buffer
- On-street parking
- Small "pocket" parks or plazas
- Street striping to reduce the visual width
- Street trees/landscaping
- Walkways between buildings or to/from origins and destinations
- Widened sidewalks

High-Priority Projects

High-priority pedestrian districts/corridors to create include:

- Commercial Districts (ranked equally)
    - Park Street between Clinton Avenue and Park Street Bridge (4,900 feet)
    - Webster Street between Central Avenue and Atlantic Avenue / Ralph Appezzato Memorial Parkway (5,000 feet)

Medium-priority Projects

Medium-priority pedestrian district/corridors to create include:

- Commercial Districts
    - Otis Drive between Park Street and Willow Street (2,200 feet)
    - Santa Clara Avenue between Walnut Street and Broadway (2,700 feet)
    - Central Avenue between Walnut Street and Broadway (2,600 feet)

Low-priority Projects

Future low-priority pedestrian districts/corridors to consider include:

- Commercial District
    - Island Drive between Mecartney Road and Clubhouse Memorial Drive (1,500 feet) and Mecartney Road between Verdemar Drive and Island Drive (1,500 feet)
- Residential Mixed Use (in priority order)
    - High Street between Encinal Avenue and Briggs Avenue (500 feet)
    - High Street between Gibbons Drive and High Street Bridge (500 feet)
- Historic Railroad Stations (in priority order)
    - Morton Station on Encinal Avenue (500 feet)
    - Chestnut Station on Encinal Avenue (500 feet)
    - Versailles Station on Encinal Avenue (550 feet)
    - Willow Station on Lincoln Avenue (500 feet)
    - Bay Station on Lincoln Avenue (1,100 feet)
    - 9th Station on Lincoln Avenue (400 feet)
    - Stanton Station on Lincoln Avenue (400 feet)
    - Grand Station on Lincoln Avenue (550 feet)

Potential Funding Sources

- Business Assessment District
- Community Based Transportation Planning Grants
- Measure B
- New Freedom Program
- Redevelopment funds
- Traffic Engineering Technical Assistance Program
- Transportation Enhancement Activities
- Transportation for Livable Communities

Order of Magnitude Cost

High-priority Projects

Pedestrian District Planning and Design Studies
This project assumes that the two high-priority Pedestrian Districts will be studied in two different phases for design work and community outreach totaling $50,000.

Pedestrian District Implementation
An implementation project would total $800,000, which amounts to about $400,000 per Pedestrian District if two were to be created and funded.

Pedestrian District Maintenance
The City will maintain the enhanced infrastructure features to ensure that they continue to perform as intended when they were installed. A placeholder maintenance amount of ***$25,000 over five to ten years*** is included in the plan to ensure that once pedestrian districts are constructed that the City has sufficient funds to properly maintain them. The potential of a pedestrian corridor maintenance district, which would pay for maintenance through property taxes, could be considered during the planning and design phases of the Pedestrian District projects.

Pedestrian district maintenance includes restriping of enhanced crosswalks, repainting curbs, replacing in-street pedestrian paddles and other signs, landscaping, repainting bollards, trash receptacles or light poles. Maintenance projects originate from the City of Alameda's on-going scheduled maintenance efforts and community requests.

High-priority Projects Total

$875,000 (only $500,000 is included in the Pedestrian Plan because the Park Street Pedestrian District is expected to be part of a larger redevelopment project)

Medium-priority Projects Total

The three medium-priority projects are estimated to cost approximately $400,000 each to plan, design and implement, which equals $1.2 million.

Low-priority Projects Total

Eleven low-priority Pedestrian District/Corridor projects are included in the low-priority project list. Since the low-priority projects are smaller in scale than the high-priority projects, it is estimated that a lower cost amount is needed to implement each one. Thus, a total of $330,000 is estimated to plan, design and implement each low-priority Pedestrian District/Corridor projects, which equals $3,630,000.

Public Walkways

Description

Public walkways consist of pedestrian walkways between properties that are under the jurisdiction of the City of Alameda. Twenty-five public walkways exist in the City of Alameda, and mainly occur between homes and businesses. Improvements to walkways between homes that are under the City's jurisdiction could include:

- Accessibility
- Fencing
- Gateway features
- Graffiti removal
- Landscaping/trees
- Pedestrian-scaled lighting
- Signage
- Surface repairs

The City will determine the feasibility of providing these enhancements by analyzing maintenance and operations costs as well as the impacts to emergency access. This program also will address accumulated deferred maintenance, and could include plans for future public walkways to enhance connectivity.

Potential Funding Sources

- Adjacent property owners
- Disaster preparedness / emergency access monies
- Maintenance District
- Measure B
- Transportation Enhancement Activities

Order of Magnitude Cost

This project assumes that each walkway will be funded an average of $15,000 for community outreach, pedestrian improvements and maintenance over five to ten years. Since a total of 25 walkways exist, this project has an order of magnitude cost of $375,000. The potential of a public walkway maintenance district could be considered for a more long-term way to fund deferred maintenance on the public walkways. No medium- or low-priority public walkway projects are recommended.

Safe Routes to School

Description

Safe Routes to School projects are listed separately to emphasize the importance of having enhanced pedestrian infrastructure adjacent to schools and along school routes as well as a comprehensive Safe Routes to School program. These projects will compete for Safe Routes to School monies, which originate from federal transportation safety funding.

Successful Safe Routes to School Grants

The City of Alameda has implemented the following Safe Routes to School grants:

- Lincoln Middle School: On Fernside Blvd. from Washington Court to Encinal Avenue totaling $368,514 (2002/2003 SRTS Program)
    - Construct bulb-outs at two intersections
    - Extend existing bike lanes
    - Widen sidewalk
    - Install in-pavement crosswalk lights
- Lum Elementary School/Wood Middle School, Haight Elementary School, Chipman Middle School totaling $192,000 (2003/2004 SRTS Program)
    - In-pavement crosswalk lights
- Washington Elementary School (8th Street at Taylor Avenue) totaling $61,600 (2004/2005 SRTS Program)
    - In-pavement crosswalk lights

School Routes

The California Manual on Uniform Traffic Control Devices (MUTCD) Section 7A.02 (School Routes and Established School Crossings of the California MUTCD) states the following:

> "Government Traffic Agency Responsibility: Standard: Upon request of the local school district, responsible traffic authorities shall investigate all locations along the school route and recommend appropriate traffic control measures."

Safe Routes to School Maps and Route Improvements

The Public Works Department will work with each school and the Police Department to create and update a Safe Routes to School map that shows recommended paths for students to walk to/from school. The Public Works Department staff will meet at least annually with each school to identify and improve preferred routes for children to walk to school.

The goals of the Safe Routes to School mapping effort are to:

- Reduce traffic congestion in and around the school
- Increase the number of children who walk and bike to school

- Guide children to key intersections to cross the street thus minimizing multiple crossing locations
- Identify improvements to the school route

The Public Works Department will use student street locations, crossing guard locations and school attendance zone information to create and revise the maps and to improve the traffic control measures along the school route. The Public Works Department will address suggestions on pedestrian enhancements around schools and along school routes that arise from the map review process. Potential enhancements could include:

- Curb extensions
- Enhanced drop-off / pick-up areas on school property
- High visibility crosswalks
- In-street pedestrian paddles or lights
- Landscaped medians to act as pedestrian refuges
- Landscaped sidewalk buffers
- Narrower travel lanes through striping or hardscape
- On-street parking
- Other markings and engineering features to help direct and calm the motor vehicle traffic
- Signage
- Wider sidewalks

SRTS Striping and Signing Maintenance Program

The Public Works Department will address striping and signage issues that are found during fieldwork. Some maintenance examples include stop bar restriping, faded white curbs and obsolete signs.

Safety Programs

The MUTCD states in Section 7A.01 (Need for Standards) the following:

> "Parents, school administrators, traffic officials, civic leaders, and vehicle drivers share the responsibility of educating school pedestrians on the use of traffic control devices. Programs in the home and school to train the child as a responsible pedestrian are an important factor in improving their understanding of traffic control devices."

Walking School Buses

A Walking School Bus is a group of children who walk to school together with adult leaders. Parents are often volunteer leaders and escort children from designated Walking School Bus Stops to the school. For adult supervision, it is recommended that one adult escort be present for every three children ages four to six. For older elementary school children ages seven to nine years old, one adult is recommended for every six children. For children ten and older, fewer adults are needed. The parent leaders use the Safe Routes to School maps, which are developed by the Public Works Department, to determine the path to/from the school.

The Walking School Bus program is recommended to be initiated each year at the start of the school year with an official kick-off on International Walk-to-School Day, which is the first Wednesday in October of each year. To ensure a successful program, Public Works and Police Department staff are available to assist each school in developing and maintaining an on-going program, which could include training the volunteer leaders on pedestrian safety and providing them with reflective vests, Walk-to-School Day and Walking School Bus signage or first aid kits.

In a survey, which was conducted on Walk & Roll to School Day (Wednesday, October 3, 2007) by the Alameda PTA Council and Pedestrian Friendly Alameda with support from the Public Works Department, there were 782 elementary school children who stated that they would like to participate in a Walking School Bus program and there were 243 survey respondents who stated that their parents would be interested in being Walking School Bus leaders.

International Walk to School Day

International Walk to School Day occurs every year on the first Wednesday in October. The Public Works Department assists the schools and the City's Collaborative for Children, Youth & Families in organizing Walk to School Days. A brief overview of the steps needed to organize a Walk to School day is as follows:

1. ***Get Partners – Use existing Task Force***. Principal, police, parents, school officials, public works and community volunteers all contribute to the effectiveness of a Walk to School program.
2. ***Plan***. At least three months before the event, work with partners to decide what type of event fits the school and community. Local businesses may be willing to contribute donations or small gifts for participants.
3. ***Promote It***. Make announcements at school, register event with California Center for Physical Activity, write article for school newsletter, post flyers, hang signs in business sponsors, prepare a Walk-to-School proclamation for the City Council and the school board, hold traffic safety fairs at participating schools, have media coverage to bring visibility to the event's purpose, provide a walkability checklist to participating children.

Potential Funding Sources

- Climate Protection Grant program
- Federal Food and Drug Administration Nutrition Network Mini Grants
- Measure B
- Safe Routes to School monies (Federal and State)

Order of Magnitude Cost

The below costs reflect the monies needed for programs and projects ***over the next five to ten years***. No medium- or low-priority SRTS projects are recommended.

- SRTS Route Mapping Program to develop and annually update school route maps: $25,000
- School Route Enhancements: $500,000
- SRTS Striping and Signing Maintenance Program: $50,000
- Walking School Bus Program: $15,000
- International Walk to School Day: $10,000
- **Total: $600,000**

Sidewalk Installations and Maintenance

Description

Sidewalk Gap Closures

The majority of the streets in the City of Alameda have sidewalks; however, a few sidewalk gaps remain. Sidewalk installations are recommended at the below locations. A feasibility study, which would include community outreach, is needed for each potential sidewalk project before installation.

High-priority Projects (all part of developer funded projects)

- Central Avenue between W Pacific Avenue and the bike path south of W Pacific Avenue and Central Avenue intersection on west side (100 feet)
- Clement Avenue east of Grand Street on south side (200 feet)
- Grand Street between Eagle Avenue and Clement Avenue on the east side (400 feet)
- Grand Street between Ellen Craig Avenue and the estuary on the west side (1,100 feet)
- Main Street between Brush Street and W Pacific Avenue on the east side (750 feet)
- Main Street between Singleton Avenue and Ferry Terminal on northeast side (1,000 feet) – wetland area would be impacted
- Mariner Square Loop between Wilver Willie Stargell Avenue (formerly Tinker Avenue) and Mariner Square Drive – east side of street (1,900 feet) and west side of street (1,300 feet)
- State Route 260 (Webster Street) between Atlantic Avenue and Wilver Willie Stargell on west side of street (2,000 feet)
- **High-priority Project Total: 8,750 feet at $0 (high-priority projects are part of developer funded projects so are not funded through this plan)**

Medium-priority Projects

- Blanding Street – 2500 block on the west side (100 feet)
- Buena Vista Avenue between Everett Street and Tilden Way on south side of the street (100 feet)
- Constitution Way east of Marina Village Parkway (100 feet)
- Maitland Drive east of Fitchburg Avenue (300 feet) – not City property so would require easement
- Mecartney Road west of Garden Road on the north side (100 feet)
- Mecartney Road west of Maitland Drive on the north side (300 feet)
- Oak Street between Clement Street and Blanding Street on the west side (100 feet)
- Ralph Appezzato Memorial Parkway between Main Street and Webster Street on the south side (4,300 feet) – not City property so would require City purchase; part of Bay Trail and Cross Alameda Trail

- Sherman Street/Atlantic Avenue between Eagle Avenue and 1120 Atlantic Avenue on west side of street (800 feet) – part of a development project and Cross Alameda Trail project; requires Historic Advisory Board approval because an historic building exists within the right-of-way of the proposed sidewalk
- Tilden Way – both sides of street (6,000 feet) – Will be evaluated as part of the Exclusive Transit Right-of-Way Project
- Westline Drive between Otis Drive and Shoreline Drive on west side of street (1,400 feet) – not City property so will require easement
- **Medium-priority Project Total: 6,800 feet at $584,800 (excludes developer projects)**

Low-priority Projects (not on Primary Pedestrian Network)

- County Road – both sides of street (800 feet)
- Tynan Avenue between Mariner Square Drive and the adjacent office complex on both sides of street (700 feet)
- **Low-priority Project Total: 1,500 feet at $129,600**

Rubberized Sidewalk Maintenance Study

In 2003, the City obtained a federal grant to purchase materials to test rubberized sidewalks at 35 locations to evaluate whether rubberized is better at accommodating uplifts. The City installed most of the rubberized sidewalks in 2006 and a few in 2004 and 2005. A comprehensive evaluation of the rubberized sidewalks will help provide direction to staff whether this new material is worth an extensive investment. This evaluation will include a comparison of the maintenance costs for the life of both concrete and rubberized sidewalks.

The advantages of rubberized sidewalks are that the material is recycled from vehicular tires and is recycleable and the material is more durable than concrete so should last longer. The disadvantages of using rubberized sidewalks are that the installation costs are three times higher costing $30 per square foot compared to concrete at $10 per square foot and that the rubberized rectangular panels do not bend around corners making it difficult to install at corners. The higher installation costs occur in part because the surface has to be flat before installing the rubber panels making it more labor intensive. It is unclear if the rubber holds up under the weight of motorized vehicles so the City has not installed them in driveways. Community members have had mixed reactions with some in approval saying that the sidewalks are more cushioned yet others have stated that the colors do not match. Preliminary maintenance analysis indicates that rubberized sidewalks are a long-term option for sidewalks that are adjacent to medium-sized street trees and not for sidewalks adjacent to large-sized street trees. The large trees raise the rubberized sidewalks too quickly.

Potential Funding Sources

- Adjacent property owners
- Developers
- Measure B

- Safe Routes to School (Federal or State)

Order of Magnitude Cost

High-priority Projects

Installations: All high-priority sidewalk installations are part of developer funded projects.

Rubberized Sidewalk Maintenance Study: $15,000

Maintenance: Sidewalks require maintenance to ensure that the infrastructure is functioning properly. The City estimated in 2005 that it had an accumulated deferred maintenance for sidewalk repairs totaling $1,318,000.

High-priority Project Total: $1,333,000

Medium-priority Projects Total: $584,800 (using average unit cost estimate of $17.28 per square feet to install the abovementioned medium-priority sidewalks assuming five-foot sidewalks)

Low-priority Projects Total: $129,600 (using average unit cost estimate of $17.28 per square feet to install the abovementioned sidewalks assuming five-foot sidewalks)

Street Crossings

Description

Street crossing projects are grouped as follows:

- Enhanced Pedestrian Signals
- Intersection Enhancements
- Street Crossing Maintenance

Enhanced Pedestrian Signals

The Transportation Master Plan (TMP) policies recommend accessible pedestrian signals and pedestrian countdown signals at all the signalized intersections in the City of Alameda. This recommendation is based on the TMP guiding policy 4.1.1.f. Table 19 has two sections: high-priority and remaining intersections for enhanced pedestrian signals. Since the enhanced pedestrian signals project is a subset of the intersection enhancements project, this project used the same intersection rankings as the intersection enhancement project.

The City recommends installing the accessible pedestrian signals and the pedestrian countdown signals at the same time, if possible, to reduce installation costs. The accessible pedestrian signal installations are recommended with improved audible technology so the devices do not increase noise pollution for individuals in land uses adjacent to the intersections with accessible pedestrian signals.

Table 19: Proposed Locations for Enhanced Pedestrian Signals

Street1	Street2	Accessible Pedestrian Signals	Pedestrian Countdown Signals
High-Priority Intersections for Enhanced Pedestrian Signals			
Constitution Way	Atlantic Ave.	X	X
Eighth St.	Central Ave.	X	
High St.	Otis Dr.	X	X
Oak St.	Santa Clara Ave.	X	
Park St.	Buena Vista Ave.	X	
Park St.	Central Ave.	X	X
Park St.	San Jose Ave.	X	
Sherman St.	Central Ave. & Encinal Ave.	X	X
Webster St.	Atlantic Ave. & Ralph Appezzato Memorial Pkwy	X	X
Webster St.	Buena Vista Ave.	X	
Willow St.	Lincoln Ave.	X	X
High-priority Intersection Total		***12***	***7***

Street1	Street2	Accessible Pedestrian Signals	Pedestrian Countdown Signals
Medium-Priority Intersections for Enhanced Pedestrian Signals			
Broadway	Central Avenue	X	
Broadway	Encinal Avenue	X	X
Broadway	Otis Drive	X	X
Buena Vista Avenue	Everett Street	X	X
Buena Vista Avenue	Sherman Street	X	X
Constitution Way	Buena Vista Avenue	X	X
Encinal Avenue	Fernside Blvd.	X	X
Fernside Blvd.	Gibbons Drive & High Street	X	X
Grand Street	Encinal Avenue	X	X
Grand Street	Otis Drive	X	X
Eighth Street	Constitution Way & Lincoln Avenue	X	X
High Street	Central Avenue	X	X
High Street	Santa Clara Avenue	X	X
Island Drive	Robert Davey Junior Drive	X	X
Main St.	Ralph Appezzato Memorial Pkwy	X	X
Oak Street	Central Avenue	X	X
Sherman Street	Lincoln Avenue	X	X
Tilden Way	Blanding Avenue & Fernside Blvd.	X	
Webster Street	Lincoln Avenue	X	
Medium-priority Intersection Total		***19***	***16***
Low-priority Intersections for Enhanced Pedestrian Signals			
Atlantic Ave.	Challenger Dr.	X	X
Buena Vista Ave.	Broadway	X	X
Central Ave.	Fourth St. & Ballena Blvd.	X	X
Chestnut St.	Encinal Ave.	X	X
Chestnut St.	Lincoln Ave.	X	X
Doolittle Dr.	Harbor Bay Pkwy	X	X
Doolittle Dr.	Island Dr.	X	X
Eighth St.	Santa Clara Ave.	X	
Fernside Blvd.	Otis Dr.	X	X
Grand St.	Buena Vista Ave.	X	X
Harbor Bay Parkway	Maitland Drive	X	X
Harbor Bay Parkway	Ron Cowan Pkwy	X	X
High St.	Encinal Ave.	X	X
Lincoln Ave.	Grand St.	X	
Main St.	Ferry Terminal	X	X
Main St.	Pacific Ave.	X	X
Main St.	Singleton Ave.	X	X
Main St.	W Midway Ave.	X	X
Marina Village Pkwy	Challenger Dr.	X	X
Oak St.	Buena Vista Ave.	X	X
Park St.	Alameda Ave.	X	X

Street1	Street2	Accessible Pedestrian Signals	Pedestrian Countdown Signals
Park St.	Blanding Ave.	X	X
Park St.	Clement Ave.	X	X
Ralph Appezzato Mem. Pkwy	W Campus Dr.	X	X
Robert Davey Jr. Dr.	Packet Landing Rd	X	X
Third St.	Pacific Ave.	X	X
Tilden Way	Eagle Ave.	X	X
Low-priority Intersection Total		**27**	**25**

Intersection Enhancement Projects

The intersection enhancement projects will consider a wide range of features such as increased walk times at signals, in-street pedestrian paddles, enhanced marked crosswalks, lighting, in-pavement crosswalk lights, signage, parking restrictions, curb extensions and pedestrian refuge islands. Table 20 shows the high- and medium-priority intersections that were ranked using the prioritization criteria shown above. Appendix C lists the low-priority projects, which are not expected to be funded within the plan's time horizon.

Table 20: High- and Medium-priority Intersection Enhancement Projects

Street1	Street2
High-priority Intersection Enhancement Projects	
Central Avenue	Encinal Ave & Sherman St
Constitution Way	Atlantic Avenue
Encinal Avenue	Willow Street
Island Drive	Mecartney Road
Otis Drive	Willow Street
Park Street	Shoreline Drive
Santa Clara Avenue	Oak Street
Santa Clara Avenue	Walnut Street
High-priority projects: 8 intersections	
Medium-priority Intersection Enhancement Projects	
Broadway	Blanding Avenue
Broadway	Central Avenue
Broadway	Lincoln Avenue
Broadway	Santa Clara Avenue
Buena Vista Avenue	Tilden Way
Central Avenue	Eighth Street
Central Avenue	Lincoln Avenue
Central Avenue	Ninth Street
Central Avenue	Sixth Street
Central Avenue	Third St & Taylor Ave
Doolittle Drive	Island Drive
Encinal Avenue	Benton Street
Encinal Avenue	Lafayette Street
Encinal Avenue	Morton Street

Street1	Street2
Encinal Avenue	Oak Street
Encinal Avenue	Union Street
Fernside Blvd	High Street
Fernside Blvd	Tilden Way
Grand Street	Otis Drive
Grand Street	Santa Clara Avenue
Grand Street	Shoreline Drive
High Street	Central Avenue
High Street	Lincoln Avenue
High Street	Santa Clara Avenue
Island Drive	Robert Davey Jr. Drive
Lincoln Avenue	Willow Street
Mecartney Road	Belmont
Mecartney Road	Verdemar/Ironwood Road
Otis Drive	High Street
Otis Drive	Towne Centre
Otis Drive	Westline Drive
Park Street	Otis Drive
Puddingstone Road	Robert Davey Jr. Drive
Ralph Appezzato Memorial Parkway	Main Street
Santa Clara Avenue	Ninth Street
Santa Clara Avenue	Stanton Street
Shoreline Drive	Willow Street
Medium-priority projects: 37 intersections	

Street Crossing Maintenance

Street crossing maintenance includes restriping of crosswalks, repainting curbs, replacing in-street pedestrian paddles and other signs, landscaping, repainting bollards, trash receptacles or light poles. Maintenance projects also could include interim measures such as signage for low-priority projects. Maintenance projects originate from the City of Alameda's inventory efforts and community requests.

Potential Funding Sources

- Gas Tax
- Measure B
- New Freedom Program

Order of Magnitude Cost

High-priority Projects

The below costs reflect the monies needed for programs ***over the next five to ten years***.

- Enhanced Pedestrian Signals (assuming 8 devices are installed at each intersection): $214,000
- Intersection Enhancement Projects: $800,000 (assuming $100,000 for each intersection)

- Street Crossing Maintenance: $100,000
- High-priority project total**: $1,114,000**

Medium-priority Projects

- Enhanced Pedestrian Signals (assuming 8 devices are installed at each intersection): $407,000
- Intersection Enhancement Projects: $3.7 million (assuming $100,000 for each intersection)
- Street Crossing Maintenance: not applicable
- Medium-priority project total: **$4,107,000**

Low-priority Projects

- Enhanced Pedestrian Signals (assuming 8 devices are installed at each intersection): $610,000
- Intersection Enhancement Projects: $8,100,000 (assuming $100,000 for 81 intersections)
- Street Crossing Maintenance: not applicable
- Low-priority project total: **$8,710,000**

Trails

Description

Trails are a major generator of pedestrian demand, yet most are not under the jurisdiction of the City of Alameda. The City of Alameda will be involved in developing new trails such as the Cross Alameda Trail, maintaining and enhancing trails that are under the City's jurisdiction and providing enhanced access to existing trails to/from City streets. The below projects are all part of the San Francisco Bay Trail, which is a planned recreational corridor that will encircle the San Francisco and San Pablo Bays. Since the City of Alameda consists of an island and a peninsula, the Bay Trail is proposed to provide non-motorized bay access around the main island and Bay Farm Island.

High-priority Project

Trail Maintenance and Enhancements

This project ensures that the trails that are under the City's jurisdiction will be properly maintained and enhanced. The total amount budgeted for this project equals $100,000.

Medium-priority Projects

Central Avenue Bay Trail Gap Closure

This Bay Trail project would close the Bay Trail gap between Lincoln Avenue and Crown Drive, which is east of Paden Elementary School. This 3,000 foot segment would cost $42,308 (2007 dollars) for multimodal analysis, design, permitting, environmental and construction costs according to the 2005 San Francisco Bay Trail Project Gap Analysis Study.[6]

Cross Alameda Trail

The Cross Alameda Trail has the following preliminary components:

- Bay Trail – close to shoreline where feasible
- Connect Alameda Point to Miller-Sweeney Bridge (3.75 miles)
- Consider the former Alameda Belt Line property alignment, as allowed
- Consistent with the Surface Transportation Board authorized rail operations
- Consistent with joint rail-trail use
- Bike and pedestrian access to major redevelopment projects
- Combination of off-street path and on-street facilities
    - Alameda Point to Atlantic Avenue (off-street path)
    - East of Sherman Street / Clement Avenue (on-street bicycle facilities for the short term; potential shoreline path for the long term depending on

[6] Association of Bay Area Governments, Bay Trail, *The San Francisco Bay Trail Project Gap Analysis Study*, August 2005, p. 31.

future land uses; this section will be incorporated into the updated Bicycle Plan)

- Estimated Cost: $3.65-$7.1 million, which includes up to $3.5 million for right-of-way acquisition according to the 2005 Cross Alameda Trail Feasibility Study[7]
- Potentially could be funded in part by new development projects

Main Street Trail Extension

This Bay Trail project extends the existing trail on the east side of the street between Singleton Avenue and the Ferry Terminal. The 2005 San Francisco Bay Trail Project Gap Analysis Study lists this project as being 1,109 feet in length and costing $100,047 (2007 dollars) for design, environmental review, permitting and construction.[8]

Shoreline Drive Trail Widening and Resurfacing Project

This project widens and resurfaces the existing trail along Shoreline Drive between Robert Crown Memorial State Beach and Broadway. The City will work in conjunction with the East Bay Regional Park District to initiate this project. One proposed option is to install bike lanes on Shoreline Drive to provide more space for pedestrians on the existing trail. This Bay Trail segment has a length of 2.13 miles, and would cost approximately $1.6 million to upgrade according to the order of magnitude cost estimates shown in Appendix B.

Shoreline Park Trail Widening and Resurfacing Project (Bay Farm Island)

This project, which is located on Bay Farm Island, resurfaces the existing trail along Shoreline Park. In spot locations, the City will widen the trail. Permeable surfaces will be considered. This Bay Trail section has a length of 3 miles, and would cost approximately $2.28 million to upgrade assuming a ten-foot wide trail.

Trail Access Projects

The City is concerned about street crossings where trails intersect with streets. The total amount budgeted for this project is $100,000. Street crossing features could include striping treatments, enhanced crosswalk markings, lighting or in-pavement crosswalk lights or signs. Potential enhancement projects include:

- Broadway at Shoreline Drive: improve connection for both pedestrians and bicyclists
- Towne Centre to Shoreline Trail

Low-priority Projects

Hancock Street Trail

This Bay Trail project creates a trail on Hancock Street between Central Avenue west of Encinal High School and Alameda Park. The proposed trail is 1,584 feet long, and would

[7] City of Alameda Public Works Department, *Cross Alameda Trail Feasibility Study*, July 5, 2005, p. VIII-2.
[8] Ibid, p. 31.

cost $142,925 (2007 dollars) for design, environmental review, permitting and construction according to the 2005 San Francisco Bay Trail Project Gap Analysis Study.[9]

Bayview Drive Shoreline Trail Eastward Extension
This Bay Trail project extends the existing trail on Shoreline Drive eastward to close the gap in back of the houses located on Bayview Drive. The trail extension would be a permeable surface to have the least negative environmental impact. This 2,800 foot segment would cost $592,317 (2007 dollars) for design, permitting, environmental review and construction costs according to the 2005 San Francisco Bay Trail Project Gap Analysis Study.[10]

Ballena Isle Peninsula Trail
This Bay Trail project creates a trail on the Ballena Isle Peninsula totaling 3,540 feet. According to the 2005 San Francisco Bay Trail Project Gap Analysis Study, the cost of this trail would total $262,257 (2007 dollars).[11]

Paden School Trail Improvements
This Bay Trail project improves the existing trail east and south of Paden School off of Central Avenue. The trail has a length of 740 feet, and would cost $81,983 (2007 dollars) according to the 2005 San Francisco Bay Trail Project Gap Analysis Study.[12]

Potential Funding Sources

- Bay Trail Grant Program
- Developer
- Land and Water Conservation Fund
- Measure B
- Recreational Trails Program

Order of Magnitude Cost

High-priority Project

- Trail Maintenance and Enhancements: $100,000

Medium-priority Projects (in priority order)

- Cross Alameda Trail: $3.65-$7.1 million (2005 dollars)
- Shoreline Drive Trail Widening and Resurfacing Project: $1.6 million
- Central Avenue Bay Trail Gap Closure: $42,308
- Trail Access Projects: $100,000
- Main Street Trail Extension: $100,047
- Shoreline Park Trail Widening and Resurfacing Project (Bay Farm Island): $2.3 million

[9] Ibid, p. 31.
[10] Ibid, p. 31.
[11] Ibid, p. 31.
[12] Ibid, p. 31.

Medium-priority Project Total: $7,780,808-$11,242,355

Low-priority Projects (in priority order)

- Hancock Street Trail: $126,500 (2005 dollars)
- Bayview Drive Shoreline Trail Eastward Extension: $524,175 (2005 dollars)
- Ballena Isle Peninsula Trail: $232,100 (2005 dollars)
- Paden School Trail Improvements: $72,600 (2005 dollars)

Low-priority Project Total: $955,000

Funding

The Funding section discusses the funding sources that are available for pedestrian projects and funding levels for the City of Alameda.

Funding Sources

Table 21 highlights the federal, state, regional and local funding sources that are available mainly on a competitive basis for pedestrian infrastructure projects and programs.

Table 21: Funding Sources

Funding Source	Description
Federal	
Community Development Block Grant (CDBG)	Available for low-income neighborhoods to improve land use and transportation infrastructure.
Federal Food and Drug Administration Nutrition Network Mini Grants	Mini grants focus on neighborhood or street-level livability assessments.
Land and Water Conservation Fund (LWCF)	LWCF grants may be used for statewide outdoor recreational planning and for acquiring and developing recreational parks and facilities, especially in urban areas.
New Freedom Program	New Freedom monies are used to "support new public transportation services and/or alternatives beyond those required by the Americans with Disabilities (ADA) of 1990." Eligible pedestrian-related projects include projects that "promote enhanced pedestrian access to transit and other alternative modes of travel." The Metropolitan Transportation Commission (MTC) administers this grant.
Recreational Trails Program (RTP)	RTP annually provides monies for recreational trails and trail-related projects totaling over $3 million for the state of California.
Safe Routes to School (SRTS – Federal)	The Federal Highway Administration apportions Federal-aid Highway monies annually to states for state Department of Transportations to administer. California received $11 million in fiscal year 2006 and $14.8 million in fiscal year 2007. Infrastructure on school property is eligible to receive funds.
Transportation Enhancement Activities (TEA)	The TEA program funds transportation projects that help enhance the travel experience. The 12 eligible TEA categories include three that are pedestrian oriented: bicycle and pedestrian facilities, bicycle and pedestrian educational activities and preservation of abandoned railway corridors for bicycle and pedestrian use.
State	
Community Based Transportation Planning (CBTP) Grants	Caltrans administered CBTP monies are used mainly to fund planning activities for livable community projects such as affordable housing, sustainable developments, land use and transportation integration, transit-oriented developments, jobs/housing balance and expanded transportation choices.

Funding Source	Description
Environmental Justice (EJ) Planning Grants	Caltrans administered EJ planning monies are used to help engage low-income and minority communities in transportation projects early in the planning process to ensure equity and positive social, economic and environmental impacts occur. EJ monies total about $2 million annually with about one-half of it for pedestrian projects.
Office of Traffic Safety	Pedestrian safety projects are eligible. No geographic or programmatic quotas exist and the grant awards are merit based.
Safe Routes to School (SRTS) State Program	SRTS is administered by Caltrans, and funds engineering and education projects that improve safety to/from schools and that encourage school children to walk or bicycle to/from schools. The federal transportation bill also has a SRTS set aside. Infrastructure on school property is ***not*** eligible to receive funds.
Regional	
Bay Trail Grant Program	Grants are available to complete the spine and spurs of the Bay Trail, and are secured until 2010. Funding levels vary each year. Eligible projects include planning, design and construction of proposed Bay Trail segments. The Association of Bay Area Governments (ABAG) administers these grants.
Climate Protection Grant Program	The goal of this program is to "achieve meaningful reductions in greenhouse gas emissions through implementation of long-term solutions throughout the region." The "Youth Climate Grant" category potentially could be used to help promote the City's Safe Routes to School program. The Bay Area Air Quality Management District (BAAQMD) administers this grant program.
Lifeline Transportation	Lifeline, which totals about $6 million annually, funds projects that improve mobility for low-income residents of the nine-county San Francisco Bay Area. The first funding cycle allocated 20 percent to pedestrian projects. These funds are administered by MTC.
Regional Bicycle and Pedestrian Program (RBPP)	MTC administers the RBPP for regionally significant bicycle and pedestrian projects. The funds originate from the federal Congestion Mitigation and Air Quality (CMAQ) program. The program has two parts: – County share (75 percent) – Regional competitive (25 percent)
Safe Routes to Transit (SR2T)	SR2T, which totals about $2 million annually, funds pedestrian projects that improve access to regional transit and that reduce congestion on one or more Bay Area toll bridges. These funds originate from Regional Measure 2, which is the $1 increase in the bridge toll, and are administered by the Transportation and Land Use Coalition.
Traffic Engineering Technical Assistance Program (TETAP)	Successful applicants receive technical assistance from consultants hired by the MTC. The maximum grant amount is $30,000. TETAP supports safety, mobility or system integration studies on arterials such as feasibility studies, before/after evaluations, conceptual designs and on-call services.

Funding Source	Description
Transportation Fund for Clean Air (TFCA)	TFCA, which totals about $22 million annually, funds pedestrian projects that reduce motor vehicle emissions, and is distributed as follows: – County Program Manager Fund (40 percent) – Regional Fund (60 percent) Two percent of TFCA has been allocated to pedestrian projects. The funds are administered by BAAQMD, and originate from a $4 surcharge on motor vehicles registered in the Bay Area.
Transportation for Livable Communities (TLC)	TLC funds, which are administered by the Metropolitan Transportation Commission, focus on improving the vibrancy of core commercial areas, downtowns, transit corridors and neighborhoods, and is distributed as follows: – Regional capital program ($18 million annually) – County capital program ($9 million annually)
County	
Transportation Development Act (TDA) / Local Transportation Funds – Article 3	TDA funds originate from one quarter cent of the statewide sales tax. Each year, two percent of the County's TDA can be designated for pedestrian and bicycle facilities. TDA is administered by the Alameda County Congestion Management Agency (ACCMA)
Transportation Sales Tax – Measure B	A one-half cent sales tax for transportation improvements exists until 2022 when the current Measure B expires, and generates about $6 million per year. Alameda County has dedicated five percent of these funds for pedestrian and bicycle facilities and plans as follows: • Local pass through (75 percent) • Countywide discretionary (25 percent)
Local	
Adjacent Landowners	Adjacent landowners are responsible for maintaining sidewalks.
Business Assessment Districts	Requires a ballot by the businesses in an area to initiate. It is often used as a local match for streetscape improvement programs, which include pedestrian facilities.
City/County General Funds / Gas Tax	The City receives gas tax funds for transportation purposes. Pedestrian and bicycle projects can be incorporated into the City's transportation CIP budget, and all roadway projects should address bicycling and walking as part of routine accommodation.
Community Services District	Requires a neighborhood ballot to initiate this tax, which usually is levied for landscaping and lighting yet can include sidewalks and trails. Also known as a Maintenance Assessment District.
Developers – New Development or Redevelopment	The Planning Board and the City Council can require new land use developments or redevelopment projects to include pedestrian and bicycle facilities, lighting and landscaping as well as dedication of open space for trails and trail construction.
Donations	Corporate or individual donations: sponsorships, merchandising and special events. Examples include bench plaques, fun runs, festivals and trail adoption programs.

Funding Source	Description
In-kind Services	Donated labor and materials for facility construction or maintenance such as tree planting programs.
Parking In-lieu Fees	Developers are required to provide a certain amount of parking depending on the development. In lieu of parking spaces, the City could require a developer to pay into other transportation services, which could include pedestrian infrastructure.
Regional Transportation Mitigation Fees (TMF) / Local TMF	The City charges builders a fee to offset the public costs required to accommodate new development with public transportation infrastructure. Regional TMF / Local TMF are generally used for roadway improvements; however, some projects include pedestrian and bicycle facilities.
Tax Increment Financing (TIF)	TIFs apply to redevelopment areas. Bonds are issued based on expected tax increment monies that can be used for improved infrastructure, including pedestrian and bicycle facilities.
Transportation System Management (TSM) / Transportation Demand Management (TDM)	Once the City approves the Pedestrian Plan, the City could create a nexus with future development to fund the plan. The goal of TSM/TDM programs is to better manage the transportation system. New businesses create or modify pedestrian circulation, and could be required to contribute to a TSM/TDM bank, which would help improve the City's overall transportation system.
Voluntary Easements	Voluntary easements from adjacent property owners help make new pedestrian and bicycle facilities affordable for local governments.
Non-profit Organizations	
Health Foundations	Focus on obesity prevention. Examples include California Wellness Foundation, Kaiser and California Endowment.
Rails to Trails Conservancy	Provides technical assistance for Rails-to-Trails projects.

Funding Levels

Over the next 10 years, the City of Alameda could expect to obtain an estimated $5 million from dedicated funding sources such as Measure B and Transportation Development Act monies and from the most common competitive sources such as Safe Routes to School, Safe Routes to Transit and Bay Trail grants. Additionally, developers will provide funding for pedestrian infrastructure in new developments such as Alameda Point and in redevelopment projects. The City will aggressively pursue additional and nontraditional funding sources to fund the remainder of the plan's projects and programs. This analysis is consistent with the one used in the Alameda Countywide Strategic Pedestrian Plan (2006).

Excluding Safe Routes to School grants, the City has applied for and obtained the following competitive grants:

- Association of Bay Area Governments Bay Trail
  - Cross Alameda Bay Trail Study
- Bicycle Transportation Account

    - Fernside Blvd, Lincoln Middle School to Aeolian Yacht Club (2006/07)
- Community Development Block Grant (CDBG)
    - Webster Street Streetscape
- Hazard Elimination System
    - In-Pavement Crosswalk Lights (2004/2005) at
        - Park Street at Webb between Santa Clara Avenue and Central Avenue
        - San Antonio Avenue between Webster Street and Taylor Street
- Measure B Discretionary
    - Alameda-Oakland Estuary Crossing Feasibility Study
    - Pedestrian Plan
- Transportation and Community System Preservation Program (TCSP)
    - Park Street Streetscape – Phase 2 (2006/07)
- Transportation for Livable Communities (TLC)
    - Park Street Streetscape
    - Webster Street Streetscape – Phase 1

Appendix A: Public Input Questionnaire

City of Alameda Pedestrian and Bicyclist Public Input Survey

The City of Alameda is developing a **Pedestrian Plan** and will be updating its **Bicycle Plan** to improve walking and bicycling access in the City of Alameda. This survey will help the City better understand walking and bicycling issues. Please return the survey no later than Friday, July 13, 2007.

Return to:

City of Alameda Public Works Dept.
950 West Mall Square, Room 110
Alameda, CA 94501-7552

Fax: 510-749-5867

Walking Issues

Identify the top two walking concerns: (Check all that apply)

1. Street name: _____ Cross streets: _____

__ Sidewalk __ Street crossing __ Curb ramp __ Street lighting __ Traffic congestion

Other: _____

Comments:

2. Street name: _____ Cross streets: _____

__ Sidewalk __ Street crossing __ Curb ramp __ Street lighting __ Traffic congestion

Other: _____

Comments:

Identify any off-street path issues on your walking routes: (Check all that apply)

Path name: _____ End points: _____

__ Width __ Surface __ Signage __ Curb ramp __ Path lighting __ Street crossing

Other: _____

Comments:

What is the purpose of your walking trips? (Check all that apply)

__ Personal/Family business __ Social/Recreational __ School/Church/Civic __ Work

How many minutes does the walking part of your trips take you? (Minutes – one way)

__ Personal/Family business __ Social/Recreational __ School/Church/Civic __ Work

What improvements would encourage you to walk more often? (Check all that apply)

__ Curb ramps / sidewalk repairs
__ Intersection safety
__ Midblock crossing enhancements
__ Multi-use path access
__ Walkway (between homes) improvements
__ Pedestrian districts / corridors
__ Safe routes to school
__ Safe routes to transit
__ Island access
__ Other _____

Bicycling Issues

Identify the top two major on-street bicycling concerns: (Check all that apply)

1. Street name: _____ Cross streets: _____

__ Congestion __ Street crossing __ No space to ride __ Street lighting __ Signal detection

Other: _____

Comments:

2. Street name: _____ Cross streets: _____

__ Congestion __ Street crossing __ No space to ride __ Street lighting __ Signal detection

Other: _____

Comments:

Identify any pavement surface issues on your bicycling routes: (Check all that apply)

Street name: _____ Cross streets: _____

__ Debris __ Potholes/cracks __ Railroad tracks __ Drainage __ Slippery

Other: _____

Comments:

Continue on back side or on second page.

City of Alameda Pedestrian and Bicyclist Public Input Survey (cont.)

Identify any off-street path issues on your bicycling routes: (Check all that apply)

Path name: _____ End points: _____

__ Width __ Surface __ Signage __ Curb ramp __ Path lighting __ Street crossing

Other: _____

Comments: _____

Identify any bicycle parking issues: (Check all that apply)

1. Street name: _____ Cross streets: _____

__ School site __ Bus stop __ Shopping __ Recreation __ Work site

Other: _____

Comments: _____

2. Street name: _____ Cross streets: _____

__ School site __ Bus stop __ Shopping __ Recreation __ Work site

Other: _____

Comments: _____

What is the purpose of your bicycling trips? (Check all that apply)

__ Personal/Family business __ Social/Recreational __ School/Church/Civic __ Work

How many minutes does the bicycling part of your trips take you? (Minutes – one way)

__ Personal/Family business __ Social/Recreational __ School/Church/Civic __ Work

What improvements would encourage you to bicycle more often? (Check all that apply)

__ Bicycle signal detection
__ Intersection safety
__ Bicycle parking
__ Multi-use path access
__ Walkway (between homes) improvements
__ On-street bicycle lane additions
__ Safe routes to school
__ Safe routes to transit
__ Island access
__ Other _____

General Information

Age: ___ Sex: ___ Female ___ Male Own car/truck: ___ Yes ___ No

Add your Name to the Mailing List (optional)

___ Pedestrian Plan (in progress!) ___ Bicycle Plan Update (coming soon!)

Name: _____ Email: _____

Address: _____ City/Zip: _____

Return Address:

_____

_____

_____

stamp

City of Alameda Public Works Department
950 West Mall Square, Room 110
Alameda, CA 94501-7552

Attn: City of Alameda Pedestrian and Bicyclist Public Input Survey

For additional survey copies, please contact the City of Alameda's Public Works Department at (510) 749-5918 or via e-mail at gpayne@ci.alameda.ca.us

Appendix B: Order-of-Magnitude Unit Cost Estimates

Item Description	Unit Cost	Unit	Year of Unit Cost Est.	Engineering (18%)	Construction (16%)	Contingency (10%)	Total Unit Cost
Accessible Pedestrian Signal	$850	Each	2007	$153	$136	$85	$1,224
Asphalt Planing (Full)	$3.8	sq yd	2006	$0.68	$0.60	$0.38	$5
Asphalt Planing Around Extensions	$4.5	SF	2006	$0.81	$0.72	$0.45	$7
Asphalt: Saw Cut, Remove	$3.8	SF	2006	$0.69	$0.61	$0.38	$6
Benches (6')	$2,033	Each	2005	$366	$325	$203	$2,928
Benches (8')	$2,297	Each	2005	$413	$368	$230	$3,307
Bike Rack (capacity = 2 bikes)	$200	Each	04 to 05	$36	$32	$20	$288
Bollards	$950	Each	2005	$171	$152	$95	$1,368
Bus Shelters	$12,000	Each	2005	$2,160	$1,920	$1,200	$17,280
Concrete Curb	$22	LF	2005	$3.94	$3.50	$2.19	$32
Concrete Curb at Tree Wells	$27	LF	2005	$4.80	$4.27	$2.67	$38
Concrete Gutter	$14	LF	2005	$2.56	$2.27	$1.42	$20
Concrete Island	$20	SF	1998	$3.54	$3.15	$1.97	$28
Concrete Median Island Curb 6"	$14	LF	1994	$2.52	$2.24	$1.40	$20
Concrete Rounded Planter Curb	$40	LF	2005	$7.26	$6.45	$4.03	$58
Crosswalk (Lighted)	$55,273	Each	2006	$9,949	$8,844	$5,527	$79,594
Crosswalk (Parallel)	$3	LF	2005	$0.57	$0.50	$0.32	$5
Curb / Gutter - New	$38	LF	2006	$6.90	$6.13	$3.83	$55
Curb/Gutter: Saw Cut, Remove	$18	LF	2006	$3.20	$2.84	$1.78	$26
Curb Ramp – Install or Upgrade	$2,520	Each	2007	$810	$720	$450	$4,500
Detectable Warning Device	$40	SF	04 to 05	$7.20	$6.40	$4.00	$58
Drinking Fountain	$2,592	Each	1996	$467	$415	$259	$3,732
Driveway - Concrete	$66	SF	2005	$12	$11	$7	$96
Graffiti Removal	$50	Hour	2007	$9	$8	$5	$72
Ground Cover	$25	Plant	2007	$4.5	$4	$2.5	$36

Item Description	Unit Cost	Unit	Year of Unit Cost Est.	Engineering (18%)	Construction (16%)	Contingency (10%)	Total Unit Cost
Irrigation Lateral 1" (outside joint trench)	$7	LF	2007	$1.3	$1.1	$0.7	$10.1
Irrigation Main 2" (outside joint trench)	$11	LF	2007	$2	$1.8	$1.1	$16
Irrigation: 4" Sleve Outside Joint Trench	$64	LF	04 to 05	$12	$10	$6	$92
Irrigation: Backflow Preventor	$3,900	Each	2007	$702	$624	$390	$5,616
Irrigation: Controller	$400	Each	2007	$72	$64	$40	$576
Irrigation: Flood Bubblers	$36	Each	2007	$6.5	$5.8	$3.6	$52
Irrigation: Gate Valve	$300	Each	2007	$54	$48	$30	$432
Irrigation: Quick Coupling Valves	$250	Each	2007	$45	$40	$25	$360
Irrigation: Remote Control Valve (1/2")	$300	Each	2007	$54	$48	$30	$432
Irrigation: Shrub Bubblers	$36	Each	2007	$6.5	$5.8	$3.6	$52
Landscaping Maintenance	$1	SF	2007	$0.18	$0.16	$0.10	$1.4
Lighting (14')	$1,900	Each	2005	$344	$305	$191	$2,748
Mulch	$2	SF	2007	$.36	$.32	$.2	$2.9
Multi-use Path - Compressed Aggregate	$2	SF	1997	$0.40	$0.36	$0.22	$3
Multi-use Path 2"Asphalt Concrete/4"BC	$10	SF	2007	$1.80	$1.60	$1.00	$14
Multi-use Path Paved w/Asphalt	$121	Ton	1995	$22	$19	$12	$174
Pavement Markings (4" Stripe)	$2	LF	2005	$0.29	$0.25	$0.16	$2.3
Pedestrian Countdown Signals	$1,200	Each	2002	$216	$192	$120	$1,728
Pedestrian Push Button and Connection	$1,400	Each	2007	$450	$400	$250	$2,500
Ped. Push Button Pole, Foundation, Wire and Box	$1,680	Each	2007	$540	$480	$300	$3,000
Pedestrian Signal Head and Frame	$500	Each	2007	$90	$80	$50	$720
Picnic Table 12'	$1,735	Each	1990	$104	$93	$58	$1,990
Sidewalk - Concrete	$12	SF	2007	$2.16	$1.92	$1.20	$17
Sidewalk Area Drains	$720	Each	2005	$130	$115	$72	$1,037
Sidewalk: Breakout and Demo	$5.2	SF	2006	$0.93	$0.83	$0.52	$7
Signs – Relocate Existing Traffic Sign	$140	Each	2007	$45	$40	$25	$250
Signs (Project)	$1,633	Each	2006	$294	$261	$163	$2,352
Street Light Installation	$2,163	Each	04 to 05	$389	$346	$216	$3,115
Thermoplastic 12" Stop Bar @ 16 ft	$41	Each	2004	$7.44	$6.61	$4.13	$60

Item Description	Unit Cost	Unit	Year of Unit Cost Est.	Engineering (18%)	Construction (16%)	Contingency (10%)	Total Unit Cost
Thermoplastic Bike Lane & Arrow Markings	$63	Each	2004	$11.40	$10.13	$6.33	$91
Thermoplastic Detail 22 @ 50 ft	$72	Each	2004	$12.96	$11.52	$7.20	$104
Thermoplastic IV (L&R) Arrows	$45	Each	2004	$8.04	$7.15	$4.47	$64
Thermoplastic Slow School Xing	$264	Each	2004	$47.58	$42.29	$26.43	$381
Thermoplastic Type VIII Arrows	$87	Each	2004	$15.66	$13.92	$8.70	$125
Thermoplastic VI Arrows	$108	Each	2004	$19.50	$17.33	$10.83	$156
Thermosplastic Stop Marking	$73	Each	2004	$13.08	$11.63	$7.27	$105
Topsoil	$65	Ton	2007	$11.7	$10.4	$6.5	$94
Traffic Signal Construction	$300,000	Each	2000	$54,000	$48,000	$30,000	$432,000
Trash Receptacle	$1,800	Each	2005	$324	$288	$180	$2,592
Tree Installation	$435	Each	2006	$78	$70	$44	$626
Tree Grates (Steel)	$1,183	Each	04 to 05	$213	$189	$118	$1,704
Tree Guard (Steel)	$633	Each	04 to 05	$114	$101	$63	$912
Tree Removal	$805	Each	2006	$145	$129	$81	$1,159
Tree Trimming / Maintenance	$100	Each/yr	2007	$18	$16	$10	$144
Tree Wells	$1,100	Each	04 to 05	$198	$176	$110	$1,584
Wheelchair Ramp	$19	SF	2006	$3.42	$3.04	$1.90	$27

Other costs for capital projects include:

- Clearing/grubbing (5 to 10 percent of project)
- Contingency (10 percent of project)
- Contract management (15 percent of project)
- Design (20 percent of project)
- Grading (10 percent of project)
- Mobilization/Demobilization (10 percent of project)
- Escalation (3 percent per year)
- Inspection (3 to 7 percent)

Appendix C: Low-Priority Intersection Enhancement Projects

Street1	Street2
Atlantic Avenue	1040 Atlantic Avenue
Aughinbaugh Way	Robert Davey Jr. Drive
Broadway	San Jose Avenue
Bruzzone Drive	Buena Vista Avenue
Buena Vista Avenue	Constitution Way
Buena Vista Avenue	Everett Street
Buena Vista Avenue	Lafayette Street
Buena Vista Avenue	Sherman Street
Central Avenue	Fifth Street
Central Avenue	Oak Street
Central Avenue	Park Avenue
Clement Avenue	Chestnut Street
Clement Avenue	Grand Street
Clement Avenue	Lafayette Street
Clement Avenue	Minturn Street
Clement Avenue	Schiller Street
Clement Avenue	Stanford Street
Clement Avenue	Union Street
Clement Avenue	Willow Street
Constitution Way	Eagle Avenue
Constitution Way	Pacific Avenue
Encinal Avenue	Broadway
Encinal Avenue	Park Avenue
Encinal Avenue	Regent Street
Fernside Blvd	East Shore Drive / Garfield Avenue
Fernside Blvd	Encinal Avenue
Fernside Blvd	Liberty Avenue
Fernside Blvd	Washington Street
Franciscan Way	Willow Street
Grand Street	Alameda Avenue
Grand Street	Clement Avenue
Grand Street	Clinton Avenue
Grand Street	Dayton Avenue
Grand Street	Encinal Avenue
Grand Street	Pacific Avenue
Grand Street	San Antonio Avenue
Grand Street	San Jose Avenue
Harbor Bay Pkwy	S. Loop Road
High Street	San Jose Avenue
High Street	Thompson Avenue
Lincoln Avenue	Constitution Way / Eighth Street
Lincoln Avenue	Ninth Street
Lincoln Avenue	Paru Street
Lincoln Avenue	Sherman Street
Lincoln Avenue	St. Charles Street

Street1	Street2
Maitland Drive	Melrose Avenue
Marina Village Parkway	Independence Drive
Mecartney Road	Fontana Drive
Oak Street	Alameda Avenue
Oak Street	San Jose Avenue
Oak Street	Times Way
Otis Drive	Broadway
Otis Drive	Court Street
Otis Drive	Sandalwood Isle
Santa Clara Avenue	Sherman Street
Santa Clara Avenue	Sixth Street
Santa Clara Avenue	St. Charles Street
Sea View Parkway	Aughinbaugh Way
Sheffield Road	Cheswick Court
Sheffield Road	Puddingstone Road
Sheffield Road	Roxburg Lane
Sherman Street	Pacific Avenue
Shoreline Drive	Sand Beach Road
Shoreline Drive	Towne Centre
Tilden Way	Buena Vista Avenue
Willow Street	Whitehall Place
Intersections not on the Primary Pedestrian Network	
Alameda Avenue	Paru Street
Ballena Blvd	Cola Ballena
Blanding Avenue	Oak Street
Buena Vista Avenue	Wood Street
Central Avenue	Chestnut Street
Central Avenue	Versailles Avenue
Constitution Way	Mariner Square Drive by Tynan Avenue
Dowling Lane	Chipman Street
East Shore Drive	Liberty Avenue
Fourth Street	Santa Clara Avenue
Independence Drive	Triumph Drive
Mariner Square Drive	Tynan Ave
Mound Street	Madison Street
Towne Centre	
Washington Street	Post Street