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1. OVERVIEW

Pasadena’s vision is for a livable community – one that is walkable, safe and healthy, with engaging places, a sound economy, vibrant and comfortable streets and interesting places of activity. Pasadena will be a City where development patterns and the pedestrian network provide safe, convenient, and enjoyable access throughout the developed portions of the City. Its neighborhoods will be protected from cut-through and speeding traffic. Its commercial districts will be easily accessible and will be linked to maintain them as viable and sustainable places to live.

1.1 INTRODUCTION

The City’s vision builds upon its rich history dating as far back as 1925 when a bold plan for creation of a new Civic Center was unveiled. Outstanding buildings with tree-lined streets and comfortable sidewalks resulted from that initiative and are a notable part of Pasadena’s identity.\(^1\)

The 1994 General Plan reaffirmed this design legacy by establishing urban design principles that are shaped and driven by community values reflecting views of residents.\(^2\) In addition to promoting good design and walkable streets, a guiding principle was established that Pasadena be a community where people can circulate without cars.\(^3\) Policies regarding historic preservation and maintaining a “city of gardens” environment also help protect the attractive and unique character of neighborhoods.\(^4\) Historic structures are preserved and designs which typify the garden character of Pasadena’s earlier apartments and bungalow courts are encouraged. These features and a favorable year-round climate contribute directly to an enhanced environment that makes Pasadena a great city for walking.

For Pasadena, walking is more than a pleasant pastime. It is an essential component of City goals to reduce reliance on the automobile, promote pedestrian safety and convenience, encourage the use of transit and bicycles, create transit-oriented developments, preserve unique qualities of the City’s historic districts,
raise awareness of the important role of walking in promoting public health, and enhance Pasadena’s attractive identity.

In 2004, the City updated the Mobility and Land Use Elements of the General Plan. These documents along with updated specific plans and updated Zoning Code, the Bicycle Plan, the Neighborhood Traffic Management Program, and the Short Range Transit Plan guide land use and transportation policy. Collectively, they provide guidance for the future by directing growth into specific areas close to transit facilities in order to protect established residential neighborhoods and create new and attractive business and mixed-use urban environments. These areas are based on a concept of higher density, and mixed use environments that support transit, bicycle, and pedestrian-oriented mobility strategies.

1.2 PURPOSE OF THE PEDESTRIAN PLAN

Pasadena recognizes that the quality of the walking experience often defines the livability of a community. The ability to walk safely, comfortably and conveniently from one place to another will often determine whether one chooses to walk, bike, take transit, or drive. The Pedestrian Plan builds upon the strengths of adopted policy and nearly $91 million of projects are contained in the Capital Program to improve the pedestrian environment. The Plan establishes the direction to guide future pedestrian improvements. It emphasizes the importance of the pedestrian in city life and aims to increase the public’s awareness of the importance of walking for good health and fitness.

The Pedestrian Plan provides guidance to preserve the walkability of pedestrian areas, to better design and develop pedestrian-friendly projects, to better integrate pedestrian improvements into street maintenance and traffic management programs, and to implement public education and enforcement programs that improve pedestrian safety and increase levels of walking.

1.3 PLANNING APPROACH

Pasadena’s Pedestrian Plan is part of an ongoing effort to make the City an even better place to walk. Much of the groundwork has been accomplished in previously adopted plans and policy documents and by the initiatives of community-based organizations including those promoting walking in places of special interest. The Pedestrian Plan relies on such programs to help raise public awareness about places of interest and the
importance of walking. It provides information and planning tools in support of the Open Space and Recreation Element, and the Recreation and Parks Master Plan and future update of Specific Plans to enable development of pedestrian improvements as part of new projects and expansion of existing ones.

Preparation of this document is particularly timely since the following significant City initiatives present opportunities to enhance the pedestrian environment and promote walking for short trips.

1.3.1 Improved Transit/Pedestrian Services

The City is committed to improving transit service in order to stem the increasing reliance on the automobile for most trips. Public officials have focused on this goal for the past decade with considerable success. Today, Pasadena benefits from an extensive network of regional and local transit services, most notably the opening of the Los Angeles County Metropolitan Transportation Authority (MTA) Metro Gold Line Light Rail service which has six stations in the City. Also, the City’s local transit “Area Rapid Transit System”, or ARTS, has undergone significant development since its inception in 1994. Currently, Pasadena is served by twenty-one transit routes and eighty-nine percent of the population resides within a quarter-mile walk of a transit route (approximately 1,300 feet). 5

Local service routes have been approved for future system expansion, coordination with regional services has been improved to promote use of regional services, and local bus stops throughout Pasadena are being analyzed to insure that appropriate safety provisions facilities and user amenities are provided.

Assuring good pedestrian access is critical to a well-functioning transit system. If transit users cannot easily walk to and from bus stops, fewer people will consider transit a viable travel option. The availability and condition of sidewalks, lighting for evening hours, bus pads and bus stop amenities can influence public opinion regarding use of the transit system.

The Pedestrian Plan provides data and analytical tools to address the needs of pedestrians. It identifies improvements that should be considered based on bus stop function, location and usage. It also links City initiatives that promote use of public transit with public health messages regarding the importance of walking.
1.3.2 Establishment of Pedestrian-Friendly Transit Oriented Districts

The opening of the Metro Gold Line Light Rail service provides significant opportunities to establish pedestrian-friendly Transit Oriented Districts around selected stations (as shown in Figure 1-1). By directing growth away from neighborhoods and into downtown and along major transit corridors, opportunities can be created to provide diverse and active economic, housing, and cultural places. Catering to pedestrians and improving the walkability and connectivity between light-rail stations and nearby housing, recreation, shopping, and employment are major components of transit-oriented development. The goal is a comfortable five- to ten-minute walk from the transit station to retail, office, or housing. Buildings, sidewalk lighting and landscaping will be designed for easy use by pedestrians to encourage walking and enliven public spaces.

Figure 1-1: Illustration of Transit-Oriented Boundaries in the Central District
1.3.3 Pedestrian Improvements Enabled by Traffic Signal Technology Upgrades

Pasadena will be installing improved traffic signal technology along major travel corridors over the next few years. This technology will enable the City to incorporate signal timing settings that will better address the needs of pedestrians at selected intersections during mid-day, evening and weekend periods. Also, these new traffic signals will be fitted with audible and tactile features to assist visual- and hearing-impaired persons. The information collected for the Pedestrian Plan will be used to implement such pedestrian-friendly improvements.

1.3.4 Walkable Neighborhoods with Traffic Management Programs

Walkable communities promote neighborliness and enhance the local character of places. With this in mind, Pasadena places an emphasis on the protection of its neighborhoods from the negative impacts of cut-through traffic. The Neighborhood Traffic Management Program specifies a comprehensive process for implementing traffic calming measures designed to improve the safety of local streets. This process differs from ongoing traffic reviews in scope, depth, and involvement of the entire residential community. Because the process is interactive at the neighborhood scale, it provides timely opportunities to obtain information from residents regarding popular destinations, how often they walk, and suggestions for improvement. This information will be used to augment traffic calming measures with programs to promote pedestrian activity.

1.3.5 Public Safety and Health Outreach Initiatives to Encourage Physically Active Lifestyles

Public outreach and information are essential implementing components of any policy plan. All of Pasadena’s programs and services incorporate extensive public review and outreach initiatives. For example, Pasadena regularly conducts safety programs particularly for children. The Safe Routes to School Program, classes on safe biking, and pedestrian safety initiatives conducted at grade schools prior to opening the light rail service are examples of City safety initiatives. Pasadena also participates in the region’s Watch the Road Campaign and conducts safe driving classes for high school students. Simple and effective campaigning messages are posted on bus shelters throughout the City.
The Pedestrian Plan identifies the need for additional public information on the importance of walking for public health. In addition to preparing this policy document, Pasadena is initiating an **Up and Moving Pasadena** campaign to promote walking. These are timely public policy initiatives since lack of physical activity has become a public health epidemic throughout the United States. Pasadena, along with many other communities throughout California, recently learned that childhood overweight rates continue to be a very significant public health concern. According to a recent statewide health study, thirty-two percent of Pasadena’s children in grades 5, 7, and 9 are considered overweight and are in need of increased physical activity. \(^7\) And, children who are overweight are likely to remain so as they age. Adults can lead by example since the large majority of trips each day are less than five miles. In fact, 27% of trips are one mile or less.\(^8\)

### 1.4 Organization of the Report

The Pedestrian Plan document is presented in five sections with four accompanying appendices. Additional information on implementation projects and design guidelines is provided in Volume 2 of the Pedestrian Plan.

**SECTION 1: OVERVIEW**

The Overview section discusses the purpose and organization of the Pedestrian Plan, the approach in preparing the document, and major related initiatives that provide timely opportunities for improving the City’s pedestrian environment.

**SECTION 2: BACKGROUND**

The Background section highlights the unique setting and character of Pasadena. It provides background information on the City, its population, employment, residential characteristics, and travel behaviors, as well as other factors to be taken into account in improving the City’s pedestrian environment.
SECTION 3: POLICY FRAMEWORK
The Policy Framework section synthesizes pedestrian policies of adopted plans and programs to provide a policy framework for future pedestrian programs and projects.

SECTION 4: CITYWIDE PEDESTRIAN NEEDS AND INFRASTRUCTURE IMPROVEMENTS
This section provides information on citywide programs to improve sidewalks, construct curb ramps, improve transit stops and adjust signal timing. This section also presents analytical tools to facilitate development of future projects to better address pedestrian needs.

SECTION 5: IMPLEMENTATION
The Implementation section provides a summary overview of initiatives to improve citywide pedestrian facilities, a summary of capital programs that constitutes nearly $91 million of pedestrian improvements in Pasadena, institutional arrangements and, sources of funds for pedestrian implementation. Additional information on implementation projects, a summary of the Central District Design Guidelines, precedents for pedestrian friendly urban design, and the Transportation Guidelines for Review of Projects is provided in Volume 2 of the Pedestrian Plan.

APPENDIX A contains full-page, high-resolution maps referenced throughout this document.

APPENDIX B contains full-page, high-resolution Safe Routes to School Maps.

APPENDIX C contains the Pedestrian Questionnaire for inclusion in Neighborhood Traffic Management Programs.

APPENDIX D provides a glossary of commonly used terms in transportation.

APPENDIX E contains reference material for those interested in additional studies regarding pedestrian safety and pedestrian improvements.
1 City of Pasadena 2004 Central District Specific Plan (adopted on Nov. 8, 2004); p. 5
2 City of Pasadena 2004 General Plan
3 http://www.ci.pasadena.ca.us/planning/deptorg/commping/GenPlan/principle5.asp
4 City of Pasadena Central District Specific Plan Environmental Impact Report (adopted on Nov. 8, 2004); p. 134
5 Arroyo Verdugo Cities Transportation Audit Project
6 City of Pasadena Central District Specific Plan (adopted on Nov. 8, 2004); p. 64
7 California Center for Public Health Advocacy, The Growing Epidemic Policy Brief No. 4, August 2005
8 http://www.dcd.gov/nccdphp/sgr/summ.htm
2. BACKGROUND

Pasadena’s natural and built environment, noted places of activity, and services offer significant opportunities to support the pedestrian. Located in the west San Gabriel Valley, the northern portion of the City extends into the San Gabriel Mountains. The Arroyo Seco nature area and the outstanding views of the San Gabriel Mountains and canyons provide a remarkable natural setting for the City. They are a part of the City’s identity and aid orientation. Scenic views and vistas are a special part of the public’s experience particularly along the major north-south roadways such as Linda Vista Avenue, Fair Oaks Avenue, Los Robles Avenue, Orange Grove Boulevard, Arroyo Boulevard, Lake Avenue, Allen Avenue, Altadena Drive, Sierra Madre Villa Avenue, and Michillinda Avenue. The Arroyo Seco also provides views of the mountains and is one of the most scenic areas in the City.¹

Pasadena has a rich architectural heritage that defines the scenic character within many neighborhoods. The City Hall, Library and Civic Auditorium were built as part of the “Bennett Plan” that established a Beaux Art framework for the City’s major civic buildings. These buildings and other historically significant structures such as the Rose Bowl stadium, and the historic Arroyo Hotel (now the 9th Circuit Federal Court of Appeals) add to the quality of the built environment. Cultural facilities such as the Pasadena Community Playhouse and establishment of the Pasadena Civic Symphony Orchestra and Civic Chorus contributed to Pasadena’s reputation through the 1920’s as an inviting and attractive tourist center and winter resort. A 1939 study rated it as the best city in the U.S. in which to live.²

The placing of the historic civic buildings established an early precedent for the relationship between buildings and outdoor open space in Pasadena. Their unique series of outdoor rooms, streets and alleys integrate art works, seating and lighting to create a high-quality urban pedestrian environment with visual interest and physical comfort.³ The recent restoration of an uninterrupted view between the library and the Civic Auditorium provides added opportunities to view the City Hall dome, a historic icon of Pasadena. The Colorado Street Bridge, designed in 1913 as a “work of art” and renovated in the early 1990’s to conform to seismic safety
standards, symbolizes the community’s commitment to value and celebrates its rich cultural heritage.  

Pasadena is home to renowned cultural and higher education institutions including the California Institute of Technology, the Pacific Asia Museum, the Norton Simon Museum, the Art Center College of Design, Fuller Theological Seminary and Pasadena City College. Along with ten libraries and other major places of interest and activity, they contribute collectively to the vitality, economy and prestige of the City. Popular activity centers include Old Pasadena, the Civic Center, the Playhouse District, South Lake Avenue, Hastings Ranch, North Fair Oaks Avenue-Orange Grove Boulevard, and the Brookside Park. Major commercial development is concentrated on Colorado Boulevard and Lake Avenue. These corridors generally exhibit a high level of architectural character and quality that contributes to a consistently strong and identifiable character. Many of the buildings are listed on the National Register of Historic Places. Historic residential neighborhoods and the City’s extensive landscaping enhance the City’s image. More than 1,000 buildings are listed on the National Register of Historic Places either individually or as part of a district.  

Pasadena’s Historic Districts include: Old Pasadena, Prospect, Civic Center, Civic Center-Financial, Ross Grove, Washington Square, Orange Heights, Arroyo Terrace, and Garfield Heights Landmark District. In one neighborhood alone, more than 700 homes along tree-lined streets have been renovated and restored.
Residents and visitors are encouraged to experience the quality of these areas through walking tours that celebrate Craftsman homes, walks and landscapes, pre-1900 “Queen Anne” Victorian homes, and bungalow cottages. Pasadena is referred to as “A City That Feels Like a Village” and the quality of its residential communities contributes significantly to that image. About 57,000 trees line City streets and there are about 25,000 park and wildland trees. The public investment in trees is valued at more than $100 million and private trees are estimated to be over 60% of the total urban forest. A recent survey of City residents reported that the characteristic most appreciated is its neighborliness.

The community’s name is derived from an Indian term for “crown of the valley” and a crown is incorporated into the City’s seal. Pasadena is also known as the “City of Roses”. Both are apt images for this community of 23 square miles that seeks to celebrate its history, protect its neighborhoods, encourage good urban design and improve its walkable environs.
2.1 POPULATION CHARACTERISTICS

2.1.1 Population

Pasadena is a highly urbanized area with a population of 133,936 according to the 2000 Census estimate. The City’s population grew at a pace of 1.8 percent from 131,591 in 1990 to 133,936 in 2000. In contrast, the population of Los Angeles County grew at a rate of 7.4 percent during the same time period, as illustrated in Table 2-1.9

Table 2-1: Population Trends

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasadena</td>
<td>131,591</td>
<td>133,936</td>
<td>1.8%</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>8,863,164</td>
<td>9,519,338</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

2.1.2 Density

The City covers an area of 23 square miles with an average density of 5,798.7 persons per square mile. Population density for the City is considerably higher than in Los Angeles County or California. Its density is nearly 2.47 times that of Los Angeles County and 26.7 times that of California, as illustrated in Table 2-2.10

Table 2-2: Density Comparison

<table>
<thead>
<tr>
<th></th>
<th>Pasadena</th>
<th>Los Angeles County</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Area, 2000 (Sq. Miles)</td>
<td>23</td>
<td>4,061</td>
<td>155,959</td>
</tr>
<tr>
<td>Persons Per Sq. Mile, 2000</td>
<td>5,798.7</td>
<td>2,344.2</td>
<td>217.2</td>
</tr>
</tbody>
</table>
2.1.3 Age

The median age for Pasadena residents is higher than Los Angeles County, 34.5 years compared to 32 years. There are fewer youth and children in the City relative to Los Angeles County. According to the 2000 Census, 23.1 percent of its population was below 18 years compared to 28 percent for Los Angeles County. However, the proportion of seniors (65 years and over) is higher as compared to Los Angeles County. There are 12.1 percent seniors in Pasadena in contrast to 9.7 percent for Los Angeles County. The largest segment of the City population is in the 25- to 34-year age group (18.5 percent) followed by 35- to 44-year age group (16.4 percent), and 45- to 54-year age group (12.5 percent).

Figure 2-1: Age Distribution

A cohort trajectory analysis of Pasadena’s population from 1990 to 2000 provides an insight into the movements of age groups over time. Figure 2-2 traces the growth and decline of population groups residing in Pasadena. It shows a strong growth of population reflected in the sharp upward trajectory for cohorts under age 34 in 2000. The 25 to 34 age group in 2000 sharply increased by 32 percent becoming the largest age group which was previously the 15 to 24 age group in 1990. The remaining cohorts, age 35 and above, exhibit a sharp downward trajectory.
In the last five years, the City has undergone a renaissance with the addition of new mixed-use developments, retail and entertainment venues, affordable housing, the Metro Gold Line, and other amenities. All of these factors have made Pasadena one of the most desirable places in Southern California, attracting diverse population groups. Most of this population growth appears to consist of young urban professionals in the knowledge-based information and services sector. As a result, a sharp upward trajectory for cohorts 35 years and above can be expected in 2010 and beyond.12

2.1.4 Race/Ethnicity and Foreign Born

The community is ethnically diverse. In 2000, Non-Hispanic Whites accounted for the largest share of population at 38.8 percent followed by Hispanics at 33.5 percent, Non-Hispanic Blacks at 13.9 percent, Non-Hispanic Asians at 9.9 percent, Non-Hispanic Other Races at 3.6 percent, and Non-Hispanic American Indians at 0.3 percent.13

Nearly 32.3 percent or 43,277 of the City’s residents are foreign born compared to 36.2 percent for Los Angeles County. As expected, most of the City’s foreign born are from Latin America (56.1 percent) followed by
Asia (31.5 percent), Europe (8.1 percent), Africa (2 percent), North America (1.9 percent), and Oceania (0.3 percent).¹⁴

2.1.5 Language Skills

The proportion of individuals (five years and over) speaking English only at home is higher in the City compared to Los Angeles County. Of the 124,685 persons (five years and over) in the City, 55 percent speak English only. In comparison, 45.9 percent speak English only in Los Angeles County. Correspondingly, 45 percent of the population (five years and over) speak a language other than English at home in Pasadena while 54.1 percent speak a language other than English in Los Angeles County.

Nearly one-fifth (22.2 percent) of the individuals (five years and over) speak English less than “very well” in Pasadena. Nearly 15.8 percent or 19,677 individuals with Spanish spoken at home do speak English less than “very well” followed by 4,299 (3.4 percent) individuals with Asian and Pacific Island languages spoken at home and 3,275 persons (2.6 percent) with Indo-European languages spoken at home.¹⁵

2.1.6 Educational Attainment

According to the 2000 Census, nearly twenty percent of the City’s population (25 years and above) has less than a high school diploma compared to 30 percent for Los Angeles County. In Pasadena, nearly 79.5 percent of the individuals are high school graduates or have higher education, compared to 69.9 percent for in Los Angeles County. Similarly, the proportion of individuals in the City with a Bachelor’s degree or higher is significantly higher than in Los Angeles County. Approximately 41.3 percent of the individuals had a Bachelor’s degree or higher compared to 24.9 percent for Los Angeles County, as illustrated in Figure 2.3. School enrollment statistics also support this trend. In Pasadena, approximately 35.1 percent of all students (Pre-K to post-graduate) are enrolled in college or graduate school.¹⁶ Pasadena public libraries holdings numbered 700,000 items; more than 1,500,000 items circulated in 2000.¹⁷
2.1.7 Income

In 2000, Pasadena’s median household income, median family income, and per capita income were 9.1 percent, 15.5 percent, and 36.3 percent higher than Los Angeles County respectively.\(^1\)

As illustrated in Table 2-3 and Figure 2-4, fewer households in Pasadena had an income level of less than $25,000 compared to Los Angeles County. The City’s distribution of households with income levels between $25,000 and $100,000 is quite similar to Los Angeles County. However, in the $100,000 and above household income range, the City has a significantly higher proportion of households relative to Los Angeles County. In Pasadena, 15.9 percent of the individuals were below the poverty level in 2000.\(^2\)
### Table 2-3: Comparison of Income Level

<table>
<thead>
<tr>
<th>Income Category</th>
<th>Pasadena</th>
<th>Los Angeles County</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Household Income</td>
<td>$46,012</td>
<td>$42,189</td>
<td>9.1%</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>$53,639</td>
<td>$46,452</td>
<td>15.5%</td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>$28,186</td>
<td>$20,683</td>
<td>36.3%</td>
</tr>
</tbody>
</table>

#### Figure 2-4: Household Income Distribution

![Household Income Distribution Chart]

#### 2.1.8 Occupation Profile

Pasadena is a predominantly white-collar city with more than 100,000 jobs. In 2000, 63,104 residents (16 years and over) were employed. Approximately half of these people were involved in management, professional, and related occupations compared to nearly one-third for Los Angeles County, as illustrated in Figure 2.5. The proportion of service occupations is quite similar to Los Angeles County. The second leading
category of jobs, sales and office occupations, accounted for 23.3 percent of occupations. Construction, extraction, and maintenance occupations provided for 5.1 percent of all jobs of City residents relative to 7.8 percent for Los Angeles County.

Figure 2-5: Employment by Occupation

The proportion of Pasadena residents employed in blue-collar jobs in the City was nearly half of Los Angeles County. In Pasadena, 7.8 percent of all employed residents were engaged in production, transportation, and material moving occupations compared to 15.5 percent for Los Angeles County.21

Pasadena’s plans call for an increase in employment in the Central District Specific Plan area. This area could provide as many as 2,250 additional employment opportunities.22 As reported in other sections of this Plan, much of this growth will be directed to transit-oriented areas around the Gold Line stations.
2.1.9 People with Disabilities

As illustrated in Table 2-4, 20.3 percent or 25,076 civilian non-institutionalized (five years and over) Pasadena residents were on disability status. Higher rates of disability are found in the City’s senior population (65 years and over). Nearly 42.6 percent of seniors were on disability status in Pasadena. Approximately one-fifth of the population between 21 and 64 years and 7.7 percent between the age group 5 to 20 years were on disability in the City.23

<table>
<thead>
<tr>
<th>Age Group/Disability</th>
<th>Pasadena</th>
<th>Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Population 5 to 20 years</td>
<td>26,196</td>
<td>100</td>
</tr>
<tr>
<td>With a disability</td>
<td>2,026</td>
<td>7.7</td>
</tr>
<tr>
<td>Population 21 to 64 years</td>
<td>81,923</td>
<td>100</td>
</tr>
<tr>
<td>With a disability</td>
<td>16,624</td>
<td>20.3</td>
</tr>
<tr>
<td>Population 65 years and over</td>
<td>15,090</td>
<td>100</td>
</tr>
<tr>
<td>With a disability</td>
<td>6,426</td>
<td>42.6</td>
</tr>
</tbody>
</table>

2.2 TRAVEL CHARACTERISTICS

2.2.1 Travel Behavior (Modal Split)

The commute to work pattern for Pasadena is very similar to that of Los Angeles County. Nearly 84 percent of people who live in Pasadena (16 years and over) commuted via car, truck, or van; 70.5 percent drove alone, while 13.3 percent carpooled. In comparison, 85.5 percent of Los Angeles County's commuters drove to work, as illustrated in Table 2.5.

The proportion of people taking public transportation to work was lower relative to Los Angeles County. In 2000, only 4.7 percent of commuters took public transit in Pasadena as opposed to 6.6 percent in Los Angeles.
County. It should be pointed out that these figures do not capture the increased public transit ridership resulting from the opening of the Metro Gold Line connecting Pasadena to downtown Los Angeles, enhanced ARTS bus services, and new housing in proximity to rail stations. The 13.7-mile-long light-rail service opened in July 2003 with six stations in Pasadena. There were 4.15 million boardings in fiscal year 2004 and 18,245 average weekday boardings.\(^{24}\) Clearly, public transit ridership in the community has increased significantly since the 2000 Census.

Table 2-5: Commuting to Work (Workers 16 years and over)

<table>
<thead>
<tr>
<th>Commuting to Work</th>
<th>Pasadena</th>
<th>Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Car, truck, or van - drove alone</td>
<td>43,652</td>
<td>70.5</td>
</tr>
<tr>
<td>Car, truck, or van - carpooled</td>
<td>8,209</td>
<td>13.3</td>
</tr>
<tr>
<td>Public transportation (including taxicab)</td>
<td>2,897</td>
<td>4.7</td>
</tr>
<tr>
<td>Walked</td>
<td>3,280</td>
<td>5.3</td>
</tr>
<tr>
<td>Other means</td>
<td>1,481</td>
<td>2.4</td>
</tr>
<tr>
<td>Worked at home</td>
<td>2,372</td>
<td>3.8</td>
</tr>
<tr>
<td>Total</td>
<td>61,891</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Nearly twice as many people walked to work in Pasadena as compared to Los Angeles County. According to the 2000 Census, 3,280 workers, or 5.3 percent of commuters, walked to work in the City. In contrast, only 2.9 percent commuters walked to work in Los Angeles County. However, Pasadena’s trends are similar to other communities throughout the nation. There has been a significant drop in people walking to work – a 25.5 percent decline over the last decade.

The mean travel time to work is 25.9 minutes for Pasadena residents compared to 29.4 minutes in Los Angeles County. About 3.8 percent of commuters worked at home and 2.4 percent used other means of travel at a rate quite similar to Los Angeles County.\(^{25}\)
2.2.2 Vehicle Availability

In 2000, of the 51,827 occupied housing units in Pasadena, 6,140 or 11.8 percent of residents had no vehicle, as illustrated in Table 2.6. It is likely that people in these households carpool, take public transit, or walk for work and non-work trips. Los Angeles County has nearly the same proportion of households with no vehicles.

Pasadena had fewer households with two or three or more vehicles compared to Los Angeles County. However, there were more households with one vehicle in the City (41.6 percent) compared to Los Angeles County (37.0 percent).

Table 2-6: Vehicles Available (Occupied Housing Units)

<table>
<thead>
<tr>
<th>Vehicle(s) Available</th>
<th>Pasadena</th>
<th></th>
<th>Los Angeles County</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>None</td>
<td>6,140</td>
<td>11.8</td>
<td>393,309</td>
<td>12.6</td>
</tr>
<tr>
<td>One</td>
<td>21,551</td>
<td>41.6</td>
<td>1,158,027</td>
<td>37.0</td>
</tr>
<tr>
<td>Two</td>
<td>17,743</td>
<td>34.2</td>
<td>1,079,792</td>
<td>34.5</td>
</tr>
<tr>
<td>Three or more</td>
<td>6,393</td>
<td>12.3</td>
<td>502,646</td>
<td>16.0</td>
</tr>
<tr>
<td>Total</td>
<td>51,827</td>
<td>100.0</td>
<td>3,133,774</td>
<td>100.0</td>
</tr>
</tbody>
</table>

2.2.3 Residential Areas

Pasadena has many attractive residential neighborhoods. As of 2003, there were 55,521 housing units, an increase of 4% over 1990 with an average of nine residents per acre (23 per hectare). The average household size is 2.5 persons.

Figure 2-6 shows the City’s land use patterns. Light-yellow and pink areas illustrate low-density and high-density residential areas, respectively. Some of these areas are home to larger numbers of children and senior citizens as illustrated in Figures 2-7 and 2-8.
Figure 2-6: Pasadena Land Use Map

![Pasadena Land Use Map](image)

Figure 2-7: Concentration of Residents under Age of 12

![Concentration of Residents under Age of 12](image)
2.2.4 Residents Who Walk to Work

Most travel studies are based on Census data and the most recent survey shows that 5.3% of Pasadena workers walk to work. While this information is useful in determining overall travel characteristics, it has significant limitations. These studies provide a very incomplete snapshot since they count only people over age 16 who walk to work. Yet we know that walking is a part of practically all trips. And this estimate excludes people younger than 16 and people not working. Figure 2-9 illustrates the distribution of Pasadena residents who walk to work.\(^\text{29}\)
2.2.5 Walking and Public Health

The headline statistics on pedestrian activity are from other data sources, particularly those of the public health community. Most people know that they need more exercise; the public is reminded of this annually by the U.S. Surgeon General. Nevertheless, due to lack of physical exercise and poor eating habits, obesity is becoming a public health epidemic.

Research conducted by the U.S. Center for Disease Control indicates that lack of physical activity is a major health problem in all age groups. In fact, physical inactivity and obesity rank second to smoking in their contribution to total mortality in the United States. Nearly 80% of inactive obese adults have diabetes, high cholesterol levels, high blood pressure, coronary artery disease, or other ailments.
Pasadena has long recognized the importance of a healthy community and established its own independent local health agency over 110 years ago. Pasadena is one of only three cities statewide to maintain a Public Health Department. One of the divisions, Health Promotion and Policy, develops policies for healthy behaviors, mobilizes communities for action, and monitors the health status of City residents. Since 1992, Pasadena has issued periodically a Quality of Life Index based on interviews of 1,000 people who work and live in Pasadena and Altadena. It is used for priority-setting and decision making in achieving a healthy community.

Promoting pedestrian activity is in the forefront of City initiatives. In addition to preparing a Pedestrian Plan, the City is undertaking a public awareness Up and Moving Pasadena campaign to promote awareness of public health and the need for physical activity. The planning for this walking campaign involves City, the Pasadena Unified School District, community agencies, and Pasadena residents.
2.3 **ACTIVE PEDESTRIAN PLACES**

Pasadena has many places of pedestrian activity, each with their own distinctive identities and needs. Following are some major places where there is active pedestrian activity and/or sensitive land uses requiring special attention.

### 2.3.1 Popular Pedestrian Destinations

**Old Pasadena** – Old Pasadena is the historical core of the City that has developed into a vibrant regional retail and entertainment destination.

**Civil Center/Mid-town Area** – The Civic Center is the governmental center of Pasadena, distinguished by the landmark City Hall, Central Library, and Civic Auditorium buildings.

**Playhouse District** – The Pasadena Playhouse District is developing as an arts-oriented area, anchored by the Pasadena Playhouse.

**South Lake Avenue and Hastings Ranch Areas** – These are popular shopping and dining areas. The Metro Gold Line and several Pasadena ARTS routes provide a convenient mode of transportation.

### 2.3.2 Schools and Parks

There are 32 public schools and approximately 20 private schools in Pasadena. Twenty-five of the public schools are located within the City limits while the other seven are located in Altadena and Sierra Madre.

Pasadena has twenty-three parks totaling more than one thousand acres of parkland. While operationally distinct, maintenance efforts in the Arroyo Seco as well as those in all other city parks similarly strive to keep parks safe, functional, and attractive for residents and visitors. Over the past few
years, the City’s parks have benefited from improvements in park maintenance service levels and the commencement and continuation of an Athletic Field Renovation Program.

Major park spaces have trails and paths to provide outdoor recreational opportunities. Recreation trails are commonly designed to provide experiences for different levels of accessibility.

Figure 2-10 illustrates the proximity between schools and parks throughout the City. Schools and parks are places where special care must be given to the safety of children. They are routinely reviewed for safe traffic conditions.

Figure 2-10: Location of Schools & Parks
2.3.3 Educational Institutions

Pasadena is also known as the home of colleges and universities, namely the California Institute of Technology (Caltech), Pasadena City College, Art Center College of Design, and Fuller Theological Seminary. These vibrant campuses encourage people to walk and require appropriate pedestrian provisions.

2.3.4 Transit Stops

Pedestrian travel and transit travel reinforce each other since every transit trip begins and ends with a pedestrian trip. If appropriate pedestrian facilities are provided, the trip to the transit stop is more pleasant and comfortable. And, if people do not feel safe or comfortable walking to transit stops, they are more likely to use their automobile. Additionally, a successful transit service must address persons with disabilities who may often rely on transit as their primary source of transportation.

Six major transit stations in Pasadena are part of the 13.7-mile Gold Line service that links to the regional transit network at Union Station in Los Angeles and provides riders with a near seamless connection to the Metro Red Line subway, the Metrolink commuter rail network and Amtrak. The rail service extends the reach of the Metro Rail system to 73 miles providing access from Pasadena to destinations throughout the region.

Pasadena’s Gold Line stations maximize access for passengers arriving by bus, bicycle, on foot, or by car, and serve major destinations within Pasadena. Improved pedestrian access and access for disabled persons are important features of these stations and their operating provisions. As illustrated in Figure 2-11, the six Gold Line Light Rail stations in Pasadena are:

- **SIERRA MADRE VILLA STATION** - This station is the interim eastern terminus of the first phase of the Gold Line. It serves as an intermodal transportation hub that connects travelers to local and regional transit services.

- **ALLEN AVENUE/COLLEGE STATION** - The Allen Station serves residential areas north and south of Colorado Boulevard, as well as the California Institute of Technology and Pasadena City College.

- **LAKE AVENUE STATION** - This station provides service to Pasadena’s financial district and the numerous office buildings, churches, shops, and restaurants along the Lake Avenue business corridor.
MEMORIAL PARK STATION - This station is located on the northern edge of historic Old Pasadena, adjacent to Memorial Park, the Pasadena Senior Center, and a short walk to the Civic Center, Pasadena City Hall, and nearby places of employment. It also provides transit service to the Levitt Pavilion, an outdoor pavilion located in Memorial Park, which provides summer concerts and special cultural events throughout the year.

DEL MAR STATION - This station is in the heart of Old Pasadena and within walking distance of many shops, restaurants, and theaters. It is also across the street from Central Park, the site of many special events, including the City’s annual Jazz and Blues Festival.

FILLMORE STATION - This station is located in the City’s biotechnical corridor and is within walking distance to medical offices, Huntington Memorial Hospital, and the Art Center College of Design’s downtown campus.
2.3.5 Transit Routes/Major Stops

Coordinated regional and local transit services operating throughout Pasadena include 15 routes operated by the MTA as well as community express services operated by Foothill Transit, Montebello Bus Lines, Sierra Madre commuter shuttles, and an express line operated by the Los Angeles Department of Transportation (LADOT).

The City of Pasadena ARTS bus service has seven local routes with more than 400 bus stops in the City, some providing local access, others enabling transfers to citywide and regional transit services. (Figure 2.12) Eighty-nine percent of residents live within a quarter mile of a transit stop. Transit routes are shown in Figure 2.11.
2.3.6 Transit Oriented Districts

Targeted development areas served by multimodal transportation systems, and linked to the surrounding community by pedestrian-friendly streets, will promote activity centers and urban villages with a reduced need for auto use. The nature of transit-oriented development supports convenient non-auto access to areas of interest throughout the city. These areas are designed particularly for pedestrians. Buildings, sidewalks, and landscaping should be designed for the pedestrian to encourage walking and enliven public spaces. Pedestrians should be able to easily access buildings from the street.
The Del Mar Metro Gold Line Station is a good example of a newly developed transit-oriented site. It includes several multistory residential buildings and is part of a larger “urban village” concept that includes public plaza areas, retail stores, and the restored former Santa Fe Depot. Light rail service is coordinated with local transit services and pedestrian needs are addressed. Because rail service at this station operates at-grade, extensive precautions were made to insure safe pedestrian access. Figure 1-1 (see p. 1-4) illustrates transit-oriented areas of Pasadena.

2.3.7 Entertainment/Special Events

Pasadena’s streets are particularly lively during its numerous and diverse special events. The most notable is the annual Tournament of Roses with the tradition of magnificent floral floats, equestrian riders, and marching bands. In 2006, the Rose Bowl hosted the National Championship game between the top two college football teams. On the day prior to the game, a food and arts festival involving more than thirty local restaurants was staged in Old Pasadena along Colorado Boulevard between Fair Oaks Avenue and Pasadena Avenue.

Every month, the Rose Bowl is home to the Rose Bowl Flea Market, thought to be the largest and most famous swap meet in California. Lasting all day, this very popular event attracts thousands of people to Pasadena looking for bargains and enjoying an outing.

Some events join culture and entertainment in the public right-of-way. Pasadena Heritage hosts a major party attended by thousands of people each year on the historic Colorado Street Bridge. Continuous live music, antique cars, children’s activities, and no-host food and beverages make this one of the City’s signature fund-raising events. Three stages provide live entertainment throughout the evening.

A series of free concerts, designed to interest all ages, backgrounds, and tastes, is held through the summer in Levitt Pavilion for the Performing Arts in Memorial Park, located in Old Pasadena. Art festivals are often held throughout the year. Also, the Pasadena Conference Center is preparing an expansion that will allow the City to be competitive in attracting conventions in an increasingly competitive field.

Citywide major events, and others like them, underscore the need for pedestrian management provisions that address the needs of large numbers of people to ensure safe, comfortable, and enjoyable
entertainment. The Department of Public Works, the Department of Transportation, and the Police Department jointly developed programs to address the particular needs of special events. The City’s Accessibility Issues Coordinator reviews these provisions to ensure that access for people with disabilities is provided by the sponsors of such activities.

2.3.8 Community Activities

Community-based activities attract pedestrians. For example, a weekly farmers’ market in the Villa Park neighborhood which provides local access to fresh fruits and vegetables is a popular destination.

2.3.9 Parking and the Pedestrian Connection

The City owns and operates twelve auto/parking facilities with over 6,500 spaces offering the public low rates and user conveniences. These parking facilities are in close proximity to retail, restaurant, entertainment, and office buildings. In addition, bicycle racks and/or lockers have been installed in some facilities pursuant to the City’s project review process. Many are close to the City’s ARTS bus routes, allowing people to park once and walk conveniently within Pasadena’s downtown.

Pasadena has designed its public parking facilities with pedestrians in mind. Safety provisions for pedestrian access and egress are carefully reviewed and the ground-floor exterior of each facility is designed to provide a sidewalk presence that is comfortable for the pedestrian. Located close to major places of activity, the parking facilities are well used by employees and visitors alike. Also, these facilities are good places to provide pedestrian-oriented information about places that one can walk to in the immediate vicinity and opportunities to use transit for short trips throughout the day.
The City recognizes that parking facilities provide opportunities to promote walking and transit for local trips. Visitors are encouraged to **Park Once and Walk** to nearby destinations.

### 2.3.10 Bicycling and the Pedestrian Connection

The **Park and Walk** concept also applies to bicycle users. Pasadena encourages people to use bicycles for short trips by providing convenient parking along frequently traveled bikeways, major destinations, and multimodal transportation services. More than 200 new bicycle racks have been installed throughout the City since 2003. Figure 2-13 illustrates the extensive coverage of the City’s bicycle parking facilities. The City also partners with the Metro to deploy a Bike-Transit Center at the Metro Memorial Park Station as part of the countywide bicycle program at major transit centers. When completed, the Pasadena Bike-Transit Center will provide secured and convenient parking to bike-transit users.

**Figure 2-13: Locations of Public Bicycle Parking in Pasadena**
1 City of Pasadena Central District Specific Plan (adopted on Nov. 8, 2004); p. 14
2 http://www.cityofpasadena.net/history/1930-1950.asp
3 City of Pasadena Central District Specific Plan (adopted on Nov. 8, 2004); p. 14
4 http://www.cityofpasadena.net/history/1970.asp
5 City of Pasadena Historic Register, www.cityofpasadena.net/planning/deptorg/dhp/register.asp
6 Ibid.
7 Pasadena Recreation Needs Survey, Research Network Ltd. March 2005
8 http://www.cityofpasadena.net/statistics.asp
9 U.S. Census Bureau, Census 2000
10 Ibid.
11 Ibid.
12 Ibid.
13 Ibid.
14 Other race includes Native Hawaiian and Other Pacific Islander alone, some other race alone, and two or more races
15 U.S. Census Bureau, Census 2000
16 Ibid.
17 www.cityofpasadena.net/library
18 U.S. Census Bureau, Census 2000
19 Ibid.
20 Ibid.
21 Ibid.
22 Ibid.
23 Ibid.
25 U.S. Census Bureau, Census 2000
26 Ibid.
28 City of Pasadena Department of Planning and Development
29 U.S. Census Bureau, Census 2000
30 http://www.pasadenaheritage.org/bridgeparty.html
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3. PEDESTRIAN POLICY FRAMEWORK

The history of planning for pedestrians in Pasadena is strong, with clear policy goals and objectives for achieving a livable community with vibrant and interesting streets and plazas. The legacies of early planning for the Civic Center area are evident in citywide policy directives for quality design, guidelines that foster streets as active and interesting places, and measures that encourage use of non-auto travel and protect neighborhoods from cut-through traffic. The City’s General Plan developed a unified vision for the City; one that envisions a livable community, shaped and driven by community values and reflecting the views of City residents.

Pasadena recognizes that the walkability of a community is a major determinant of its livability. That linkage along with goals and guidelines for improving the pedestrian environment and promoting a healthy community were formally established as Guiding Principles by the City Council in 1994. These Principles include:

- Growth Will Be Targeted to Serve Some Community Needs and to Enhance the Quality of Life
- Pasadena Will Be Promoted as a Healthy Family Community
- Pasadena Will Be a Community Where People Can Circulate Without Cars
- Community Participation Will Be a Permanent Part of Achieving a Greater City

Implementation of these principles is accomplished through recent General Element updates including the 2004 Land Use and Mobility Elements, the Bicycle Master Plan, the Cultural Plan and Draft Open Space and Recreation Element, and seven Specific Plans. Other implementing plans include Design Principles and Criteria, Historic Preservation provisions, Master Development Plans and Zoning Code revisions. Additional focus on pedestrian needs is detailed in special studies of walkways and alleys and in approved transportation and streetscape programs. All pedestrian improvement programs and projects are implemented through the annual Capital Improvement Program.

The Pedestrian Plan does not replace the policies of these documents; rather it provides additional information and guidance to facilitate their implementation. It also highlights recent pedestrian improvements that offer design precedents for the future.
3.1 CITY PLANS AND POLICY DOCUMENTS

3.1.1 2004 General Plan

One of Pasadena’s achievements during 2004 was completion of new major planning policies, including the Land Use Element, the Mobility Element, the revised Zoning Code, and the Central District Specific Plan. The work leading to unanimous adoption of these policies involved hundreds of meetings to obtain and consider public comment from participating residents, business owners and community leaders. The approved version validated the vision which framed the 1994 General Plan, and at the same time incorporated refinements for planning and zoning rules. The 2004 General Plan calls for protecting neighborhoods, targeting growth in areas where it can be best accommodated, preserving Pasadena’s historic character, promoting transit, streets, and sidewalks where people can circulate without cars, and promoting Pasadena as a cultural, scientific, corporate, entertainment, and education center.

3.1.2 Land Use and Mobility Elements

The 2004 Land Use Element protects residential neighborhoods by targeting and concentrating appropriate growth into Pasadena’s Central Business District and along the Metro Gold Line Light Rail Corridor to create vibrant, pedestrian-oriented urban developments. The 2004 Mobility Element provides implementation programs to achieve greater use of non-automobile travel including walking for short trips and use of transit, ridesharing and bicycling. Traffic calming programs for use in residential neighborhoods impacted by excessive cut-through traffic are also identified. Both the Land Use and Mobility Elements are implemented in part through the City’s development review processes that address pedestrian needs from both a site design and transportation perspective. The needs of disabled persons are included in the development review process to insure accessibility for all.

3.1.3 Noise Element

Noise is a key factor in considering the quality of the urban environments. Noise affects the home and work environment as well as enjoyment of recreational activity. Recognizing the impact of noise pollution and the impact that both land use and transportation circulation plans have on the community’s environment, the City undertook preparation of a Noise Element. It identifies land use, transportation, event management, and construction guidelines for mitigating noise impacts on residential and other sensitive land uses.
3.1.4 Green Space and Recreation Element

The Green Space and Recreation Element which addresses open space and park areas is commonly referred to as the Open Space Element in other localities. The Green Space & Recreation Element will serve as the City of Pasadena’s guiding policy document for the preservation of existing green space as well as the future stewardship of both passive and active recreation areas. The Element will identify community recreation needs and establish policies and objectives to guide planning and implementation efforts. The Element will be accompanied by a Citywide Recreation and Park Master Plan. The Master Plan will implement the policies and objectives of the Element and provide a guide for the creative, orderly development and management of recreation facilities and programs throughout the City. A key component of the Master Plan will be an emphasis on creative use of green spaces throughout the City, including partnerships with public and private schools to provide community recreation areas.

3.1.5 Cultural Plan

The Cultural Plan (Cultural Nexus) represents an important step in the City’s continuing efforts to strengthen Pasadena’s participation in arts and culture and enhance the public’s ability to enjoy arts and recreation.

Public art adds interest to the public environment, and special events based on art and cultural affairs contribute to the ambiance and sociability of the City environment.

3.1.6 Bicycle Master Plan

The Bicycle Master Plan presents guidelines for a safe and attractive environment needed to promote bicycling as a transportation mode. The plan outlines a network of bikeways that increase access to major destinations such as employment and shopping centers, high schools, colleges, and the six Metro Gold Line stations. It also outlines provisions for supporting facilities such as Share the Road signage, bicycle parking facilities, and bicycle brochures that show the City’s network and regional connections.

City policy is to make Pasadena a place where bicycling and walking are encouraged and fostered, where all streets are also bikeways, and where safety, education, and facilities are provided as an ongoing part of transportation and recreational planning and programs.
3.1.7 Specific Plans

The 1994 Land Use Element identified areas most suited for future targeted development. It directed preparation of specific plans to guide implementation of the General Plan goals and policies tailored to the needs of the following areas which are shown on Figure 3-1.

- Central District Specific Plan
- East Colorado Boulevard Specific Plan
- East Pasadena Specific Plan
- Fair Oaks Avenue/Orange Grove Boulevard Specific Plan
- South Fair Oaks Avenue Specific Plan
- West Gateway Specific Plan
- North Lake Avenue Specific Plan

These plans contain detailed development standards, distribution of land uses, infrastructure requirements, and implementation measures. They provide an opportunity to translate policy into implementing regulations and standards for specific communities. They also address precise land-use patterns, setbacks, and design provisions to promote transit-oriented...
development, pedestrian-oriented development, and provisions for mixed-use development.

The Metro Gold Line Light Rail stations are highlighted in the respective Specific Plans as places to incorporate transit-oriented development, emphasize pedestrian linkages, and define provisions that enhance the pedestrian environment. Following is an overview of each plan. Design guidelines for the pedestrian realm are contained in Volume Two of the Pedestrian Plan.

**Central District Specific Plan**

The Central District Specific Plan, adopted in 2004, covers the entire Central District and the Arroyo Parkway gateway corridor. Its area encompasses nearly one-half of the City’s places of employment, one-quarter of total retail sales generated, and one-tenth of the population. This area serves as a regional center attracting visitors from regional and local areas. The plan includes a diverse mix of land uses designed to create the primary business, financial, retailing and government center of the City. A large portion of the Central District Specific Plan area is governed by existing redevelopment plans which have been fully incorporated into the Central District Specific Plan.

The Central District Specific Plan also directs that a master plan be developed for the Fuller Theological Seminary properties, consistent with standards for the Central District.

**East Colorado Boulevard Specific Plan**

This Specific Plan identifies areas of East Colorado Boulevard that are appropriate locations for developing mixed-use projects and housing projects and areas where commercial development should be concentrated. This Specific Plan analyzes the corridor between Colorado Boulevard and the light rail station at Allen Avenue and the 210 Freeway for appropriate pedestrian and circulation links.

**East Pasadena Specific Plan**

This Specific Plan is focused on providing additional employment opportunities by facilitating the expansion of existing businesses and development of new businesses. The area consists of industrial and retail places of activity on both sides of the 210 Freeway and includes:
East Foothill Industrial Sub-District: The Plan facilitates pedestrian-friendly transit-oriented development near the Sierra Madre Villa Metro Station and I-210 Freeway. The completed San Gabriel Redevelopment Project Area is within this specific plan area.

Foothill/Rosemead/Sierra Madre Villa Sub-District: The Plan encourages additional industrial and office development with a limited amount of supporting retail/commercial development. Transit-oriented development with an emphasis on pedestrian linkages to transit is encouraged around the Sierra Madre Villa Metro Station and I-210 Freeway.

Hastings Ranch/Foothill/Rosemead Shopping Center Sub-District: Here the emphasis is on enhancing the existing retail development and improving pedestrian access between the separate shopping areas. Transit oriented development is also encouraged.

Fair Oaks Avenue/Orange Grove Boulevard Specific Plan
This Specific Plan encourages actions to visually and physically unify the area. It promotes job creation and encourages “livable community” concepts such as balanced mixed-use development with retail, residential, and employment within walking distance of one another.

South Fair Oaks Biotechnology Center Specific Plan
The Specific Plan facilitates the transition of this area to become a center for tech-based development that builds upon the assets of the adjacent Huntington Hospital and the nearby California Institute of Technology.

West Gateway Specific Plan
This Specific Plan focuses on enhancing the arts, culture, and education by building on the strengths of the Norton Simon Museum and Ambassador Auditorium. This focus is strengthened through incorporation of existing parks and setback requirements. The Plan’s emphasis is on preserving, replacing, and enhancing gardens and foliage landscaping as a continued visual extension of the “South Orange Grove” ambience. Historic structures must be preserved and mixed-use development is encouraged.

North Lake Avenue Specific Plan
The Specific Plan focuses on developing design standards and identifying areas for mixed-use development on North Lake Avenue and the frontage of East Washington Boulevard between Lake Avenue and El Molino Avenue with an emphasis on providing a pedestrian-friendly environment, revitalization of the commercial boulevard, and protection of adjacent residential neighborhoods.
3.2 OTHER IMPLEMENTING DOCUMENTS

3.2.1 Design Principles and Criteria

In 1992, the City adopted citywide design principles to guide development and make buildings and open spaces achieve the qualities desired to provide interest and amenities for its citizens. Guiding Principles for an enhanced environment, human values, and imagination and creativity include recognition of the importance of outdoor passages, alleys, streets, courtyards, and gardens.

3.2.2 Design Standards

The City has established standards and guidelines to review design of new construction and alternatives throughout the City. This review process insures consistency with adopted plans and policies. For example, the sign design guidelines encourage pedestrian-oriented signs that are designed for and directed toward pedestrians so that people standing nearby can easily and comfortably read the sign.

3.2.3 Historic Preservation

This program is designed to achieve the Guiding Principle “Change should be harmonized to preserve Pasadena’s historic character and environment.” Historic preservation guidelines and standards are a well established part of the City’s design review process. They contribute to maintaining Pasadena’s interesting pedestrian environment.

3.2.4 Master Development Plans

Seventeen areas of the City are the subject of Master Development Plans. These plans set forth the rules for development of properties owned by major public institutions in Pasadena and are the implementation tools of the General Plan in these areas.
3.2.5 Transit-Oriented Development

This program has the potential to provide an important contribution to Pasadena’s vision of a livable and walkable community. Targeted development areas served by intermodal transportation systems and linked to the surrounding community by pedestrian-friendly streets will promote pedestrian activity centers and urban villages with a reduced need for auto usage. Pasadena envisions that transit-oriented developments, characterized by varied and complementary land uses, will facilitate walking and biking as convenient options and make use of transit trips convenient.

Transit oriented development planning involves active collaboration with regional and local transit service providers. Recent interagency initiatives have coordinated transit services, facilitated transfers among various services, and promoted pedestrian and bicycle linkages.

3.3 Policies for a Livable and Walkable Community

Pasadena is known for its livability and the quality of its built environment. The Pedestrian Plan builds upon established City policy and supports walking as the mode of choice for short trips.

As summarized in Table 3-1, the following adopted citywide policies provide a framework for Pasadena’s Pedestrian Plan:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy 1</td>
<td>A network of public spaces and paths that are safe and accessible to all should connect the community.</td>
</tr>
<tr>
<td>Policy 2</td>
<td>A street should be safe.</td>
</tr>
<tr>
<td>Policy 3</td>
<td>A street should include amenities for pedestrians.</td>
</tr>
<tr>
<td>Policy 4</td>
<td>A street is a public space.</td>
</tr>
<tr>
<td>Policy 5</td>
<td>A community should have a strong identity, including the presence of recognizable districts, landmarks, and places of interest.</td>
</tr>
</tbody>
</table>
## Policy 1: A network of public spaces and paths that are safe and accessible to all should connect the community.

STRATEGY 1.1: Establish and maintain a pedestrian network consisting of citywide streets, neighborhood streets, neighborhood commercial streets, transit-serving streets, residential streets, and neighborhood connection streets to enable pedestrians to move comfortably and safely between places and destinations.

STRATEGY 1.2: Provide barrier-free mobility that meets American Disability Act (ADA) requirements for all pedestrians.

STRATEGY 1.3: Support pedestrian mobility for those who do not drive, particularly seniors, youth, and disabled persons.

STRATEGY 1.4: Provide pedestrian, transit, and bicycle access to major destinations.

STRATEGY 1.5: Develop and maintain transit stops as important public places; provide pedestrian improvements at bus stops and at or near important pedestrian access routes to transit.

STRATEGY 1.6: Encourage clear, direct, and comfortable, and safe pedestrian access to the City’s urban core. Provide for safe and convenient pedestrian and bicycle connections to and between major commercial districts, activity centers, and neighborhoods within the City.

STRATEGY 1.7: Enhance pedestrian circulation and create walkable places in neighborhoods, at community centers, and at appropriate locations such as major activity centers and along mixed-use boulevards. Plan for pedestrian-oriented development.
that encourages lively pedestrian circulation among parcels, uses, transit stops, and public spaces.

STRATEGY 1.8: Install signage to support pedestrian safety and inform pedestrians of nearby destinations.

STRATEGY 1.9: Encourage and require, where feasible, the incorporation of publicly accessible urban open spaces, including parks, courtyards, water features, gardens, passageways, and plazas, as part of public improvements and projects.

STRATEGY 1.10: Promote development that creates and enhances positive spatial attributes of major streets, open spaces, cityscape and mountain sight lines, and important “gateways” into the City.

STRATEGY 1.11: Provide pedestrian-friendly transit-oriented development near light rail stations and along major transportation corridors, thereby creating nodes that encourage pedestrian activity and transit use.

STRATEGY 1.12: Encourage pedestrian amenities through measures such as requiring a human scale for new development, regular visual (ground-floor windows) and physical access for pedestrians, requirements that ground-floor residential and commercial entries face and engage the street, and encouraging pedestrian amenities.

STRATEGY 1.13: Encourage development of businesses that serve residents within walking distances of homes.

POLICY 2: A street should be safe.

STRATEGY 2.1: Sidewalks should provide safe environments that support and encourage pedestrian activity.

STRATEGY 2.2: Streetscape elements should be installed so that they are not obstacles to pedestrians. Sidewalk treatment should take into account the needs of persons with disabilities.

STRATEGY 2.3: Provide and maintain barrier-free mobility that meets ADA requirements for all pedestrians.

STRATEGY 2.4: Reduce conflicts between pedestrians and automobiles by minimizing the number of drive approaches along a block; when possible, consolidate and place drive approaches near the mid-block. Discourage fences and tall shrubs near the intersections of driveway and sidewalk so that drivers can easily see pedestrians.
STRATEGY 2.5: A street and its intersections should accommodate the safety needs of various users, including children, seniors, and persons with disabilities.

STRATEGY 2.6: Provide and locate signage to improve pedestrian safety.

STRATEGY 2.7: Provide adequate glare-free lighting to ensure safety for pedestrians, particularly at transit stops.

STRATEGY 2.8: Discourage excessive traffic on residential streets by incorporating traffic calming treatments; wherever feasible, direct through traffic away from residential neighborhoods and onto major and secondary arterials.

STRATEGY 2.9: Manage traffic volumes and speeds on local and collector streets so that they are compatible with the character of the adjacent land uses, the function of the street, and pedestrian and bicycle traffic.

STRATEGY 2.10: Minimize the use of street widening which narrows sidewalks in order to promote walking and use of bicycles.

STRATEGY 2.11: Design signal plans to accommodate the needs of pedestrians with particular attention given to the WALK interval at active pedestrian places and sensitive land uses.

STRATEGY 2.12: Promote pedestrian safety and pedestrian-friendly design in the development of transportation projects and services and evaluate such programs regularly to determine their effectiveness.

STRATEGY 2.13: Enforce traffic and parking regulations to ensure pedestrian safety.

POLICY 3: A street should include amenities for pedestrians.

STRATEGY 3.1: Install pedestrian-serving street furniture where appropriate.

STRATEGY 3.2: Emphasize the planting of street trees to define the street and sidewalk, and provide overhead cover. Species choices should consider access to both shade and sun along sidewalks.

STRATEGY 3.3: Allow sufficient room where feasible for street canopies to grow without conflict with other building elements. Maintain tree canopies so that branches do not obstruct pedestrian travel.
STRATEGY 3.4: Use tree grates in areas with considerable commercial and pedestrian activity to increase sidewalk width and reduce safety hazards. Tree wells without grates should have the ground surface surrounding the trees at the level of adjacent sidewalk.

STRATEGY 3.5: Develop and implement a program for management and replacement of street trees so that on each street there is a mixture of trees of various ages.

STRATEGY 3.6: Detail street and streetscape amenities to high standards that demonstrate evidence of quality that is appealing to pedestrians. Provide visual interest and human scale through the use of varied forms, materials, details, colors, and planes.

STRATEGY 3.7: Design public sidewalks and connecting paths to meet at grade; sidewalks extending across private property should also continue at grade, wherever feasible.

STRATEGY 3.8: Eliminate gaps in sidewalks to support an accessible pedestrian environment.

STRATEGY 3.9: Require, where appropriate, overhead cover along the sidewalk for pedestrian comfort, especially where there are few mature trees, or along a southern exposure; encourage canopies and awnings.

STRATEGY 3.10: Design lighting to provide ambience, safety, and security without unnecessary spillover or glare onto adjacent properties.

STRATEGY 3.11: Pedestrian light poles along pathways and alleys should be of appropriate scale.

STRATEGY 3.12: Provide enhanced bus stops with seats and shelter to increase safety and comfort; consider additional features such as bicycle facilities, waste receptacles, and directional maps.

POLICY 4: A street is a public space.

STRATEGY 4.1: Locate and orient buildings to positively define public streets and civic spaces such as plazas.

STRATEGY 4.2: Use public landscape and streetscape improvements to reinforce the public character and quality of major streets.

STRATEGY 4.3: Maintain a hierarchical distinction in the design of streets; nonetheless all streets should accommodate a diversity of users, multiple purpose and modes of transportation including walking.
STRATEGY 4.4: Reinforce the spatial definition of streets and important public spaces.

STRATEGY 4.5: Provide sufficient building height and mass.

STRATEGY 4.6: Maintain a minimum clear pedestrian passage along public sidewalks (as determined by the Director of Public Works) without conflicts from utility equipment, trunks and branches of street trees, street amenities, or other potential interferences.

POLICY 5: A community should have a strong identity, including the presence of recognizable districts, landmarks, and places of interest.

STRATEGY 5.1: Create human-scale environments that are safe, attractive, and encourage walking.

STRATEGY 5.2: Provide wayfinding signs to identify pedestrian routes and popular pedestrian destinations to inform pedestrians of major places of interest.

STRATEGY 5.3: Preserve pedestrian amenities and features such as streetlights and historic sidewalk treatments, granite and river rock curbs, appropriate tree preservation and replacements, and respect for the spatial design of pathways.

STRATEGY 5.4: Encourage and accommodate pedestrian, transit, and bicycle access to major destinations.

STRATEGY 5.5: Amenities in a district, i.e., lighting, benches, trash and receptacles, should reinforce district design theme.

POLICY 6: There should be an easy transition between exterior and interior space.

STRATEGY 6.1: Promote active, pedestrian-oriented uses that are readily discernable to the passer-by and design sites that make walking convenient and enjoyable.

STRATEGY 6.2: Establish clear pedestrian connections on-site that are well-marked.

STRATEGY 6.3: Parcels that include parking and buildings should be designed to achieve a cohesive and safe interaction between automobile and pedestrian circulation within the site and between adjacent properties and activities and immediately adjacent to transit stops.
POLICY 7: A building should contribute to a more pleasant and humane living environment and add interest and variety to its surroundings.

STRATEGY 7.1: Provide articulated and engaging storefronts rather than blank walls that face onto pedestrian spaces, sidewalks and corridors.

STRATEGY 7.2: Architectural detail should be used to enhance the building and the adjacent pedestrian spaces by adding color, shadows, and appropriate variation in form.

STRATEGY 7.3: Encourage a balance in the configuration of shops in the downtown between pedestrian and auto comfort, visibility, and accessibility.

STRATEGY 7.4: Orient shops to the street and transit stops and orient smaller shops primarily to pedestrian “main” streets and urban open spaces.

STRATEGY 7.5: Identify pedestrian priority areas and develop project review guidelines to develop, protect, and foster the pedestrian-oriented character of these places. Consider traffic impacts on these places and apply traffic mitigation measures which do not restrict pedestrian circulation.

POLICY 8: Public transportation facilities should be designed to promote pedestrian safety and access.

STRATEGY 8.1: Pedestrian safety provisions along the Gold Line corridor are especially important and should be monitored routinely to determine whether modifications are needed.

STRATEGY 8.2: The Pedestrian Network should include routes that radiate out from each Gold Line Station to adjoining neighborhoods and commercial districts.

STRATEGY 8.3: Users of the public parking facilities should be encouraged to park once and walk or use transit to other local destinations.

STRATEGY 8.4: Signage at public transportation facilities, including major transit stations and public parking facilities, should provide directional information for destination in the immediate areas and indicate walking distance to those locations.

STRATEGY 8.5: Pedestrian safety provisions and amenities should be provided at bus stops throughout the City to promote the use of transit.
POLICY 9: Public education initiatives should promote public safety messages and the benefits of walking in creating a healthy community.

STRATEGY 9.1: Raise public safety awareness of all groups responsible for planning and maintaining the pedestrian environment.

STRATEGY 9.2: Inform and involve neighborhood residents in the development of transportation services including public safety initiatives such as the Safe Routes to Schools program.

STRATEGY 9.3: Review safety provisions along the perimeter of schools for drop off and pick up.

STRATEGY 9.4: Use signage at public facilities and on local public transit vehicles to promote public safety educational messages directed to both drivers and pedestrians.

STRATEGY 9.5: Encourage Pasadena residents to walk for short trips for health reasons.

STRATEGY 9.6: Raise the awareness of residents, workers, and visitors about the benefits of walking and the resources of Pasadena’s pedestrian environment.

1 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/centdis.asp
2 http://www.ci.pasadena.ca.us/planning/ECSP/ECSP.asp
3 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/epsp.asp
4 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/foog.asp
5 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/sfobiotech.asp
6 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/westgateway.asp
7 http://www.ci.pasadena.ca.us/planning/deptorg/commlng/GenPlan/nlake.asp
This section provides information about pedestrian travel, the needs of pedestrians, and major places of pedestrian activity throughout Pasadena. Also included are summaries of sidewalks and curb ramps reviews conducted by the City, and information regarding upcoming signal timing provisions and bus stop enhancements. These reviews, along with provisions of adopted plans, are the basis for pedestrian improvements implemented through the Capital Improvement Program and summarized in Volume 1 Section 5 of the Pedestrian Plan.

Major components of the City’s transportation infrastructure were mapped in a Geographic Information System (GIS) format for the Pedestrian Plan for use in refining pedestrian improvements and to facilitate updates of plans, policy documents, and project review activities. Application of this analytical capability is discussed in this section.

### 4.1 Pedestrian Characteristics and Needs

While the overall proportion of pedestrian trips compared to all modes of travel is relatively small, in urban areas pedestrian trips account for as much as 39 percent of all trips less than one mile, and 73 percent of all pedestrian trips are less than one-half mile. Therefore, in addition to addressing the quality of the pedestrian space throughout all contiguous major travel corridors, the needs of residential areas must also be considered.

The pedestrian journey often starts at home and may also occur throughout the day while a person is at another destination. In each case, the choice to walk is determined by the person’s immediate surroundings. Walking needs to be safe and easy and preferably the trip should be comfortable and enjoyable. Some important needs of pedestrians include:

- Safe streets and walking areas
- Convenience
- Nearby places to walk
- Visibility: day and night
- Comfort and shelter
Tree cover and landscaping
Attractive and clean environment
Access to transit
Interesting things to look at while walking
Social interaction

Table 4-1: Common Pedestrian Characteristics

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| 0-4       | • Learning to walk, less predictable  
|           | • Requiring constant supervision  
|           | • Too small to be seen by fast moving or inattentive drivers  
|           | • Developing peripheral vision (have one-third narrower peripheral vision), depth perception  
|           | • Have trouble judging speeds and distances of moving cars; not aware of dangerous conditions  
| 5-12      | • Increasing independence, but still requiring supervision  
|           | • Poor depth perception  
|           | • Susceptible to dart out and/or dash into intersection  
| 13-18     | • Sense of invulnerability  
|           | • Intersection dash  
| 19-40     | Active, fully aware of traffic environment  
| 41-65     | Slowing of reflexes  
| 65+       | • Street crossing difficulty  
|           | • Poor vision  
|           | • Difficulty hearing vehicles approaching from behind  
|           | • High fatality rate  

There is no typical pedestrian trip and like most travelers, pedestrians often combine one trip purpose with another, such as walking to work and stopping to shop on the way home. Some linked trips, such as waiting for transit, have particular needs including shelter and night lighting. The following list provides examples of pedestrian trips:
To and from work or school
Multimodal trips (walking to a bus stop or from a bike or auto parking place)
Errands and shopping
Appointments
Health, exercise, and recreation
Extracurricular activities
Combined trips

We also know that certain pedestrians have particular needs that must be taken into account in designing and operating an effective system. Following are common pedestrian characteristics as well as aids that assist older and disabled pedestrians.  

Table 4-2: Aids to Older and Disabled Pedestrians

<table>
<thead>
<tr>
<th>Group</th>
<th>Suitable Strategies/Aids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Pedestrians</td>
<td>- Reduced roadway crossing distances</td>
</tr>
<tr>
<td></td>
<td>- Signal timing at lower than average walking speed</td>
</tr>
<tr>
<td></td>
<td>- Easy to read signs, good viewing distance for signals</td>
</tr>
<tr>
<td></td>
<td>- Traffic measures particularly at sensitive uses such as community centers</td>
</tr>
<tr>
<td></td>
<td>- Transit shelters</td>
</tr>
<tr>
<td></td>
<td>- Low floor buses</td>
</tr>
<tr>
<td></td>
<td>- Smooth unobstructed surfaces</td>
</tr>
<tr>
<td>Pedestrians with Disabilities</td>
<td>- Curb cuts and ramps</td>
</tr>
<tr>
<td></td>
<td>- Tactile warnings</td>
</tr>
<tr>
<td></td>
<td>- Easy to reach traffic signal activation buttons</td>
</tr>
<tr>
<td></td>
<td>- Audible warnings and message systems</td>
</tr>
<tr>
<td></td>
<td>- Braille letters on traffic signals</td>
</tr>
<tr>
<td></td>
<td>- Signal timing at lower than average walking speed</td>
</tr>
<tr>
<td></td>
<td>- Reduced roadway crossing distances</td>
</tr>
<tr>
<td></td>
<td>- Traffic control devices</td>
</tr>
<tr>
<td></td>
<td>- Handrails</td>
</tr>
<tr>
<td></td>
<td>- Smooth and unobstructed surfaces</td>
</tr>
<tr>
<td></td>
<td>- Low floor buses</td>
</tr>
</tbody>
</table>
4.2 **PEDESTRIAN INFRASTRUCTURE IMPROVEMENTS**

Pedestrian facilities are the sidewalks and paths traveled and the aids and assists that make them safe and accessible. These facilities include: sidewalks, walkways and trails, curb ramps, crosswalks, traffic control devices, signals timed to specified walking speeds; furnishings that create a pedestrian-friendly atmosphere (such as benches and landscaping), and other technology, design features, and strategies designed to encourage pedestrian travel and alert motorists to safe driving.

An effective pedestrian program includes consideration of all these measures to assure good performance, safe operations, connectivity, and continuity.

4.2.1 **Sidewalks**

Sidewalks are a fundamental component of the pedestrian system. Basic elements of a sidewalk include: width, surface, and separation from adjacent motorized vehicular traffic. Pasadena is fortunate that its early design was based on streets built for walking, bicycling, horse-pulled carts, and trolleys. Today such conditions are referred to as traditional neighborhoods served by a multimodal and balanced transportation system – places where the importance of walkability is growing.

Most of the City’s sidewalk surfaces in commercial areas are concrete, a smooth and durable material. In many commercial areas concrete pavers are used; some sidewalks have borders made from pavers.

Sidewalks are important in the pedestrian realm because they provide a separation from vehicular traffic. Pasadena makes a special effort, especially on busy streets, to provide a separation space – usually one that is landscaped with trees for shade and visual aesthetics. Sidewalk improvements are incorporated into a wide range of implementation projects outlined in this report. Improvements addressed include pedestrian lighting, design and installation of street trees, tree grates, and trash receptacles. Other elements include benches, signage, bicycle racks, and public art. Requirements for a minimum of 10-foot to 15-foot sidewalk width in the Central District provide for ease of pedestrian movements. Figure 4-1 provides summary statistics on a sidewalk inventory that was...
recently conducted by the Department of Public Works.

**Figure 4-1: Sidewalk Concrete Inventory Statistics**

<table>
<thead>
<tr>
<th>Sidewalk Concrete Inventory Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of Sites/1000</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Banding Cat &amp; others</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Unclipped</td>
</tr>
<tr>
<td>Missing</td>
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</tr>
<tr>
<td>Sidewalk</td>
</tr>
<tr>
<td>Sidewalk</td>
</tr>
<tr>
<td>Sidewalk</td>
</tr>
<tr>
<td>Suspected</td>
</tr>
</tbody>
</table>

Sidewalk Inventory Completed: Total Cost $16 Million (including construction and administration costs).

**4.2.2 Curb Ramps**

The Department of Public Works conducts an ongoing review of curb ramps citywide to complete a program that complies with the Americans Disabilities Act requirements. This ongoing review is incorporated into a fifteen-year project, initiated in 1994, to install wheelchair ramps along arterial and collector streets throughout the City. The arterial and collector street network was targeted because of higher pedestrian volume and proximity to commercial and business districts. The Accessibility and Disability Commission works annually with staff to identify specific corridors for wheelchair ramps installation. Also, the program installs ramps in residential districts in response to specific requests from citizens. Figure 4-2 illustrates ADA-compliant curb ramps that have been implemented through this review. Volume 1 Section 5 of the Pedestrian Plan outlines provisions for the next phases of this annual improvement program.
4.3 INTERSECTIONS AND PEDESTRIAN SAFETY

Most people cross streets throughout their daily routine. And most take for granted that this activity will occur without incident. In general this is true, but sometimes accidents occur. In planning for pedestrians, particular attention is given to the condition of sidewalks and other transportation infrastructure at locations where streets intersect, where heavy volumes of vehicular traffic exist, and where there are transit stops, loading zones, and traffic controls.

The focus on intersection safety is for good reason. The National Highway Traffic Safety Administration reported that in 2002, 4,808 pedestrians were killed and 71,000 were injured; 22% of fatalities and 44% of injuries occurred at intersections; and 36% of pedestrian deaths among those aged 65 or older occurred at intersections. This is due in part to the common disregard of traffic control devices by both motorists and pedestrians. Nationally, about one-third of fatal crashes involving pedestrians are the result of pedestrians disobeying intersection traffic control or making misjudgments while attempting to cross a street.
Research informs us that most collisions involving pedestrians are due to the following causes:

- Driver inattention
- Struck by vehicle while crossing at an intersection (50 percent of all collisions)
- Struck by vehicle while crossing mid-block (33 percent of all collisions)
- Struck from behind while walking along the roadway in the same direction as traffic
- Motorists exceeding safe speed (contributes to most pedestrian deaths)
- Darting out into the street at mid-block (most common type of pedestrian collision for children)
- Vehicles backing up (difficult to see children and others walking behind)
- Collisions in commercial areas (80% of all collisions)

A review of traffic accidents in Pasadena over the past five years shows that there have been 486 traffic accidents involving pedestrians and vehicles (Table 4-3). These accidents have resulted in injuries to 466 individuals and nine fatalities. The number of collisions has ranged from a low of 68 in 2002 to a high of 105 in 2004. As of September 30, 2005, there have been 60 collisions involving pedestrians in the City with one fatal accident and 55 persons injured.

Pasadena’s Police Department Traffic Section has identified the top five primary causes for collision for each traffic accident involving pedestrian (Table 4-4). The leading cause for traffic accidents was pedestrian right-of-way violations. Of the 486 traffic accidents reported between 2000 and 2005, 37.8 percent or 184 collisions between pedestrians and vehicles were caused by pedestrian right-of-way violations.

The next major cause for collisions was pedestrian violations. Nearly 22.6 percent or 110 collisions resulted from pedestrian violations. This could be in the form of a pedestrian violation outside a crosswalk, pedestrian violation at a crosswalk, pedestrian violation of signals, jaywalking, and a pedestrian on roadway.

Unsafe starting or backing of vehicle resulted in 33 or 6.8 percent of all collisions. And 32 collisions were caused by unsafe speeds.
Table 4-3: Traffic Accidents Involving Pedestrians

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Collisions</th>
<th>Injuries</th>
<th>Killed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>95</td>
<td>99</td>
<td>3</td>
</tr>
<tr>
<td>2001</td>
<td>83</td>
<td>77</td>
<td>2</td>
</tr>
<tr>
<td>2002</td>
<td>68</td>
<td>66</td>
<td>1</td>
</tr>
<tr>
<td>2003</td>
<td>75</td>
<td>71</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>105</td>
<td>98</td>
<td>2</td>
</tr>
<tr>
<td>2005*</td>
<td>60</td>
<td>55</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>486*</td>
<td>466</td>
<td>9</td>
</tr>
</tbody>
</table>

* Date Range Reported: 1/1/00 to 9/30/05

Table 4-4: Top Five Primary Causes for Collisions Involving Pedestrians

<table>
<thead>
<tr>
<th>Primary Cause</th>
<th>‘00</th>
<th>‘01</th>
<th>‘02</th>
<th>‘03</th>
<th>‘04</th>
<th>‘05*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ped R/W Violation</td>
<td>32</td>
<td>33</td>
<td>25</td>
<td>28</td>
<td>43</td>
<td>23</td>
<td>184</td>
</tr>
<tr>
<td>Pedestrian Violation</td>
<td>27</td>
<td>18</td>
<td>12</td>
<td>19</td>
<td>22</td>
<td>12</td>
<td>110</td>
</tr>
<tr>
<td>Unsafe Vehicle Starting or Backing</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Unsafe Vehicle Speed</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Unknown</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>22</td>
</tr>
</tbody>
</table>

* Date Range Reported: 1/1/00 to 9/30/05

Figure 4-3 illustrates all pedestrian actions that occurred during this five-year period.
Table 4-5 summarizes the frequency and distribution of traffic accidents by location. It illustrates intersections with three or more accidents involving vehicles and pedestrians. As shown in Table 4-5, there were twenty intersections with three collisions involving pedestrians, six intersections with four collisions, four intersections with five collisions, and two intersections with six collisions. Mitigation of any traffic and pedestrian safety problems is a City priority.

The City assesses each accident to determine whether engineering improvements are needed to improve public safety. Additionally, the Pasadena Police Department posts the Top Ten Most Dangerous Intersections on the City’s web page showing accident location, the number of accidents and the primary collision factor. This site is updated regularly to provide timely safety information to the public and to promote safe driving behavior.
Table 4-5: Locations Where Four or More Pedestrian Accidents Occurred in Pasadena between Jan. 00 and Sept. 05

<table>
<thead>
<tr>
<th>Locations Where 4 Ped Collisions Had Occurred</th>
<th>Locations Where 5 Ped Collisions Had Occurred</th>
<th>Locations Where 6 Ped Collisions Had Occurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado Boulevard &amp; Allen Avenue</td>
<td>Lake Avenue &amp; Colorado Boulevard</td>
<td>Fair Oaks Avenue &amp; Painter Street</td>
</tr>
<tr>
<td>Colorado Boulevard &amp; Garfield Avenue</td>
<td>Lake Avenue &amp; Washington Boulevard</td>
<td>Fair Oaks Avenue &amp; Washington Boulevard</td>
</tr>
<tr>
<td>Fair Oaks Avenue &amp; Colorado Boulevard</td>
<td>Orange Grove Boulevard &amp; Summit Avenue</td>
<td></td>
</tr>
<tr>
<td>Green Street &amp; Mentor Avenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Avenue &amp; Del Mar Boulevard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange Grove Boulevard &amp; Lincoln Avenue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since many accidents involve collisions while making left turns, the City has instituted a **Photo Red Light Program**. The intersections chosen for application of this technology were the site of broadside or 90-degree collisions and frequent red light violations. A red light violation carries a $341 minimum fine plus a point against the driver’s record. The following intersections are equipped with Photo Red Light cameras (see Table 4-4). This program is a good example of a joint enforcement and engineering effort to promote public safety.

Table 4-6: Photo Red Light Camera Locations (As of July 2005)

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Directions of Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Avenue at Union Street</td>
<td>Northbound and Southbound</td>
</tr>
<tr>
<td>Marengo Avenue at Union Street</td>
<td>Northbound, Southbound, and Westbound</td>
</tr>
<tr>
<td>Foothill Boulevard at San Gabriel Boulevard</td>
<td>Northbound and Southbound</td>
</tr>
</tbody>
</table>
4.4 TRAFFIC SIGNAL SYSTEM

4.4.1 Placement of Traffic Signals

Traffic signals attract attention of all road users and provide direction. The selection and use of traffic signals are based on an engineering study of roadway, pedestrian, bicycle, and other conditions including analysis of existing traffic volumes, pedestrian usage, collision history, and site conditions. Modifications to existing signals may include pedestrian actuation, pedestrian clearance intervals, ADA pushbuttons, pedestrian heads, countdown pedestrian signals, scramble phasing, leading pedestrian phasing, etc.

The Department of Transportation is responsible for determining the needs for new signal locations. Established Traffic Signal Warrants that are consistent with the State and Federal guidelines provide the basis for this review. Figure 4-4 illustrates signalized intersections in the City.
4.4.2 Traffic Signal Timing Review

In Pasadena, 296 intersections are equipped with traffic signals and interconnected to the City’s Traffic Management Center (TMC). Signal timing provisions at each location are evaluated periodically to ensure their effectiveness in meeting the needs of road users.

At a signalized intersection where pedestrian indication is provided, the timing is designed to provide sufficient walk time for pedestrians to safely cross streets. Pedestrian signals may be partially omitted at certain intersections due to safety reasons. Pedestrian should always obey traffic controls and be alert when crossing streets.
The green **WALK** interval is usually five seconds in length. At intersections where high pedestrian volume is observed, the **WALK** interval may be set to seven seconds for adequate opportunity to leave the curb or shoulder before the pedestrian clearance time begins. The pedestrian clearance time refers both to flashing and non-flashing intervals of **DON’T WALK**. The pedestrian clearance provides sufficient time for a pedestrian crossing in the crosswalk, who left the curb or shoulder during the **WALK** interval, to at least the far side of the travel way or to a pedestrian median. In Pasadena, pedestrian clearance time at most intersections is sufficient for persons walking at a rate of four feet per second.

The 2003 Manual on Uniform Traffic Control Devices (MUTCD) provides provisions to calculate the pedestrian clearance time based on slower walking speed if a crosswalk is routinely used by seniors or persons with disabilities. The Pasadena DOT is currently adjusting signal timing to accommodate a greater cross-section of its population where the needs can be substantiated. Use of a slower walking speed of 3.5 feet per second or three feet per second will increase pedestrian clearance time by 12 to 25 percent.

Additionally, many major travel corridors are being equipped with upgraded traffic signal technology, such as video detection, closed circuit...
TV (CCTV), and count-down pedestrian signals. These upgrades are an integral part of the City’s advanced traffic management system that provides more efficient and safe uses of streets by all users.

4.4.3 Accessible Pedestrian Signals

Many traffic signals located on major streets are equipped with devices to assist pedestrians with hearing and vision disabilities. These devices include audible tones, vibro-tactile pushbuttons, and ADA-compliant pushbuttons. The Pasadena DOT actively participates in the continuing advancement of traffic control devices that assist persons with disabilities. Accessible pedestrian devices will be incorporated for installation on new traffic signals.

4.4.4 Traffic Safety Signs and Markings

Regulatory signs such as stop signs, speed limits, pedestrian crosswalk restrictions and turn restriction signs are used to guide movements and assign right-of-way.

Warning signs such as pedestrian presence and crossing signs are used to warn motorists and direct pedestrians to appropriate crossing locations and are used in conjunction with marked and unmarked crosswalks. Pavement markings such as Stop and Ped Xing messages are also used to further enhance or reinforce the field condition.
4.4.5 Crosswalks & In-Roadway Warning Lights (IRWL)

The need for crosswalks is assessed based on whether an intersection is controlled or uncontrolled, the number of travel lanes, the grade of street, the speed of vehicles, vehicular volume, the number of pedestrians, collision history, and site conditions such as street width, sight visibility, parking, and adjacent land uses.

The Pasadena DOT conducts ongoing reviews of the need for such improvements as part of its operational programs. Annually, Pasadena DOT responds to over 100 requests for signs. Each request is reviewed by an on-site assessment in order to determine appropriate action.

In-Roadway Warning Lights (IRWL) is one example of a number of crosswalk enhancements to be used in the City. IRWL’s are special flashing lights installed on the roadway surface to enhance driver awareness at uncontrolled pedestrian crossings. This includes, but is not necessarily limited to, school crosswalks, mid-block crosswalks, and crosswalks at uncontrolled intersection approaches. As part of the City’s ongoing efforts to improve pedestrian safety, six IRWL’s will be installed as part of the Suggested Routes to School and Safe Rides and Strides Project. More locations are planned to be installed as funding becomes available in the future.

In December 2000, the use of LED In-Roadway Warning Lights at crosswalks became a new federal standard in the Manual on Uniform Traffic Control Devices (MUTCD).
4.5 SUGGESTED ROUTES TO SCHOOL: REVIEW OF SUPPORTIVE INFRASTRUCTURE

In many communities, few children walk to school. Research estimates that while more than two-thirds of children walked or biked to school as little as thirty years ago, that number has now plummeted to less than ten percent.\(^{11}\) Parents driving their children to school increasingly are part of the morning commute. The California Department of Health Services cited the fear of traffic as one of parents’ top concerns in allowing their children to walk or bike to school. They noted the importance of stronger traffic education programs, better enforcement of traffic laws, and programs and projects to slow down the speed of residential traffic.

The Suggested Routes to School Program focuses on encouraging children to walk or bike to school. This program which is underway in communities throughout the nation is a collaborative effort of parents and neighborhood groups, school and local officials, traffic engineers, and planners.

Suggested Routes to School is a year-round program, beginning with the school year 2005-06. A joint letter from the Department of Transportation and the Pasadena Unified School District (PUSD) informed a cross section of parents of this important safety initiative program and requested feedback regarding their child’s specific route. Parents were asked to review the route map and identify their individual routes as well as any safety issues along the route. Suggested Routes to School maps will be posted on the City’s web page and at the local schools to assist parents in identifying their preferred routes to school. These maps are provided in Appendix B.

Various pedestrian safety and mobility enhancements will be constructed as a result of the Suggested Routes to School program. These improvements, generally funded competitively through the Caltrans Safe Routes to School Program, include in-pavement lighted crosswalks, new sidewalks, and new curb ramps.

4.6 REVIEW OF TRANSIT STOPS

The Pasadena Area Rapid Transit System (ARTS) has seven fixed bus routes operating within the City, serving more than 400 bus stops. A review is underway to determine suitable improvements including pedestrian-friendly amenities at each of the following types of ARTS stops:
“Time-Points” are the most used stops on a bus route. The departing times at these locations are indicated on a bus schedule. There are 50 ARTS stops classified as “time points,” for example, the intersection of Fair Oaks Avenue and Woodbury Road.

“Heavy Use” and “Destination” bus stops are used consistently through the day or serve specific destinations where transit use is encouraged, but are not identified as “time-points.” There are about 200 ARTS stops in these two categories, for example, the intersections of Colorado Boulevard-Los Robles Avenue and Colorado Boulevard-Arroyo Parkway.

“Support” bus stops provide additional boarding and alighting opportunities along a bus route. There are about 160 support stops throughout the City.

Improvements taken into account during this review that are of benefit to pedestrians include:

- Location of bus stops to facilitate linkages and pedestrian safety
- Accessibility for people with disabilities, including curb cuts and ramps
- Waiting areas that are secure, comfortable, well lit, and easily accessible
- Crosswalks and traffic signal timing set to allow pedestrians time to comfortably cross streets in areas immediately adjacent to transit stops
- Appropriate street furnishings
- Signage for system coverage and connectivity
- Trash receptacles where appropriate
- Bus shelters where needed

### 4.7 Neighborhood Traffic Management Program (NTMP) Review

The traffic conditions on a street affect not only pedestrians (both adults and children) but also people living within the residential structures along a street. The impacts of traffic include noise, dust, air pollution, vibration, traffic accidents, and decreased pedestrian safety. These impacts affect the quality of life for people who live nearby and may raise safety...
concerns. Pasadena places an emphasis on the livable and walkable neighborhoods that are protected from the impacts of traffic, particularly cut-through traffic, speeding cars, on-street parking and, in some cases, noise.

The Neighborhood Traffic Management Program (NTMP) is a comprehensive process for addressing these issues on local streets. The program benefits pedestrians by improving the overall neighborhood environment. It also promotes the goals of Safe Routes to Schools which are discussed in this report. One initiative resulting from preparation of the Pedestrian Plan is adding a Pedestrian Survey to the NTMP review process (see Appendix E). Information collected through such surveys will be considered in developing neighborhood pedestrian improvements.

**NTMP GOALS**

1. Improve the safety and convenience for motorists, pedestrians, and bicyclists.
2. Protect neighborhoods from traffic intrusion through traffic control measures.
3. Increase the quality of life by creating safe and attractive streets.
4. Promote non-auto modes of travel.
5. Achieve transportation programs desired and supported by the community.

### 4.8 LANDSCAPING

The presence of landscaping and trees can greatly improve the pedestrian environment. Pasadena residents, workers, and visitors benefit from more than 57,000 trees lining City streets. Preserving this urban forest is a major objective of the City. The Department of Public Works is developing a tree maintenance and replacement program that will insure that trees are replaced in a staggered manner on each street to insure that there is always the presence of mature arching trees throughout the City.
4.9 OTHER PEDESTRIAN-RELATED REVIEWS

In addition to infrastructure reviews, the City conducts periodic surveys of pedestrians in major retail activity centers including South Lake Avenue, the Playhouse District, Old Pasadena, and Hastings Ranch. These studies assess where each district’s pedestrians come from, and the perceptions of visitors to the areas using a list of key attributes. They also document pedestrian patterns and types of merchandise or restaurants that the pedestrians surveyed would most like to see in the districts.

Generally the percentage of pedestrians in these areas who also live in the City has increased and more of these people travel to the areas by sharing rides. Off all districts, the Playhouse District has the lowest percentage of drivers since many of these people walk from residences to nearby shops. Old Pasadena has a regional draw and there too, more people are now sharing rides. While these studies are intended to provide information for the leasing and district management of these areas, they are also a source of information about pedestrians who visit these major places of activity.¹²
4.10 Use of GIS Data to Develop A Better Pedestrian Environment

The data collected and mapped for the Pedestrian Plan provides a very valuable tool to address the ongoing design and development of improvements for pedestrians. Information has been formatted in a geographic information system format to facilitate ongoing analysis and project development.

For example, the formatted data allow pedestrian accident data to be overlaid with school locations to determine the incident rate in proximity to schools. Figure 4-5 illustrates this combined data set.

Figure 4-5: Cumulative Five-Year Pedestrian Collisions in Relations to Schools

It is then possible to draw designated walk time (in this case a ten-minute walk shed) to capture a visual illustration of the findings.

Figure 4-6 illustrates new layers of information that were used to develop the Pedestrian Plan. These layers can be combined to suite a variety of analyses. The walk shed can be expanded to any desired distance to capture related data from design and review functions.
Use of GIS data has considerable applications including design of projects, review of proposed projects, fine-tuning operational programs, designing enforcement programs, and so forth. With this information the Pedestrian Plan is not only a policy document, but also an ongoing source of easily constructed data files tailored to meet the ongoing needs of Pasadena’s pedestrians.

Ibid.


State of Georgia Guidebook for Pedestrian Safety


Institute of Traffic Engineers Issue Briefs. Number 9, April 2004.

City of Pasadena Police Department Crossroad Database

http://www.ci.pasadena.ca.us/police/traffic/Top_Ten_Most_Dangerous_Intersections.asp


US Center for Disease Control Prevention

5. PEDESTRIAN PLAN IMPLEMENTATION

A successful pedestrian program necessitates not only attention to public improvements in the built environment but also a reversal of trends in the community’s level of walking. Public education is important in achieving behavioral change and leadership, advocacy, and volunteerism throughout the community important ingredients. Many are needed to lead by example.

In the United States, the average share of walking has declined 50% over the past ten years from a low rate of 5.9% to a very low rate of 2.8%. Cities that rely extensively on non-auto travel are often found in other countries. Table 5.1 shows mode share characteristics for eight European cities that are of a similar scale of development as Pasadena although auto ownership is significantly lower.¹

<table>
<thead>
<tr>
<th>City</th>
<th>Ped/Bike</th>
<th>Transit</th>
<th>Car</th>
<th>Inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delft (NL)</td>
<td>49%</td>
<td>7%</td>
<td>40%</td>
<td>93,000</td>
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<tr>
<td>Groningen (NL)</td>
<td>58%</td>
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<td>36%</td>
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<tr>
<td>Arhus (DK)</td>
<td>32%</td>
<td>15%</td>
<td>51%</td>
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<td>L'Hospitalet (ES)</td>
<td>35%</td>
<td>36%</td>
<td>28%</td>
<td>273,000</td>
</tr>
<tr>
<td>Mataro (ES)</td>
<td>48%</td>
<td>8%</td>
<td>43%</td>
<td>102,000</td>
</tr>
<tr>
<td>Vitoria (ES)</td>
<td>66%</td>
<td>16%</td>
<td>17%</td>
<td>215,000</td>
</tr>
<tr>
<td>Ghent (BE)</td>
<td>17%</td>
<td>17%</td>
<td>56%</td>
<td>226,000</td>
</tr>
<tr>
<td>Brugge (BE)</td>
<td>27%</td>
<td>11%</td>
<td>53%</td>
<td>116,000</td>
</tr>
</tbody>
</table>

These communities share similar features. Many are the site of colleges and universities, most are served by a regional light rail system, and some have undertaken public fitness initiatives as part of a European Union initiative referred to as Shape Up.
The Implementation section provides a description of the responsible agency and/or department for improving and/or maintaining Pasadena’s pedestrian public realm as well as regional agencies whose programs, services and/or initiatives contribute to improving pedestrian facilities. Major initiatives are highlighted along with programming of near-term improvements.

**5.1 IMPLEMENTATION INITIATIVES**

Current and planned initiatives for improving pedestrian uses include overarching initiatives that constitute a comprehensive program and projects that collectively add to an enhanced pedestrian environment throughout the City. Sections 5.1 and 5.2 provide information on both these activities.

**Element 1: Coordinate outreach efforts of ongoing pedestrian-related programs to increase public awareness of the role of the pedestrian in civic life and the importance of pedestrian safety and activity in achieving a healthy community.**

Pasadena has effective public information resources focused on pedestrians. They include:

- Ongoing safety programs including Safe Routes to School and Safe Rides and Strides which are designed to improve safety for school-age children
- Driver education programs conducted by the Police Department for high-school students
- Messages to increase awareness of public safety and health such as Watch the Road and Up and Moving Pasadena
- Press releases to the media
- Ongoing community meetings on issues involving planning, public health, and neighborhood traffic management
- Advocacy groups that promote walking and biking such as Pasadena Walks
- Marketing studies that survey pedestrians to determine views of major retail districts
Private organizations that organize and promote walking in historic areas of the City and along recreational paths and nearby nature trails
Youth organizations such as sports teams

Additional resources include:

- Schools and educational institutions
- Community centers
- Signage in the public pedestrian realm
- Transit marketing initiatives
- Employers and business organizations
- Planning programs including Specific Plan updates and community meetings
- Neighborhood Traffic Management Program
- City’s public information processes
- Traffic safety awareness and enforcement programs
- Federal, state, and regional public agencies with responsibility for and/or interest in promoting pedestrian activity
- The media
- Health institutions
- Non-profit groups such as those providing walking tours, pedestrian safety advocacy, and public health advocacy

**Element 2: Use Pedestrian Plan policies, data and analytical tools to refine pedestrian improvements in updates of City plans, policy documents, and improvement projects.**

Preparation of the Pedestrian Plan has been coordinated with the concurrent preparation of the Open Space and Recreation Element. The information collected for the Pedestrian Plan, the application of GIS tools prepared for the Pedestrian Plan, and the Public and Private Realm Design Guidelines developed as part of the Central District Specific Plan and the Mobility Element will facilitate a more detailed review of pedestrian enhancements in that program and other planning initiatives. Volume 2 of
the Pedestrian Plan contains design guidelines that are used to achieve quality built form that enhances the pedestrian environment.

**Element 3: Seek grant funding for projects that implement Pedestrian Plan policies.**

Adoption of a Pedestrian Plan strengthens initiatives to secure competitive grant funding. Such documents demonstrate the City’s commitment to coordinating pedestrian policies with related plans and addressing pedestrian improvements in a comprehensive fashion. Additionally, the data provided in the Pedestrian Plan can be used to support and target needed grant-funded improvements.

**Element 4: Tailor annual operating programs to better meet the needs of pedestrians.**

The information collected for the Pedestrian Plan will facilitate refinement of ongoing improvement programs for sidewalks, curb ramps, safety measures, street lighting, pedestrian amenities, and so forth.

Plans are underway in the Transportation Department to undertake a marketing program for the ARTS service. The information collected for the Pedestrian Plan will support a thorough review of the City’s 400 transit stops and will assist in developing an assessment of transit/pedestrian enhancements that will encourage ridership. Pedestrian information will also support Transportation Department efforts to provide signal timing settings that meet pedestrian needs at various locations.

Additionally, the information will assist City Departments in future updates of plans and in design and development of provisions for transit oriented districts as outlined in adopted City policy plans.

**Element 5: Evaluate the Effectiveness of Improvement Programs.**

Pasadena has a number of ongoing evaluative programs to monitor the effectiveness of pedestrian improvements. These include:

- **Accident safety statistics.** This information is collected annually and the Top Ten Most Dangerous Intersections are reported on the City’s web page and are updated regularly.

- **Periodic surveys of pedestrians.** Pasadena regularly conducts surveys of pedestrians in major shopping districts. These surveys
help assess the geographic area from which they come including which percentage are out-of-town visitors, how pedestrians view shopping areas on a list of key attributes, their choice of mode in accessing surveyed shopping areas and the amount of time and money they spend.

**Citywide Quality of Life Index.** This unique program supports decision-making, planning, and policy development that ultimately determine the quality of life and sustainability of the community. Its indicators relate to quality of life issues including transportation; they are reliable enough to track, monitor changes, and ensure that the City is moving in the right direction. The last assessment was conducted in 2002.²

**Neighborhood Traffic Management Program Follow-up Assessments.** A Pedestrian Survey will be included in the future NTMP program areas to identify needs and improvement priorities.

**Operational Reviews and Reporting of Problem Areas.** The Pedestrian Plan benefits from recent surveys of sidewalk conditions and the ongoing curb ramp implementation program. City residents are another strong asset in monitoring problem areas. Pasadena’s web page provides ample opportunity for the public to report problem areas; for example needed curb ramps, broken street lights, sidewalks needing repair, street sweeping, broken bus benches, storm drain problems and so forth. This information enables the City to monitor operational conditions and provide timely maintenance services.

### 5.2 SUMMARY OF IMPLEMENTATION PROJECTS & SCHEDULE

The project described in the Pedestrian Plan does not include physical implementation of any new physical improvements. Instead the Pedestrian Plan incorporates pedestrian improvements adopted as part of Specific Plans and are subsequently implemented through the Capital Improvement Program. It also provides information to facilitate consideration of pedestrian enhancements such as those described in this section at the time of any development project is proposed within the City. The particular pedestrian improvements that may become part of a future
development project will be selected during analysis of that future development project.

Projects in the City’s Capital Improvement Program are funded with City resources and/or grant funding. Other programs involve application of extensive project design review measures to ensure that new projects and reuse of existing development take into account the needs of pedestrians. Table 5.2 summarizes Pasadena’s ongoing pedestrian-related implementation programs and a schedule of near-term implementation projects. Funding and priority of these projects included in the Capital Improvement Program are reviewed and adjusted annually. New projects are solicited each year through an open Call for Projects process and evaluated competitively. The information provides a brief project description, funding sources, project schedule. Both citywide and specific plan projects are documented below.

Additional information on the background, justification, and source of funding for each project is provided in Volume 2, Section 1.

**Table 5-2: Summary of Pedestrian-Related Improvements**

<table>
<thead>
<tr>
<th>Project Name: Wheelchair Ramps – Citywide (73736)</th>
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<tbody>
<tr>
<td><strong>Description:</strong> This is a fifteen-year project to install wheelchair ramps along arterial and collector streets throughout the City. The arterial and collector street system was targeted because of higher pedestrian volumes and its proximity to commercial and business districts. The Accessibility and Disability Issues Committee annually works with staff to identify specific corridors to address the needs for wheelchair ramp installation. Also, the program installs ramps in residential districts in response to specific requests from citizens.</td>
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<tr>
<td><strong>Schedule:</strong> This project began in FY 1994. To date, 800 ramps have been constructed as part of this program. Approximately 75 ramps were installed in FY 2005 and another 70 will be installed in FY 2006.</td>
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<td>$2,696,000</td>
<td>$1,421,100</td>
<td>$122,500</td>
<td>$122,500</td>
<td>$1,029,900</td>
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Project Name: **Neighborhood Traffic Management – Citywide (75210)**

**Description:** The Neighborhood Traffic Management Program (NTMP) is a comprehensive process for managing traffic volume, travel speeds, and traffic-related noise in the City's residential neighborhoods. The NTMP relies heavily on community input to determine the best-suited traffic management measures for a particular neighborhood. Specific measures include reconfiguration or installation of roadway striping, alteration of signal timing, installation of regulatory or warning signs, installation of traffic-calming devices, and pedestrian safety measures.

**Schedule:** In FY 2006, the following neighborhoods are scheduled for comprehensive traffic review, in addition to the current study areas:

1. Daisy Avenue/Villa Street Neighborhood bounded by Maple Avenue to the south, Orange Grove Avenue to the north, Sierra Madre Boulevard to the west, and Eaton Drive to the east;
2. Los Robles/Mountain Street Neighborhood bounded by Washington Boulevard to the north, Marengo Avenue to the west, Orange Grove Avenue to the south, and El Molino Street to the east;
3. Craig Avenue/Casa Grande Neighborhood bounded by north city limits, Allen Avenue to the west, Loma Vista to the south, and Altadena Street to the east;
4. WCIU Neighborhood bounded by north city limits, Hill Avenue to the west, Washington Boulevard to the south, and Sierra Bonita to the east. In addition, the program will continue to conduct speed hump reviews and installations; distribute NTMP handbooks; conduct preferential permit parking program studies as needed; perform traffic counts and speed surveys as needed; and install traffic equipment such as electronic speed signs, portable data collection devices, etc.

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<td>$2,488,400</td>
<td>$1,593,400</td>
<td>$195,000</td>
<td>$175,000</td>
<td>$525,000</td>
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</tbody>
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Project Name: **South Access Pedestrian Bridge to the Sierra Madre Villa Light Rail Station – Citywide (75068)**

**Description:** This project will provide a southern pedestrian bridge over the eastbound lanes of the Route 210 Freeway at the Sierra Madre Villa Light Rail Station. This bridge will provide a direct and safe approach for pedestrians and bus riders approaching from the south. It will supplement the north pedestrian bridge which provides access to a 1,000-car parking garage as well as facilitate pedestrians and bus riders approaching from the north.
**Schedule:** The environmental study and design were completed in FY 2004. A supplemental environmental study will be completed in FY 2006. Right-of-way acquisition will be completed in FY 2006.

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<td>$3,000,000</td>
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**Project Name:** Gold Line Pedestrian Enhancements – Citywide (75059)

**Description:** This project provides for the installation of pedestrian lighting, benches, and trash receptacles on Halstead Street between Rosemead and the 210 Freeway (per the East Pasadena Specific Plan) and on Colorado Boulevard between Northup and Halstead (per the East Colorado Specific Plan).

**Schedule:** The lighting on Colorado Boulevard and on Halstead Street was designed in FY 2005 and will be constructed in FY 2006.

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**Project Name:** Lake Avenue Light Rail Enhancements – Citywide (75038)

**Description:** The Light Rail Station Review Committee recommended various architectural enhancements to the Lake Avenue light rail station. These enhancements will be completed in two phases, including but not limited to:

**Phase I:**
1. Installation of colored concrete sidewalk improvements, planters, and landscaping.

**Phase II:**
1. A clock tower on the east side of the bridge
2. Pedestrian canopies on each side of the station entrances, which includes a photovoltaic system
3. Additional bike rack areas
This project aims at integrating the entire bridge area with the light rail transit station design, providing a pedestrian-friendly entrance and creating a landmark as well as a gateway to the Lake Avenue business district.

**Schedule:** Phase I was completed in FY 2003 and design of Phase II was completed in FY 2005. Construction of Phase II will be completed in FY 2006.

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**Project Name:** Gold Line Light Rail Station Enhancements – Citywide (75021)

**Description:** This project involves planned enhancements at various sites along the Gold Line Light Rail route to make the station and crossings pedestrian friendly, safe and accessible. The enhancement locations are:

- Allen Avenue Station - Retain and enhance architectural and art elements removed during cost reduction plus add streetlights and landscaping. Estimated cost is $300,000.
- Sierra Madre Villa Station - Improve Halstead Street. Estimated cost is $275,000.
- Fillmore Station- Retain architectural and art components plus landscaping. Estimated cost is $200,000
- Right-of-way Between Green Street and Holly Street - Improve old right-of-way with area lights, sidewalks, and landscaping. Estimated cost is $480,000
- Arroyo Parkway at Del Mar Boulevard - Widen south side of Del Mar Boulevard. Estimated cost is $50,000.
- Widen Arroyo Parkway to provide a right-turn lane. Estimated cost is $150,000.
- Power plant private crossing. Estimated cost is $150,000.
- Citywide - Miscellaneous betterments at various locations. Estimated cost is $225,000.
- Design and construct a bike-transit facility near one or more of the Metro Gold Line Stations. Estimated cost is $200,000.
Schedule: The remaining work was designed in FY 2005 and will be constructed after the execution of an agreement with the MTA/Caltrans. The remaining work includes: Landscaping and bike racks at Allen Avenue Station; Right-of-way improvements between Green Street and Holly Street; and the Citywide miscellaneous betterments. In addition, in FY 2006, a bike-transit facility will be designed and construction will be completed in FY 2007.

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Project Name: Gold Line Phase 1 - Project Enhancements – Citywide (75506)

Description: This project provides for the following twelve enhancement projects along the Gold Line route and stations.

1. Sierra Madre Villa Station - South Pedestrian Overcrossing: Completion of the southern access pedestrian bridge over the eastbound lanes of the 210 Freeway at the Sierra Madre Villa Light Rail Station along with the elevator/stair tower at the south end of bridge, and the necessary improvements and acquisition of a portion of the OSH property on Colorado Boulevard and Madre Street. The estimated cost is $6,500,000. This enhancement is a separate CIP project - “South Access Pedestrian Bridge to the Sierra Madre Villa Light Rail Station” (page 5.6), and therefore not included in the Total Estimated Project Cost of this project.

2. Fillmore Station Pedestrian Plaza - Raymond Avenue to Station and Fillmore Street Improvements Closure of Fillmore Street from Raymond Avenue east to cul-de-sac to include the following: Remove existing street, modify existing drainage system, and construct decorative walkways, lighting, benches, bike racks, and kiosks for enhancement of the Fillmore Station. Install a new traffic signal at Fair Oaks Avenue and Fillmore Street for pedestrians traveling between the Fillmore Station and the Huntington Hospital area. The estimated cost is $500,000.

3. Noise Mitigation for Freeway Stations - Mitigate the noise from the freeway for passengers waiting for Gold Line trains. The project will reduce noise levels to below the maximum acceptable noise thresholds at three Gold Line stations along the 210 Freeway: Lake Avenue, Allen Avenue, and Sierra Madre Villa Avenue. Potential solutions to reduce traffic noise levels at the station platforms include, but are not limited to: sound walls, platform enclosures and pedestrian shelters. This proposal will require MTA and Caltrans approval. The estimated cost is $3,000,000.

4. Traffic Signal Upgrades for Automated Traffic Control System (ATCS) Intersections - Upgrade 20 signalized intersections with battery back-up, 8-inch to 12-inch traffic signal head conversion, and LED upgrades. This will improve traffic safety at three
5. **Information Kiosks** - Install intermodal way-finding information kiosks at Gold Line stations. The City of Pasadena engaged the design services of an environmental graphic design firm to develop a free-standing information kiosk to be located adjacent to the six Pasadena Metro Gold Line stations and throughout the various business districts in the City. The kiosks will provide information related to the Gold Line transit system, directions to activities and events throughout the various business districts, and promote City of Pasadena-sponsored events. The kiosks will exhibit an electronic interface (i.e. LED monitor, CPU, input interface) and static graphic information. The kiosks will also provide storage areas for limited printed materials. The initial installation will focus on the six Pasadena Gold Line stations. The estimated cost is $90,000.

6. **Improvement to MTA Right-of-Way Between Green Street and Holly Street** Improve MTA right-of-way with special colored concrete pavement, pedestrian lights, landscaping, benches, and trash receptacles per the Old Pasadena Streetscapes and Alley Walkways Plan. This will improve pedestrian travel from the Memorial Park Station into Old Pasadena. The estimated cost is $750,000 with a funding shortfall of $250,000. The "Gold Line Light Rail Station Enhancements" project (page 5.10) includes this enhancement but with an estimated cost of $500,000. The shortfall is included in the total estimated cost of this project.

7. **Pasadena Light Rail Train (LRT) Tracking and Network Monitoring System** Upgrade the existing Pasadena LRT Automated Traffic Control System by integrating standard train-tracking capabilities as well as monitoring of all transportation systems associated with the Pasadena Metro Gold Line. This will be done by integrating all necessary transceivers, controls, and communication equipment from the SCADA system (the real-time train-tracking system used by the MTA) into strategic control cabinets along Arroyo Parkway and Raymond Avenue as well as the Traffic Management Center. The estimated cost is $400,000.

8. **Street Improvements on Halstead Street from Electric Drive to Sierra Madre Villa Station** - Improve safety and traffic circulation for pedestrian and vehicular access leading to the Gold Line station by doing the following:

   A. Install electronic message boards for eastbound and westbound freeway traffic for parking accessibility at Sierra Madre Villa parking structure.

   B. Remove existing cross and longitudinal gutters at Foothill Boulevard and Halstead and construct new cross gutters and other miscellaneous street improvements at the intersection.

   C. Install landscaping, irrigation systems, and center fence on existing medians on Sierra Madre Villa Avenue between Colorado Boulevard and Foothill Boulevard.
The estimated cost is $500,000.

9. **Pedestrian Lighting Near Gold Line Stations** - Install pedestrian lighting on Raymond Avenue between Glenarm Street and California Boulevard, and on Allen between Colorado Boulevard and Corson Street. The estimated cost is $700,000. This enhancement is being done under two separate CIP projects - “South Fair Oaks Specific Plan” (page 2.20) and the "East Colorado Specific Plan" (page 2.21), and therefore not included in the Total Estimated Project Cost of this project.

10. **Allen Avenue Station Improvements** - Install decorative tile and accents to entry-level walls to match outside tile and accents at the station and install landscaping and bike racks. The estimated cost is $150,000.

11. **Vehicle Arrival Information** - Install an automated bus arrival notification system at various stations throughout the city. NextBus provides actual arrival information, updated at regular intervals. Because traffic variations, breakdowns, and day-to-day problems can interrupt service, this system will keep riders on schedule. It uses satellite technology and advanced computer modeling to track vehicles on their routes. Each train is fitted with a satellite tracking system. The estimated cost is $600,000.

12. **Fence Line Landscaping and Irrigation between Fillmore and Del Mar Stations** - Install landscaping and an irrigation system along Gold Line fences from Del Mar Boulevard to the South City Limits. The estimated cost is $500,000.

**Schedule**: The following work will be done in FY 2006:

1. Noise Mitigation Project - pending the determination of a feasible project alternative during the initial phase of the concept barrier study, the Caltrans project study report phase will be completed;

2. Improvements to MTA Right-of-Way between Green Street and Holly Street - This project will be completed;

3. Pedestrian Lighting near Fillmore and Allen Stations - Installation of lighting on Allen Street will be completed and the installation of lighting on Raymond Avenue will begin in FY 2006 and be completed in FY 2007;

4. Traffic Signal Upgrades for ATCS Intersections - This project will be completed; and

5. Street Improvements for Fillmore Plaza from Raymond Avenue to the Gold Line will be designed in FY 2006 and constructed in FY 2007.

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Project Name: Del Mar Station Public Plaza Betterments – Citywide (75011)

Description: This project provides for betterments at the Gold Line Del Mar Station Plaza. The betterments include:

1. Upgrade the paving in the general plaza area from colored, stamped concrete to natural cut stone with banding of precast concrete pavers.
2. Upgrade the paving in the specialty plaza areas from stamped, simulated terra cotta concrete to terra cotta tile paving over concrete.
3. Upgrade the finishes of three water features in the plaza from a plaster finish to use of ceramic tile emulating the historic character of fountains and walls found in the Pasadena area.
4. Upgrade metal furniture in the plaza including benches and informal café tables to period style teak furniture.
5. Upgrade the size of the trees planted throughout the plaza in order to provide immediate shade and a sense of maturity to the public spaces.

Schedule: The Construction Authority’s contractor will complete this project in FY 2006.

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Project Name: Suggested Routes to School Program - Citywide (75501)

Description: This project provides for the establishment of a routes map to and from the fourteen public elementary schools located in Pasadena. Identification of suggested routes to school includes site visit to the schools, coordination with the Pasadena Unified School District (PUSD), and mapping of the routes in a GIS format. This is a collaborative effort between the Pasadena Unified School District and the City.

Schedule: This project began in FY 2005 and will be completed in FY 2006.

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Project Name: **Safe Routes to School Project – Citywide (75601)**

**Description:** This project provides for improvements that will increase safety on routes to elementary schools in the City. The project will install additional sidewalk, gutter, and wheelchair access ramps; improve signage; and install bulb-outs and in-pavement lighted crosswalks at eligible elementary schools in Pasadena.

**Schedule:** This project will be designed in FY 2006 and construction will begin in FY 2007.

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Project Name: **Pedestrian and Bicyclist Safety Enhancements - Safe Strides and Ride – Citywide (75507)**

**Description:** This project provides for the enhancement of pedestrian and bicyclist safety and awareness through educational and engineering treatments. In-roadway lighting systems will be installed at two crosswalks in the City of Pasadena. The location of these crosswalks will be identified by the Department of Transportation as part of this project through a warrants analysis in high-density pedestrian areas. In addition, through a collaborative effort with other agencies, an educational video regarding safe walking and cycling tips will be developed. The video will be distributed to schools, youth centers, community centers and senior center assisted living developments. This project also provides funding to procure equipment such as bicycle helmets to be distributed at three bicycle rodeos, organized by the City.

**Schedule:** This project will be designed in FY 2006 and constructed in FY 2007.

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**Project Name: New Bus Benches, Passenger Alighting Pads and Other Stop Amenities – Citywide (75900)**

**Description:** This project involves the installation of new bus benches, bus stop amenities, and concrete paving at various bus stop locations throughout the City.

**Schedule:** This is an ongoing annual project. Work will be completed on an as-needed basis.

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**Project Name: Traffic Signal System Enhancement for Pedestrian Connectivity and Safety - Phase 1 – Citywide (Priority 52)**

**Description:** This project provides for the first phase of pedestrian-related traffic signal enhancements related to pedestrian presence, control and safety at signalized or non-signalized locations. The enhancements will include, but are not limited to: the upgrade of pedestrian indicators, pedestrian push buttons, pedestrian detection systems, battery backup, count-down pedestrian signals when warranted, implementation of Leading Pedestrian Level phase, enhanced signing for pedestrian safety, and other newly approved technologies that aim towards betterment of pedestrian mobility.

**Schedule:** This project will begin when funds are identified.

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**Project Name:** Civic Center/Mid-Town Public Improvements and Related Components– Citywide (73200)

**Description:** The goal of the Civic Center/Mid-Town District Public Improvements Project is to design and implement pedestrian and transportation enhancements within the public spaces of Pasadena’s historic Civic Center District. This area includes Centennial Square, Holly Street, Garfield Avenue Promenade including the Civic Auditorium and Central Library forecourts, Thurgood Marshall Street and Colorado Boulevard.

These improvements will include streetscape and walkway elements such as street and sidewalk paving, landscaping and street trees, lighting, signage, graphics, street furniture, and gateway elements.

**Schedule:** The Concept Plan was completed in FY 2002 and the Design Development documents were completed in FY 2004. Current grant and match funding will allow for implementation of the following Phase 1-3 District improvements:

- **Phase 1 - Colorado Boulevard:** Street trees, lighting and site amenities (benches, trash cans, bike racks);
- **Phase 2 - Garfield Avenue** (between Union and Ramona Streets) Pedestrian amenities include historic sidewalk repair, irrigation, street trees and landscaping, street lights, trash cans, temporary parking/crosswalk striping, parking meter relocation, Union Street signal relocation, Thurgood Marshall signs for one-way conversion, storm drainage system, signage (watermarks/historic building markers) and related demolition, grading and patching.
- **Phase 3 - Holly Street:** New brick and concrete sidewalks; street trees and landscaping; street lighting, gateway and tree up-lighting; site amenities (benches, trash cans, bike racks); gateway entry elements, and related demolition, grading and patching.

Phases 4-11 improvements will be designed and constructed as future funding becomes available.

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Project Name: **South Lake Streetscapes Improvements – Citywide (Priority 28)**

**Description:** This project provides for the installation of pedestrian lighting, electrical upgrades, and landscaping of the median island on South Lake Avenue between Green Street and California Boulevard. The total estimated cost of the project is as follows:

- $280,000 - Pedestrian Lighting Costs
- $275,770 - Electrical Upgrades
- $305,000 - Landscaping and Irrigation Costs
- $860,770 Total Costs

**Schedule:** This project will be scheduled when funding becomes available.

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Project Name: **Arroyo Parkway Enhancement - Citywide (73201)**

**Description:** This project provides improvements on Arroyo Parkway between Colorado Boulevard and Glenarm Street and on Arroyo Parkway/SR-110 between Glenarm Street and State Street. The improvements on the portion between Colorado Boulevard and Glenarm Street include pavement reconstruction/rehabilitation, modification of the median island to add/lengthen left-turn pockets and to widen through-traffic lanes, parkway and median landscaping, pedestrian lighting, crosswalk treatments, pedestrian amenities, and miscellaneous sidewalk and curb and gutter reconstruction.

Proposed improvements on Arroyo Parkway/SR-110 between Glenarm Street and State Street include new fences, screening, landscaping, and street lighting.

This project will be constructed in three phases. Phase I and II include roadway improvements between Colorado Boulevard and Glenarm Street such as pavement reconstruction/rehabilitation; median island modifications; sidewalk, curb and gutter reconstruction; aesthetic enhancements and gateway treatments for which funding is currently available. Phase III includes all of the proposed improvements on SR-110 south of Glenarm Street and any additional aesthetic enhancements and gateway treatments. Phase III will be implemented as funding becomes available.

**Schedule:** This project will be completed in three phases:

- **Phase I (Colorado to California):**
  - Environmental and design of roadway improvements were completed in FY 2004
  - Design of aesthetic elements will be completed in FY 2006
Construction will begin in FY 2007

Phase II (California to Glenarm):
- Environmental and design of roadway improvements were completed in FY 2004
- Design of aesthetic elements will be completed in FY 2006
- Construction will begin in FY 2007

Phase III (Glenarm to State Street):
- Environmental to begin when funds are available

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**Project Name: Old Pasadena Traffic Improvement – Citywide (75814)**

**Description:** This project provides for mitigation of parking and traffic impacts and issues that may be needed in the Old Pasadena Parking Meter Zone District. This may include: (1) special traffic control devices; (2) installation of special signs, striping, and traffic signal operations; (3) on-street parking related enhancements; and/or, (4) construction of traffic islands and minor curbside traffic improvements.

**Schedule:** This is an ongoing project funded on an annual basis. In FY 2005, the following work was performed: Update of signal equipment such as pedestrian signal displays to international symbols and the installation of audio-tactile pedestrian push buttons. In FY 2006, work will begin on the upgrading of existing parking meters and the installation of new parking meters.

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Project Name: Advanced Traveler Information System (ATIS) – Citywide (75010)

Description: This project will provide the infrastructure to develop a traveler information website for the Arroyo Verdugo Area. The system will enable collection and dissemination of multi-modal, real-time traveler information in the region. The project includes a website and ancillary computer equipment, and the installation of a traffic volume and speed data collection system to complement the existing Traffic Management Center (TMC) system detectors. Pasadena will receive seven traffic count stations and data server equipment to interface with the website.

Schedule: This project is scheduled to be completed by the end of FY 2006. The City of Glendale is the lead agency on this project.

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Project Name: Playhouse District Streetscape and Paseos Plan – Phase I – Citywide (73397)

Description: This project will provide for the design and installation of street trees, tree grates, street lighting, trash receptacles, and other elements including benches, signage, bicycle racks, and public art in the Playhouse District.

1. Street Lighting - Install pedestrian lighting and/or upgrade existing lighting at the following locations:
   a. Colorado Boulevard from Los Robles Avenue to Lake Avenue – COMPLETED
   b. El Molino Avenue from Green Street to Union Street - COMPLETED
   c. Green Street from Los Robles Avenue to Lake Avenue - COMPLETED
   In addition, streetlight poles will be painted.

2. Street Trees and Landscaping - Install street trees and tree grates at the following locations:
   a. Colorado Boulevard from Los Robles Avenue to Lake Avenue - PHASE I COMPLETED
   b. El Molino Avenue from Green Street to Union Street - COMPLETED
   c. Prune trees on Green Street from Los Robles Avenue to Lake Avenue – ONGOING

3. Streetscapes - Install trash receptacles and benches at the following locations:
   a. Colorado Boulevard between Los Robles Avenue and Lake Avenue -
b. El Molino Avenue between Green Street and Union Street – COMPLETED

4. Signage and graphics
   a. Install district identification signs, remote district directional signs and directional parking signs - COMPLETED
   b. Install small and large banners on light poles - COMPLETED
   c. Remove, refurbish and reinstall historic Pasadena Playhouse sign - COMPLETED

**Schedule:** In FY 2006, streetlight poles will be painted at the following locations: Green Street - Lake Avenue to Hill Avenue; Green Street - Los Robles Avenue to Lake Avenue; El Molino Avenue - Union Street to Green Street; and Colorado Boulevard - Los Robles Avenue to Lake Avenue. Phase II of the tree removal and replanting along Colorado Boulevard will be reviewed in FY 2006.

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**Project Name:** Playhouse District Streetscapes, Walkways and Alleys - Phase II – Citywide (73125)

**Description:** The second phase of this project will provide for paved pedestrian crossings at the intersection of Colorado Boulevard and El Molino Avenue; new street lighting on the north/south streets and Union Street; as well as new trees, street furniture, banners, and public art on selected streets within the district. The improvements include:

1. Street Lighting - Install pedestrian lighting at the following locations:
   a. Union Street from Los Robles to Lake Avenue
   b. Oakland from Union to Green Street
   c. Madison from Union to Green Street
   d. Oak Knoll from Union to Green Street
   e. Hudson from Union to Green Street

2. Street Trees and Landscaping - Install street trees and tree grates at the following locations:
   a. Union between Los Robles and Lake Avenue
   b. Oakland between Los Robles and Lake Avenue
c. Madison between Los Robles and Lake Avenue  
d. Oak Knoll between Los Robles and Lake Avenue  
e. Hudson between Los Robles and Lake Avenue  

3. Streetscapes - Install bike racks on Green Street between Los Robles Avenue and Lake Avenue, and El Molino Avenue between Green Street and Union Street; and trash receptacles at the following locations:  
a. Green Street between Los Robles and Lake Avenue  
b. Union Street between Los Robles and Lake Avenue  
c. El Molino between Green and Union Street  
d. Oakland between Green and Union Street  
e. Madison between Green and Union Street  
f. Oak Knoll between Green and Union Street  
g. Hudson between Green and Union Street  

4. Street construction - Install special paved crosswalks at the intersection of Colorado Boulevard and El Molino Avenue.

Schedule: This project will be designed in FY 2006 and construction will begin in FY 2007.

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**Project Name:** South Fair Oaks Specific Plan – Citywide (73123)  
**Description:** This project provides for implementation of various public improvements described in the adopted South Fair Oaks Specific Plan which encompasses two subareas: 1) General Industrial Subarea; and 2) Huntington Memorial Hospital Subarea. Proposed projects include:  
1. Street Trees and Landscaping – Install street trees and landscaping in the form of shrubs, ground cover and/or vines at the following locations:  

Major Streets  
a. Fair Oaks Avenue from the south City Limits to California Boulevard  
b. Raymond Avenue from Glenarm Street to California Boulevard  
c. California Boulevard from Pasadena Avenue to Metro Gold Line right-of-way District Streets
d. Glenarm Street from Alarcon Place to the Metro Gold Line right-of-way

2. Street Lights - Implement comprehensive street lighting improvements to increase pedestrian activity, promote safety, aid in orientation, and enhance area ambiance at the following locations:

Major Streets

a. Fair Oaks Avenue from the South City Limits to California Boulevard
b. Raymond Avenue from Glenarm Street to California Boulevard
c. California Boulevard from Pasadena Avenue to Metro Gold Line right-of-way

District Streets

d. Glenarm Street from Alarcon Place to the Metro Gold Line right-of-way
e. Pico Street from Fair Oaks Avenue to Metro Gold Line right-of-way
f. Bellefontaine Street from Pasadena Avenue to Fair Oaks Avenue

3. Decorative Crosswalks - Install decorative pedestrian crosswalks at the following intersections:

Major Streets

a. Fair Oaks Avenue at California Boulevard, Congress Street, Fillmore Street, Bellefontaine Street and Glenarm Street
b. Raymond Avenue at California Boulevard, Fillmore Street and Glenarm Street

4. Sidewalk Repair/Improvements - Improve and/or repair sidewalks in conformance with City engineering standards and with texture and scoring patterns as set forth in the specific plan. Sidewalk repair/improvements shall be implemented at the following locations:

Major Streets

a. Fair Oaks Avenue from the South City Limits to California Boulevard
b. Raymond Avenue from Glenarm Street to California Boulevard
c. California Boulevard from Pasadena Avenue to Metro Gold Line right-of-way

District Streets

d. Glenarm Street from Alarcon Place to the Metro Gold Line right-of-way
e. Pico Street from Fair Oaks Avenue to Metro Gold Line right-of-way
f. Bellefontaine Street from Pasadena Avenue to Fair Oaks Avenue

5. Streetscapes - Install trash receptacles at the following locations:

Major Streets
a. Fair Oaks Avenue from the South City Limits to California Boulevard  
b. Raymond Avenue from Glenarm Street to California Boulevard  
c. California Boulevard from Pasadena Avenue to Metro Gold Line right-of-way  
District Streets  
d. Glenarm Street from Alarcon Place to the Metro Gold Line right-of-way  
e. Pico Street from Fair Oaks Avenue to Metro Gold Line right-of-way  
f. Bellefontaine Street from Pasadena Avenue to Fair Oaks Avenue  

6. Fillmore Street Improvements - The following improvements shall be implemented on Fillmore Street between Fair Oaks Avenue and Raymond Avenue:  
   a. Install sidewalk trees.  
   b. Install street trees between parking spaces. The in-street trees shall be placed in a planter with shrubs and/or ground cover to form a dense planting area.  
   c. Implement comprehensive street lighting improvements to increase pedestrian activity, promote safety, aid in orientation, and enhance area ambiance.  
   d. Improve and/or repair sidewalks in conformance with City engineering standards and with texture and scoring patterns as set forth in the specific plan.  
   e. Install street furnishing to include trash receptacles and benches. Benches shall be wood and/or metal. Concrete benches shall not be used.  
   f. Install a traffic signal at the Fillmore Street and Raymond Avenue intersection – COMPLETED  

7. Fillmore Station Plaza - Fillmore Street between Raymond Avenue and the Metro Gold Line right-of-way shall be closed to create a public pedestrian plaza. The following improvements shall be implemented on the Fillmore Station Plaza:  
   a. Install a single row of trees and shrub/ground cover planting to match the “in-street” trees on Fillmore Street west of Raymond Avenue.  
   b. Provide paving for the Station Plaza designed as one integrated area preferably utilizing a combination of concrete and decorative paving materials. Existing curbs and sidewalks should be removed.  
   c. Install lighting to include up-lighting for roof structures and pedestrian-scale decorative features.  
   d. Install street furnishing to include trash receptacles and benches. Benches shall be wood and/or metal.  

8. Miscellaneous  
   a. Widen the south side of California Boulevard at the Fair Oaks Avenue intersection to provide an eastbound right-turn-only lane on California Boulevard to southbound Fair Oaks Avenue – COMPLETED  
   b. Widen the east side of Fair Oaks Avenue at the Glenarm Street intersection to provide a northbound right-turn-only lane on Fair Oaks Avenue to eastbound Glenarm
Schedule: In FY 2006, the installation of street trees and landscaping, street light improvements, and sidewalk repairs/improvements will be completed on Glenarm Street from Alarcon Place to the Metro Gold Line right-of-way as part of the SR-710 Mitigation Project. In FY 2007, the Raymond Avenue street and pedestrian lighting will be done as part of the Raymond Avenue Widening Project. The Fillmore Station Plaza will also be completed in FY 2007 as part of the Gold Line Phase 1 - Project Enhancements Project. The street trees and landscaping, sidewalk repair/improvements and decorative crosswalks on Raymond Avenue between Del Mar Boulevard and Glenarm Street will be completed in FY 2007 as part of the SR-710 mitigation project.

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Project Name: East Colorado Boulevard Specific Plan – Citywide (73582)

Description: This project involves the implementation of public improvements described in the East Colorado Boulevard Specific Plan. The plan identifies six subareas or districts and builds on the existing character, scale, and development trend of each to provide a comprehensive strategy for the entire area. The districts are Mid-City, College District, Gold Line, Route 66, Lamanda Park, and Chihuahuita (City Edge). The streetscape improvement plans in each area include the following:

1. Street Trees and Landscaping
   a. Install street trees
   b. Install landscaping
   c. Replant existing median islands

2. Streetscapes
   a. Repair sidewalks
   b. Install street furniture

3. Street Lighting - Install pedestrian lighting

   The following improvements are specific to one of the subareas:
   1. Mid-City Subarea (Colorado - Catalina to Holliston)
      a. Secure existing historic marker at 1308 Colorado Boulevard
   2. College District Subarea (Colorado - Holliston to Allen)
      a. Install decorative crosswalks at three locations
b. Install bulb-out and mid-block crosswalk
c. Widen sidewalks along Pasadena City College frontage
d. Install public art
e. Install directional signs

3. Gold Line Subarea (Allen - Colorado to Corson)
   a. Install median island and monument
   b. Widen sidewalks between Colorado Boulevard and Walnut Street

Schedule: Asphalt concrete decorative crosswalks will be installed on Colorado Boulevard at Harkness Avenue, Marion Street, Sierra Bonita Avenue and Bonnie Avenue in early FY 2006, following completion of the sidewalk widening project by Pasadena City College. Also in FY 2006, the installation of pedestrian lights, street trees and streetscapes on Colorado from Northrup to Sycamore and on Allen Avenue from Colorado Boulevard to Corson Street will begin. Enhanced crosswalks have been designed for the Colorado and Bonnie intersection and reviewed by the Design Commission. Street trees were planted along Colorado Blvd.

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Project Name: Fair Oaks/Orange Grove Specific Plan - Transportation Issues – Citywide (73129)

Description: This project provides for the implementation of the public improvements in the Fair Oaks/Orange Grove Specific Plan. The specific plan is comprised of three smaller areas: 1) La Pintoresca Neighborhood Corridor District, 2) Robinson Park District, and 3) The Renaissance Commercial District. The elements of the project are as follows:

1. Pedestrian Improvements
   a. Provide decorative crosswalks consisting of interlocking pavers in the following intersections:
      I. Fair Oaks Avenue and Montana Street
      II. Fair Oaks Avenue and Washington Boulevard
      III. Fair Oaks Avenue and Mountain Street
      IV. Fair Oaks Avenue and Orange Grove Boulevard
      V. Orange Grove Boulevard and Lincoln Avenue
VI. Orange Grove Boulevard and Los Robles Avenue
VII. Orange Grove Boulevard and Garfield Avenue
VIII. Fair Oaks Avenue at Maple Street (along 210 Freeway)

b. Provide street furniture (lights, benches, trash receptacles, etc) in all three Specific Plan districts
c. Property owners to reconstruct existing sidewalk gaps and repair pavement where needed
d. Widen sidewalk at Fair Oaks/Orange Grove intersection
e. Ensure that sidewalk ramps and audible traffic controls comply with ADA requirements
f. Install directional and informational pedestrian signs
g. Improve lighting in pedestrian areas
h. Improve street light standards where needed

2. Traffic Improvements
   a. Fair Oaks Avenue/Painter Street - Install traffic signal control and include signal in traffic signal synchronization – COMPLETED
   b. Develop alternative transportation routes that link neighborhoods

3. Signature Improvements
   a. Provide gateway feature to mark and enhance the northerly entrance to the Specific Plan area (where North Fair Oaks Avenue crosses the boundary with Altadena), including a monument sign, landscaping, and flood lights.
   b. Install graphic icons as stand-alone elements or on existing street lighting poles in all three Specific Plan districts to provide a sense of identity.
   c. Provide decorative bus stop shelters to build on the unique character of surrounding neighborhoods in all three Specific Plan districts.
   d. Provide monument signs, landscaping, and floodlights to mark and enhance southerly, easterly and westerly gateways at or near:
      I. Villa Street and Fair Oaks Avenue
      II. Lincoln Avenue and Orange Grove Boulevard
      III. Los Robles Avenue and Orange Grove Boulevard

4. Landscape Improvements - Plant trees were gaps exist (minimum of 24-inch box specimens) in all three Specific Plan districts.

5. Public Facilities Improvements
   a. Underground utility wires wherever possible
   b. Upgrade sewer system between Hammond Street and Orange Grove Boulevard
Schedule: In FY 2006, construction of pedestrian lighting on Fair Oaks Avenue from Hammond Street to Orange Grove Boulevard will begin.

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Project Name: North Lake Specific Plan – Citywide (75954)

Description: This project provides for the implementation of the various public improvements described in the adopted North Lake Specific Plan.

1. Tree Lanes and Tree Peninsulas - Construct Tree Lanes and Tree Peninsulas, including landscaping and irrigation on Lake Avenue at the following locations:
   a. Maple Avenue to Villa Street
   b. Villa Street to Orange Grove Boulevard - COMPLETED
   c. Orange Grove Boulevard to Boylston Street
   d. Boylston Street to Bell Street – COMPLETED
   e. Bell Street to Claremont Street
   f. Claremont Street to Washington Boulevard
   g. Washington Boulevard to Rio Grande Street - COMPLETED
   h. Rio Grande Street to Elizabeth Street

2. New Traffic Signal
   a. Rio Grande Street at Lake Avenue

3. Roadway Maintenance - Perform Street Resurfacing at the following locations:
   a. Claremont Street - Lake Avenue to Hudson Street
   b. Lake Avenue - Villa Street to Maple Street
   c. Washington Boulevard - Lake Avenue to Michigan Avenue - COMPLETED

4. Chokers and Median Islands - Construct chokers and median islands on Lake Avenue at the following locations:
   a. Claremont Street to Washington Boulevard
   b. Boylston Street to Mountain Street – COMPLETED

5. Street Lighting - Install pedestrian lighting at the following locations:
a. Lake Avenue - Villa Street to Elizabeth Street - COMPLETED
b. Orange Grove Boulevard - El Mira Street to Mentor Street – COMPLETED
c. Washington Boulevard - El Molino Avenue to Catalina Avenue – COMPLETED

6. Street Trees - Develop and implement a tree plan which will include the installation of landmark trees at the following locations:
   a. Lake Avenue and Maple Street
   b. Lake Avenue and Elizabeth Street

7. Streetscapes - Install benches, trash receptacles, bike racks and news racks

**Schedule:** In FY 2006, the traffic signal at Rio Grande Street and Lake Avenue will be designed and construction will begin. Also, plans will be completed for benches and trash receptacles. The remaining improvements will be designed and constructed as funds become available.

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**Project Name:** East Pasadena Specific Plan – Citywide (75939)

**Description:** This project involves the implementation of various public improvements described in the East Pasadena Specific Plan which encompasses three subareas:

1) East Foothill Industrial District;
2) Foothill, Rosemead, Sierra Madre Villa; and
3) Hastings Ranch/Foothill-Rosemead Shopping Center Area. Proposed projects include:

1. Pedestrian Environment Improvements
   a. Install pedestrian push buttons at pre-timed traffic signal locations adjacent to the light rail station and in areas impacted by light rail – COMPLETED
   b. Relocate pedestrian crosswalks
   c. Install directional and informational signs for pedestrians
   d. Expand pedestrian routes system
   e. Define and develop pedestrian networks linking residential communities to local commercial centers
   f. Improve and emphasize children’s pedestrian safety
2. Traffic signal, striping modifications and/or widening
   a. Sierra Madre Villa Avenue and Foothill Boulevard (East and West left-turn phases) – COMPLETED
   b. Sierra Madre Villa Avenue and Foothill Boulevard (North and South left-turn phases) widen east side of Sierra Madre Villa south of Foothill Boulevard and remove median island on Sierra Madre Villa - PARTIALLY COMPLETED
   c. Halstead Street and Foothill Boulevard – COMPLETED
   d. Rosemead Boulevard and Foothill Boulevard
   e. Sierra Madre Villa Avenue at I-210 Freeway Eastbound and Westbound Route 210 Freeway ramps
   f. Sierra Madre Boulevard and Foothill Boulevard
   g. San Gabriel Boulevard and Foothill Boulevard
   h. Rosemead Boulevard and Colorado Boulevard (in L.A. County)
   i. Altadena Drive and Colorado Boulevard
   j. Sierra Madre Villa Avenue/Madre Street and Colorado Boulevard
   k. I-210 Freeway westbound off-ramp and Foothill Boulevard (west of Rosemead Boulevard)
   l. I-210 Freeway westbound ramps and Foothill Boulevard (Quigley)
   m. Michillinda Avenue and Foothill Boulevard
   n. Sierra Madre Boulevard and Colorado Boulevard

3. New traffic signal at Sierra Madre Villa Avenue and Electronic Drive; and install center two-way left-turn lanes on Electronic Drive east of Sierra Madre Villa Avenue.

4. Foothill Boulevard Improvements
   a. Remove parking to increase pedestrian space
   b. Install landscaped median islands along various segments
   c. Widen Foothill Boulevard west of Sierra Madre Villa Avenue
   d. Construct bicycle lane in each direction on Foothill Boulevard east of I-210 Freeway
   e. Install palm trees and canopy trees in the parkway area to establish a separation between street and pedestrian pathway
   f. Install bus benches, public art, fountains, and pedestrian lighting
   g. Decorative crosswalks at signalized intersections

5. Halstead Street Improvements
   a. Reduce the width of the roadway north of Foothill Boulevard to provide a combined bicycle/pedestrian path on the west side and a pedestrian walkway with convenient parking pockets on the east side
b. Increase roadway width south of Foothill Boulevard to facilitate turning movements of buses serving the light rail station and to provide drop-off area – COMPLETED

c. Install street lighting (decorative pedestrian-scaled lamps)

d. Install bike lane south of Foothill Boulevard

e. Plant additional trees on parkway areas and enhance landscaping

f. Remove the cross-gutter on the north leg of the Foothill Boulevard intersection

6. Walnut Street Improvements

a. Improve the north side between Altadena Drive and Sunnyslope Avenue

b. Extend the roadway from Sunnyslope Avenue to Kinneloa Avenue

c. Construct a pedestrian/bicycle path with landscape buffers

d. Provide an area for landscaping or loading within the right-of-way

e. Provide center two-way left-turn lane east of San Gabriel Boulevard – COMPLETED

7. Gateway sign at Sierra Madre Boulevard and Walnut Street and on Foothill Boulevard near Michillinda Avenue

8. Street furnishings - Install bus shelters, benches, trash receptacles, bicycle racks, bollards, decorative lights, tree grates, fountains, newspaper racks, drinking fountains, directories, kiosks, etc.

9. Roadway Extension/Street Improvement Projects

a. Kinneloa Avenue from Titley Avenue to Walnut Street

b. Maple Street from Sierra Madre Villa Avenue to Titley Avenue

10. Neighborhood Protection Measures for the Lower Hastings Ranch Neighborhood

**Schedule:** In FY 2005, a portion of item 6(a) - improvement of the north side of Walnut Street from Daisy Avenue to Sunnyslope Avenue was constructed as part of another CIP project. In FY 2006, the design for the widening of Foothill Boulevard west of Sierra Madre Villa Avenue will take place. The remaining improvements will be designed and constructed as funds become available.

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Project Name: Complete Sidewalk Along North and South Side of Seco Street – Citywide (73121)

Description: This project provides for the construction of sidewalks along the north side of Seco Street between Rosemont Avenue and Lincoln Avenue and the completion of the sidewalk along the south side of Seco Street within the same limits.

The project along the north side includes: The construction of a ten-foot wide sidewalk; curb and gutter; a variable-height retaining wall with a maximum height of seven feet; relocation of existing street lights; and planting of street trees.

Along the south side of Seco Street there is an existing five-foot wide sidewalk but it is not continuous. In addition to completing the sidewalk, it will be expanded from five to ten feet in width. Additionally, the existing landscaping and irrigation systems will be modified and new trees will be planted. The estimated cost for improvements to the south side of Seco Street is $150,000.

Schedule: In FY 2005, the sidewalk along the north side of Seco Street was completed. Work on the south side of Seco Street will begin when funds are available.

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Project Name: Lincoln Avenue Corridor Improvements – Citywide (73405)

Description: This project provides for improvements along Lincoln Avenue from the I-210 Freeway overpass south of Mountain Street to the north city limits. The improvements include:

1. Traffic Safety Enhancements - Install traffic signals at the following locations:
   a. Lincoln Avenue and Wyoming Street - COMPLETED
   b. Lincoln Avenue and Idaho Street – COMPLETED

2. Street Lighting
   a. Install pedestrian-scale post-top street lights
   b. Install pedestrian-scale double acorn lighting fixtures to the existing high mast street lighting poles

3. Gateway Identity Markers - Install gateway markers at the following locations:
   a. South end of Lincoln Avenue near Seco/Mountain Street
   b. North end of Lincoln Avenue near Woodbury or Vermont
   c. Northbound I-210 Freeway on and off ramps to Lincoln Avenue
4. Street Trees and Landscaping
   a. Install street trees - COMPLETED
   b. Install landscaping strips
5. Streetscapes
   a. Install sidewalk pavers in front of John Muir High School
   b. Install bus benches and bus shelters – COMPLETED
6. Miscellaneous
   a. Undergrounding of Overhead Utilities - COMPLETED
   b. Parking Study for the Avenue - COMPLETED
   c. Seasonal Banners

Schedule: Street lighting will be constructed in FY 2006. Design of the gateway identity markers will also begin in FY 2006.

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5.3 Institutional Framework and the Planning Process

5.3.1 Mayor and City Council

Pasadena is a charter city with a city council/city manager form of government. The City has seven City Council Districts and a Mayor elected at large. Major recent accomplishments include the City adoption of the General Plan, Land Use and Mobility Elements and Central District Specific Plan all that address the role of the pedestrian in civic life.

Twenty appointed commissions advise the City Council. Following are those Commissions involved with pedestrian issues raised throughout this Plan.
5.3.2 Commissions Involved in Pedestrian Plan Policies and Components

Accessibility and Disabilities Commission. Advises the City Council on issues regarding the accessibility of the community to all people, particularly those with disabilities.

Arts and Culture Commission. Among other responsibilities for promoting arts and culture, the Commission encourages the provision of cultural and artistic features in public and commercial construction.

Design Commission. Advises the City Council on the establishment of design standards, criteria, concepts, and policies for the implementation of public and private projects. Reviews projects for the purpose of creating design and to ensure the maintenance of design excellence.

Historic Preservation Commission. Advises the City Council on the promotion, protection and use of Pasadena’s history resources. Reviews projects that may have impact on historical resources. Recommends designation of landmarks and landmark districts and prepares brochures and other material designed to promote awareness of Pasadena’s unique heritage.

Planning Commission. Advises the City Council on the preparation and review of the General Plan as well as adoption of elements under the Plan, including creation of districts and zones, modification to and administration of zoning regulations, review of the capital improvement program, and review of other programs and projects which affect City development.

Recreation and Parks Commission. Advises the City Council on all matters concerning parks and recreation and makes recommendations for improvement of the area in and around Central Park.

Senior Commission. Advises the City Council on the needs, concerns, and quality of life of all seniors.

Transportation Advisory Commission. Advises the City Council concerning policies affecting the City’s transportation system.
Urban Forestry Advisory Committee. Advises the City Council regarding the City’s Master Street Tree Plan and related reviews pertaining to public trees.

5.3.3 City Departments Responsible for the Pedestrian Realm and Improvement Initiatives

Department of Transportation

- Conduct transportation planning and oversee development of transportation projects throughout the City.

- Operate traffic signals, traffic control signs, markings and other traffic control devices under the City’s jurisdiction.

- Responsible for transportation safety programs including the Safe Routes to School initiative.

- Plan and administer local transit services and ensure coordination of local and regional transit services.

- Manage the operation of all on-street parking and off-street public parking facilities, and administer related parking services, including staff support to various parking districts.

- Perform transportation and traffic engineering.

- Conduct and/or manage and review the traffic analyses for the environmental review process of all proposed projects within the City.

- Provide primary staff support to the Transportation Advisory Commission and support other commissions and committees on transit or transportation activities.

Department of Public Works

- Construct and maintain all public streets, street lights, storm drains, sewers, traffic signals, alleys, rights-of-way, improvements, and facilities; control the temporary occupation or use thereof; and inspect work performed by others.
Provide staff support to commissions or committees related to public works projects.

Perform all civil engineering, excluding traffic and transportation engineering, for the City.

Inform the public on repair and maintenance services including Department contacts for: How to get a sidewalk patched, scheduling street sweeping, repairing a broken bus bench, and street lights.

**Police Department**

Coordinate traffic enforcement and traffic operations for major events within the City with the Transportation Department.

Provide staff support to commissions or committees related to traffic safety and moving violations.

Conduct regular traffic safety and education programs in the City’s local high schools, both public and private. This initiative recognizes that teenage drivers are four times more likely to be involved in a traffic accident than adult drivers.

Traffic officers also conduct traffic safety presentations in any school that requests one, including elementary schools. The Department encourages young children to be careful when crossing the street, wear their seat belts, and wear helmets when riding a bicycle.

**Planning and Development Department**

Prepares the City’s General Plan, Specific Plans, Citywide Design Guidelines and ensures consistency with legislative requirements such as the National Historic Preservation Act.

Responsible for planning and project development for eight redevelopment areas.

Ensure that projects meet the City’s requirements for auto parking, bicycle parking, trip reduction, and code parking provisions through the plan check and entitlement process. This is accomplished through the application of approved standards including zoning...
during the design review process, consistent with Council-adopted plans and policies.

- Lead Department on design review and environmental review for projects and developments.

- Currently undertaking, in collaboration with Public Works and Human Services & Recreation, an update of the Open Space and Recreation Element of the General Plan as well as creation of a comprehensive Recreation and Parks Master Plan to assure efficient stewardship of the City’s green spaces, recreational facilities and natural resources.

**Human Services/ADA.** This Department coordinates accessibility issues including compliance with the Americans with Disabilities Act requirements.

**Public Health Department.** Pasadena is one of only three cities in the state of California that maintain an independent local health jurisdiction. The Department undertakes activities that promote the health of individuals and the community including promotion of nutrition and physical activity for healthy lifestyles.

**Public Affairs Division.** The Public Affairs Division is the information link between city government, the community and the media. It also produces the community newsletter *Pasadena In Focus*. In addition to undertaking a wide range of media and public relations activities, the division also provides counsel to City departments in their public outreach initiatives.

### 5.4 SOURCES OF IMPLEMENTATION FUNDING

Pasadena recognizes the importance of partnering with other agencies and local jurisdictions on plans, legislative initiatives, capital grant funding opportunities, and studies to improve and enhance coordinated regional and local transportation services. Many funding opportunities to implement City policies and programs occur at the federal, state, and regional level through competitive grant processes. Following is a summary of funding sources that the City routinely monitors in seeking opportunities to implement pedestrian improvements:
5.4.1 Federal Funding

Periodically, opportunities arise to secure federal and state funding for needed transportation improvements of regional significance. A recent example is federal funding of the pedestrian connection from the parking facility to the transit platform at the Metro Gold Line Sierra Madre Villa Station.

5.4.2 State Funding

**State of California, Office of Traffic Safety (OTS) Grants.** Annually the OTS provides opportunities for eligible agencies to compete for funding. There are eight program areas that provide grant funding: Alcohol and other Drugs, Occupant Protection, Pedestrian and Bicycle Safety, Emergency Medical Services, Traffic Records, Roadway Safety, and Police Traffic Services

**Transportation Development Act (SB 821).** These state block grants are awarded annually to local jurisdictions through the MTA for bicycle and pedestrian projects. The source of funding is the state gasoline tax.

**Community-Based Transportation Planning (CBTP) Grants.** These are "seed" grants to promote livable communities through better coordination of land use and transportation policies and programs including mixed-use and transit-oriented development.

**Environmental Enhancement and Mitigation Program (EEMP).** Annually the State allocates $10 million for projects to mitigate the impact of public transportation facilities. Urban forestry projects are eligible for consideration and approval by the California Transportation Commission.

**Safe Routes to School.** A total of $18 million statewide is provided annually to enhance the safety of pedestrian and bicycle facilities.

**Habitat Conservation Fund Program.** This program includes a trails program that matches up to 50% of other funds for trails/ambulation including access projects in urban areas.

**Petroleum Violation Escrow Account.** This $5 million statewide fund has funded trail facilities.
**TEA-21 Recreational Trails Program.** This $3 million statewide program provides up to 80% funding for recreational trails that benefit pedestrians and bicyclists.

**Transportation Development Act.** The 1971 Transportation Development Act created a Local Transportation Fund (LTF) funded by one-quarter cent of the seven-cent sales tax collected statewide. This is returned to each county in proportion to the amount collected in each county. Local agencies may spend a portion of these funds to improve pedestrian facilities.

**Healthy Communities Grants.** Grants to public agencies to further define the public health relationship between transportation facilities, mode choice, and increased levels of walking.

### 5.4.3 Regional Funding - The MTA Call for Projects Program

MTA is the designated agency for preparing the Transportation Improvement Program for Los Angeles County. Funds from all sources are programmed to implement pedestrian, bicycle, transit, and highway projects. MTA accomplishes this function by programming revenues through the Call for Projects. The City competes for regional funding to implement transportation projects through this competitive grant process that is administered every few years. MTA uses this competitive process to distribute funding to local jurisdictions, transit operators, Metro activities, and Caltrans. Approved projects are placed in the Transportation Improvement Program, which is then part of MTA’s five-year implementation program. Pedestrian improvement projects are eligible under the categories of regional bikeways and pedestrian improvements and transportation enhancement. Such projects may also be considered as part of funding for transportation demand program.³

### 5.4.4 Local Funding

**Capital Improvement Program.** The City of Pasadena Capital Improvement Program (CIP) is a funding program for capital projects approved annually by the City Council. This program, which is prepared annually by the Department of Public Works, builds upon programs that are consistent with, and implement, the City’s General Plan. Community requests for projects are also considered in developing a recommended program.
Staff’s recommendations are reviewed by the various commissions with oversight responsibility for the projects. After review, the program is submitted to the Planning Commission for a finding of consistency with the City’s adopted plans. Thereafter, the document is submitted to the City Council for approval. In developing the CIP budget, the first priority is to focus on safety issues within the City’s infrastructure. Safe streets and roadways are addressed in this document.

**Developer Fees or Exactions.** Because pedestrian improvements are a fine-grain element of the City's infrastructure and the built form environment, every opportunity is taken to assure that opportunities for improvement are taken into account during the review of new development or expansion/reuse of an existing development. Volume Two of the Pedestrian Plan provides detailed information on land use, urban design, and transportation considerations taken into account during the review of land use projects. The project review process is further strengthened through use of the GIS maps developed for the Pedestrian Plan.

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1Source: Victoria Transportation Institute


3More detailed information can be found at [www.metro.net/projects_programs/funding.htm](http://www.metro.net/projects_programs/funding.htm)
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PASADENA PEDESTRIAN PLAN

VOLUME 1

APPENDIX A

FULL-PAGE, HIGH-RESOLUTION MAPS
PASADENA PEDESTRIAN PLAN
VOLUME 1

APPENDIX B

FULL-PAGE, HIGH-RESOLUTION
SAFE ROUTES TO SCHOOL MAPS
APPENDIX C

Pedestrian Questionnaire for Inclusion in the Neighborhood Traffic Management Program
How walkable is your community?

Take a walk with a child and decide for yourselves.

Everyone benefits from walking. These benefits include: improved fitness, cleaner air, reduced risks of certain health problems, and a greater sense of community. But walking needs to be safe and easy. Take a walk with your child and use this checklist to decide if your neighborhood is a friendly place to walk. Take heart if you find problems, there are ways you can make things better.

Getting started:

First, you'll need to pick a place to walk, like the route to school, a friend's house or just somewhere fun to go.

The second step involves the checklist. Read over the checklist before you go, and as you walk, note the locations of things you would like to change. At the end of your walk, give each question a rating. Then add up the numbers to see how you rated your walk overall.

After you've rated your walk and identified any problem areas, the next step is to figure out what you can do to improve your community's score. You'll find both immediate answers and long-term solutions under "Improving Your Community's Score..." on the third page.
1. Did you have room to walk?

☐ Yes  ☐ Some problems:
☐ Sidewalks or paths started and stopped
☐ Sidewalks were broken or cracked
☐ Sidewalks were blocked with poles, signs, shrubbery, dumpsters, etc.
☐ No sidewalks, paths, or shoulders
☐ Too much traffic
☐ Something else __________________________
Locations of problems: ______________________
Rating: (circle one) 1 2 3 4 5 6

2. Was it easy to cross streets?

☐ Yes  ☐ Some problems:
☐ Road was too wide
☐ Traffic signals made us wait too long or did not give us enough time to cross
☐ Needed striped crosswalks or traffic signals
☐ Parked cars blocked our view of traffic
☐ Trees or plants blocked our view of traffic
☐ Needed curb ramps or ramps needed repair
☐ Something else __________________________
Locations of problems: ______________________
Rating: (circle one) 1 2 3 4 5 6

3. Did drivers behave well?

☐ Yes  ☐ Some problems: Drivers...
☐ Backed out of driveways without looking
☐ Did not yield to people crossing the street
☐ Turned into people crossing the street
☐ Drove too fast
☐ Sped up to make it through traffic lights or drove through traffic lights?
☐ Something else __________________________
Locations of problems: ______________________
Rating: (circle one) 1 2 3 4 5 6

4. Was it easy to follow safety rules?
Could you and your child...

☐ Yes  ☐ No  Cross at crosswalks or where you could see and be seen by drivers?
☐ Yes  ☐ No  Stop and look left, right and then left again before crossing streets?
☐ Yes  ☐ No  Walk on sidewalks or shoulders facing traffic where there were no sidewalks?
☐ Yes  ☐ No  Cross with the light?
Locations of problems: ______________________
Rating: (circle one) 1 2 3 4 5 6

5. Was your walk pleasant?

☐ Yes  ☐ Some unpleasant things:
☐ Needed more grass, flowers, or trees
☐ Scary dogs
☐ Scary people
☐ Not well lighted
☐ Dirty, lots of litter or trash
☐ Dirty air due to automobile exhaust
☐ Something else __________________________
Locations of problems: ______________________
Rating: (circle one) 1 2 3 4 5 6

How does your neighborhood stack up?
Add up your ratings and decide.

1. _____  26-30 Celebrate! You have a great neighborhood for walking.
2. _____  21-25 Celebrate a little. Your neighborhood is pretty good.
3. _____  16-20 Okay, but it needs work.
4. _____  11-15 It needs lots of work. You deserve better than that.
5. _____  5-10 It's a disaster for walking!

Now that you've identified the problems, go to the next page to find out how to fix them.
### 1. Did you have room to walk?

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>What you and your child can do immediately</th>
<th>What you and your community can do with more time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalks or paths started and stopped</td>
<td>• pick another route for now</td>
<td>• speak up at board meetings</td>
</tr>
<tr>
<td>Sidewalks broken or cracked</td>
<td>• tell local traffic engineering or public works department about specific problems and provide a copy of the checklist</td>
<td>• write or petition city for walkways and gather neighborhood signatures</td>
</tr>
<tr>
<td>Sidewalks blocked</td>
<td></td>
<td>• make media aware of problem</td>
</tr>
<tr>
<td>No sidewalks, paths or shoulders</td>
<td></td>
<td>• work with a local transportation engineer to develop a plan for a safe walking route</td>
</tr>
<tr>
<td>Too much traffic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2. Was it easy to cross streets?

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>What you and your child can do immediately</th>
<th>What you and your community can do with more time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road too wide</td>
<td>• pick another route for now</td>
<td>• push for crosswalks/signals/parking changes/curb ramps at city meetings</td>
</tr>
<tr>
<td>Traffic signals made us wait too long or did not give us enough time to cross</td>
<td>• share problems and checklist with local traffic engineering or public works department</td>
<td>• report to traffic engineer where parked cars are safety hazards</td>
</tr>
<tr>
<td>Crosswalks/traffic signals needed</td>
<td>• trim your trees or bushes that block the street and ask your neighbors to do the same</td>
<td>• report illegally parked cars to the police</td>
</tr>
<tr>
<td>View of traffic blocked by parked cars, trees, or plants</td>
<td>• leave nice notes on problem cars asking owners not to park there</td>
<td>• request that the public works department trim trees or plants</td>
</tr>
<tr>
<td>Needed curb ramps or ramps needed repair</td>
<td></td>
<td>• make media aware of problem</td>
</tr>
</tbody>
</table>

### 3. Did drivers behave well?

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>What you and your child can do immediately</th>
<th>What you and your community can do with more time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backed without looking</td>
<td>• pick another route for now</td>
<td>• petition for more enforcement</td>
</tr>
<tr>
<td>Did not yield</td>
<td>• set an example: slow down and be considerate of others</td>
<td>• request protected turns</td>
</tr>
<tr>
<td>Turned into walkers</td>
<td>• encourage your neighbors to do the same</td>
<td>• ask city planners and traffic engineers for traffic calming ideas</td>
</tr>
<tr>
<td>Drove too fast</td>
<td>• report unsafe driving to the police</td>
<td>• ask schools about getting crossing guards at key locations</td>
</tr>
<tr>
<td>Sped up to make traffic lights or drove through red lights</td>
<td></td>
<td>• organize a neighborhood speed watch program</td>
</tr>
</tbody>
</table>

### 4. Could you follow safety rules?

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>What you and your child can do immediately</th>
<th>What you and your community can do with more time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross at crosswalks or where you could see and be seen</td>
<td>• educate yourself and your child about safe walking</td>
<td>• encourage schools to teach walking safely</td>
</tr>
<tr>
<td>Stop and look left, right, left before crossing</td>
<td>• organize parents in your neighborhood to walk children to school</td>
<td>• help schools start safe walking programs</td>
</tr>
<tr>
<td>Walk on sidewalks or shoulders facing traffic</td>
<td></td>
<td>• encourage corporate support for flex schedules so parents can walk children to school</td>
</tr>
<tr>
<td>Cross with the light</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5. Was your walk pleasant?

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>What you and your child can do immediately</th>
<th>What you and your community can do with more time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs grass, flowers, trees</td>
<td>• point out areas to avoid to your child; agree on safe routes</td>
<td>• request increased police enforcement</td>
</tr>
<tr>
<td>Scary dogs</td>
<td>• ask neighbors to keep dogs leashed or fenced</td>
<td>• start a crime watch program in your neighborhood</td>
</tr>
<tr>
<td>Scary people</td>
<td>• report scary dogs to the animal control department</td>
<td>• organize a community clean-up day</td>
</tr>
<tr>
<td>Not well lit</td>
<td>• report scary people to the police</td>
<td>• sponsor a neighborhood beautification or tree-planting day</td>
</tr>
<tr>
<td>Dirty, litter</td>
<td>• report lighting needs to the police or appropriate public works department</td>
<td>• begin an adopt-a-street program</td>
</tr>
<tr>
<td>Lots of traffic</td>
<td>• take a walk with a trash bag</td>
<td>• initiate support to provide routes with less traffic to schools in your community (reduced traffic during am and pm school commute times)</td>
</tr>
</tbody>
</table>

### A Quick Health Check

- **What you and your child can do immediately**
  - start with short walks and work up to 30 minutes of walking most days
  - invite a friend or child along
  - walk along shaded routes where possible
  - use sunscreen of SPF 15 or higher, wear a hat and sunglasses
  - try not to walk during the hottest time of day

- **What you and your community can do with more time**
  - get media to do a story about the health benefits of walking
  - call parks and recreation department about community walks
  - encourage corporate support for employee walking programs
  - plant shade trees along routes
  - have a sun safety seminar for kids
  - have kids learn about unhealthy ozone days and the Air Quality Index (AQI)
Great Resources

WALKING INFORMATION
Pedestrian and Bicycle Information Center (PBIC)
UNC Highway Safety Research Center
730 Airport Road, Suite 300
Campus Box 3430
Chapel Hill, NC
27599-3430
Phone: (919) 962-2202
www.pedbikeinfo.org
www.walkinginfo.org

National Center for Bicycling and Walking Campaign to Make America Walkable
1506 21st Street, NW
Suite 200
Washington, DC 20036
Phone: (800) 760-NBPC
www.bikefed.org

WALK TO SCHOOL DAY WEB SITES
USA event: www.walktoschool-usa.org
International: www.iwalktoschool.org

STREET DESIGN AND TRAFFIC CALMING
Federal Highway Administration
Pedestrian and Bicycle Safety Research Program
HSR – 20
6300 Georgetown Pike
McLean, VA 22101
www.fhwa.dot.gov/environment/bikeped/index.htm

Institute of Transportation Engineers
www.ite.org

Surface Transportation Policy Project
www.transact.org

Transportation for Livable Communities
www.tlcnetwork.org

WALKING COALITIONS
America Walks
P.O. Box 29103
Portland, Oregon 97210
Phone: (503) 222-1077
www.americawalks.org

Partnership for a Walkable America
National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
Phone: (603) 285-1121
www.nsc.org/walkable.htm

PEDESTRIAN SAFETY
National Highway Traffic Safety Administration
Traffic Safety Programs
400 Seventh Street, SW
Washington, DC 20590
Phone: (202) 662-0600
www.nhtsa.dot.gov/people/injury/pedbimot/ped

National SAFE KIDS Campaign
1301 Pennsylvania Ave. NW
Suite 1000
Washington, DC 20004
Phone: (202) 662-0600
Fax: (202) 393-2072
www.safekids.org

WALKING AND HEALTH
US Environmental Protection Agency
Office of Children's Health Protection (MC 1107A)
Washington, DC 20460
Phone: 202-564-2188
Fax: 202-564-2733
www.epa.gov/children/
www.epa.gov/air/urbanair/ozone/what.html
www.epa.gov/sunwise/uvindex.html
www.epa.gov/otaq/transp/comchoic/ccweb.htm

President's Task Force on Environmental Health Risks and Safety Risks to Children
www.childrenshealth.gov

Centers for Disease Control and Prevention
Division of Nutrition and Physical Activity
Phone: (888) 232-4674
www.cdc.gov/nccdphp/dnpa/readyset
www.cdc.gov/nccdphp/dnpa/kidswalk/index.htm

Prevention Magazine
33 East Minor Street
Emmaus, PA 18098
www.itstallaboutprevention.com

Shape Up America!
6707 Democracy Boulevard
Suite 306
Bethesda, MD 20817
www.shapeup.org

ACCESSIBLE SIDEWALKS
US Access Board
1331 F Street, NW
Suite 1000
Washington, DC 20004-1111
Phone: (800) 872-2253;
(800) 993-2822 (TTY)
www.access-board.gov

Need some guidance?
These resources might help...
APPENDIX D

Glossary of Commonly Used Terms in Transportation
**AA - ALTERNATIVE ANALYSIS**
An analysis of the environmental effects of alternatives under consideration for a project that has been determined through an Initial Study (IS) and/or Environmental Assessment (EA) to have potential significant environmental impacts.

**AADT - AVERAGE ANNUAL DAILY TRAFFIC**
The total traffic for a year divided by 365.

**AASHTO - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS**
An interest group based in Washington, D.C., that is involved in transportation-related research, advocacy, and technical assistance.

**ACCESSIBLE ROUTE**
In the ADA, a continuous route on private property that is accessible to persons with disabilities. There must be at least one accessible route linking the public sidewalk to each accessible building. See also "Continuous Path".

**ACTUATED SIGNAL**
A signal where the length of the phases for different traffic movements is adjusted for demand by a signal controller using information from detectors.

**ADA - AMERICANS WITH DISABILITIES ACT**
Federal civil rights legislation for disabled persons passed in 1990. As it pertains to transportation, public transportation, and public facilities such as sidewalks, features must be designed per ADA standards to provide access for disabled persons.

**ADT - AVERAGE DAILY TRAFFIC**
The total traffic volume during a given period divided by the number of days in that period. Current ADT volumes can be determined by collecting traffic counts for two or more 24-hour periods. Where only periodic traffic counts are taken, ADT volume can be established by applying correction factors, e.g., for season or day of week. For roadways having traffic in two directions, the ADT includes traffic in both directions unless specified otherwise.

**AFC - AUTOMATIC FARE COLLECTION SYSTEM**
A system of controls and equipment that automatically admits passengers on insertion of the correct fare in coins, tokens, tickets or fare cards; it may include special equipment for transporting and counting revenues.

**ALTERNATIVE FUELS**
Low-polluting fuels which are used to propel a vehicle instead of high-sulfur diesel or gasoline. Examples include methanol, ethanol, propane or compressed natural gas, liquid natural gas, low-sulfur or "clean" diesel and electricity.

**APPORTIONMENT**
A federal budgetary term that refers to a statutorily prescribed division or assignment of funds.

**APPROPRIATION**
A federal budgetary term that refers to an act of Congress that permits federal agencies to incur obligations and make payments out of the Treasury for specified purposes.

**ARB - AIR RESOURCES BOARD**
The state agency, (aka, CARB in California) responsible for adopting state air quality standards, establishing emission standards for new cars sold in the state, and overseeing activities of regional and local air pollution control agencies.

**ARBITRATION**
A method of settling disputes where labor and management present their case to an impartial third party, called an arbitrator, who has the responsibility of deciding the case.
ARTERIAL
A major thoroughfare, used primarily for through traffic rather than for access to adjacent land, that is characterized by high vehicular capacity and continuity of movement.

ARTICULATED BUS
See "Bus, Articulated".

ARZ - AUTO RESTRICTED ZONE
An area in which normal automobile traffic is prohibited or limited to certain times, and vehicular traffic is restricted to public transit, emergency vehicles, taxicabs and, in some cases, delivery of goods.

ATC - AUTOMATED TOLL COLLECTION
Also known as Electronic Toll Collection (IVHS term), this system electronically collects tolls on roadways and bridges.

ATIS - ADVANCED TRAVELER INFORMATION SYSTEMS

ATMS - ADVANCED TRAFFIC MANAGEMENT SYSTEMS
ATMS uses a variety of means to more efficiently manage traffic. It can include roadside sensors, ramp metering, HOV lanes and synchronized traffic signals that respond to traffic flows.

ATTAINMENT AREA
An area that the Environmental Protection Agency has designated as being in compliance with one or more of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others. (See National Ambient Air Quality Standards (NAAQS), nonattainment area, and particulate matter.)

AUDIBLE PEDESTRIAN SIGNALS
Pedestrian signal indicators that provide an audible signal to assist visually impaired pedestrians in crossing the street.

AUTHORIZATION
Basic, substantive legislation which establishes or continues the legal operation of a federal program or agency, either indefinitely or for a specific period of time, or which sanctions a particular type of obligation or expenditure within a program. An authorization may set appropriation limits.

AUTOMATED GUIDEWAY
An electric railway operating without vehicle operators or other crew on board the vehicle.

AVCS - ADVANCED VEHICLE CONTROL SYSTEMS
New techniques to ease stresses and strains of driving are evolving, possibly leading to the day when you may be able to sit back and leave your car in charge. AVCS spans the gamut from ordinary cruise control to "smart cruise control" that helps maintain safe following distance to, researchers hope, "platooning" — the ability to electronically link and guide a dense pack of cars moving in formation at high speed.

AVI - AUTOMATED VEHICLE IDENTIFICATION SYSTEM
Also known as Automatic Vehicle Monitoring System or Automatic Vehicle Location System. A system in which electronic equipment on a vehicle sends signals back to a central control facility, locating the vehicle and providing other information about its operations or about its mechanical condition.

AVL – AUTOMATED VEHICLE LOCATION SYSTEM
A computerized system that employs satellites and other technologies to track vehicles in a fleet, assisting with dispatching and other applications.

AVO - AVERAGE VEHICLE OCCUPANCY
The number of people traveling by private passenger vehicles divided by the number of vehicles used.
AVR - AVERAGE VEHICLE RIDERSHIP
The ratio of the number of all people traveling by any mode, including cars, buses, trains and bicycles, in a given area during a given time period to the number of cars on the road.

AWDT - AVERAGE WEEKDAY DAILY TRAFFIC
The total traffic for an average weekday. An average weekday is a representative weekday computed as the mathematical average of several typical weekdays selected at random throughout the year. A typical weekday has no anomaly such as heavy traffic due to a special public event or light traffic due to inclement weather. Average Saturday, Sunday, and holiday traffic are determined the same way.

BASELINE
The existing environmental conditions against which impacts of the proposed action and its alternatives can be compared.

BASE PERIOD
The period between the morning and evening peak periods when transit service is generally scheduled on a constant interval. Also known as “off-peak period”.

BASE FARE
The price charged to one adult for one transit ride; excludes transfer charges, zone charges, express service charges, peak period surcharges and reduced fares.

BICYCLE PATHS
Commonly referred to as Class I facilities with exclusive right of way, with cross flows by motorists minimized.

BICYCLE LANE
Commonly referred to as Class II facilities established within the paved area of roadways for the preferential use of bicycles. Bike lane stripes are intended to promote an orderly flow of traffic by establishing specific lines of demarcation between areas reserved for bicycles and lanes to be occupied by motor vehicles.

BICYCLE ROUTES
Commonly referred to as Class III facilities, designated Bicycle Routes do not provide an exclusive lane for bicycles. These facilities are established by placing Bike Route signs along the roadways to provide awareness to drivers that bicyclists may be more common on the route.

BICYCLE RACK
A non-enclosed rack designed for parking and securing a bicycle.

BICYCLE LOCKER
An enclosed storage facility designed to temporarily house and secure a bicycle.

BUDGET AUTHORITY
A federal budgetary term that refers to legal authority given by Congress to federal agencies to make funds available for obligation or expenditure.

BUDGET RESOLUTION
A federal budgetary term that refers to a concurrent resolution passed by both Houses of Congress, but not requiring the signature of the President, setting forth the congressional budget for each of five fiscal years. The budget resolution sets forth various budget total and functional allocations, and may include reconciliation instructions to designated House or Senate committees.

BUS (MOTORBUS)
A rubber-tired, self-propelled, manually steered vehicle with fuel supply carried on board the vehicle. Types include advanced-design, articulated, charter, circulator, double-deck, express, feeder, intercity, medium-size, new look, sightseeing, small, standard-size, subscription, suburban, transit and van.

BUS, ARTICULATED
A bus, usually 55 feet or more in length, with two connected passenger compartments that bend at the connecting point when the bus turns a corner.
**Bus, Charter**
A bus, transporting a group of persons who pursuant to a common purpose and under a single contract at a fixed price have acquired the exclusive use of a bus to travel together under an itinerary.

**Bus, Circulator**
A bus serving an area confined to a specific locale, such as a downtown area or suburban neighborhood with connections to major traffic corridors.

**Bus, Double Deck**
A bus with two separate passenger compartments, one above the other.

**Bus, Express**
A bus that operates a portion of the route without stops or with a limited number of stops.

**Bus, Feeder**
A bus service that picks up and delivers passengers to a rail rapid-transit station or express bus stop or terminal.

**Bus, Intercity**
A bus with front doors only, high-backed seats, separate luggage compartments, and usually with restroom facilities, for use in high-speed long-distance service.

**Bus, Medium-Size**
A bus from 29 to 34 feet in length.

**Bus, New Look**
A bus with the predominant styling and mechanical equipment common to buses manufactured between 1959 and 1978.

**Bus, Rapid Transit (BRT)**
Bus Rapid Transit can be defined as a flexible, rubber-tired rapid-transit mode that combines stations, vehicles, services, running ways, and Intelligent Transportation System (ITS) elements into an integrated system with a strong positive identity that evokes a unique image. BRT applications are designed to be appropriate to the market they serve and their physical surroundings, and they can be incrementally implemented in a variety of environments. In brief, BRT is an integrated system of facilities, services, and amenities that collectively improves the speed, reliability, and identity of bus transit. BRT, in many respects, is a rubber-tired light-rail transit (LRT) bus with greater operating flexibility and potentially lower capital and operating costs.

**Bus, Sightseeing**
A bus adapted for sightseeing use, usually with expanded window areas.

**Bus, Small**
A bus 28 feet or less in length.

**Bus, Standard-Size**
A bus from 35 to 41 feet in length.

**Bus, Subscription**
A commuter bus express service operated for a guaranteed number of patrons from a given area on a prepaid, reserved-seat basis.

**Bus, Suburban**
A bus with front doors only, normally with high-backed seats, and without luggage compartments or restroom facilities, for use in longer-distance service with relatively few stops.

**Bus, Transit**
A bus with front and center doors, normally with a rear-mounted engine, low-back seating, and without luggage compartments or restroom facilities, for use in frequent-stop service.

**Bus, Trolley**
An electric, rubber-tired transit vehicle, manually steered, propelled by a motor drawing current through overhead wires from a central power source not on board the vehicle. Also known as "trolley coach" or "trackless trolley."

**Bus Lane**
A street or highway lane intended primarily for buses, either all day or during specified periods,
but sometimes also used by carpools meeting the requirements set out in traffic laws.

**BUS SHELTER**
A building or other structure constructed near a bus stop for the convenience of waiting passengers to provide seating and protection from the weather.

**BUS STOP**
A place where passengers can board or alight from the bus, usually identified by a sign.

**BUSWAY**
(See HOV Lane)
Exclusive freeway lane for buses and carpools.

**CAA - CLEAN AIR ACT AMENDMENTS OF 1990**
Also known as the FCAA Federal legislation that sets national air quality standards; requires each state with areas that have not met federal air quality standards to prepare a SIP. The sweeping 1990 amendments to the CAA, sometimes refereed to as CAAA, established new air quality requirements for the development of metropolitan transportation plans and programs.

**CABLE CAR**
An electric railway operating in mixed street traffic with unpowered, individually controlled transit vehicles propelled by moving cables located below the street surface and powered by engines or motors at a central location not on board the vehicle.

**CALTRANS – STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**
The state agency that operates and maintains California's state-owned transportation facilities.

**CALIFORNIA VEHICLE CODE**
The body of laws which regulate all facets of driving in California.

**CAPITAL ASSISTANCE**
Financial assistance for transit capital expenses (not operating costs); such aid may originate with federal, local, or state governments.

**CAPITAL COSTS**
Costs of long-term assets such as property, infrastructure, buildings, vehicles, etc.

**CAPITAL REVENUES**
Monies dedicated for new projects to cover one-time costs, such as construction of roads, transit lines and facilities, or purchase of buses and rail cars.

**CARB - CALIFORNIA AIR RESOURCES BOARD**
See ARB.

**CARPOOL**
An arrangement where two or more people share the use and cost of privately owned automobiles in traveling to and from pre-arranged destinations together.

**CATEGORICAL EXEMPTION**
An exemption from CEQA (see below) for a class of projects based on a finding by the Secretary for Resources that the class of projects does not have a significant effect on the environment.

**CBD - CENTRAL BUSINESS DISTRICT**
The downtown retail trade and commercial area of a city or an area of very high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and services.

**CEQA - CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970**
The California Environmental Quality Act, California Public Resources Code Sections 21000 et seq.

**CHARTER BUS**
See “Bus, Charter”. 
CIP - Capital Improvement Program
The CIP is a mechanism for prioritizing and funding city-sponsored projects with an estimated cost that exceeds $50,000. Typical CIP projects include construction/reconstruction of street, water, and sewer systems; technology infrastructure; and public parks, libraries, community centers, etc. The program also includes streetscape projects, installation of street lights and traffic signals, and the City’s Neighborhood Traffic Management Program.

Circulator Bus
See "Bus, Circulator".

Clearance Interval
The length of time that the DON'T WALK indication is flashing on a pedestrian signal indication.

CMAQ - Congestion Mitigation and Air Quality Program
Money contained in ISTEA for projects and activities that reduce congestion and improve air quality in regions that have not yet attained federal air quality standards.

CMP - Congestion Management Program
Required of every county in California with a population of 50,000 or more (including all of the SCAG 6-County area) in order to qualify for certain state and federal funds. The CMP requires annual development reporting and biennial data collection at designated intersections and roadway segments. The CMP sets performance standards for roads and public transit, and requires local jurisdictions to employ measures to meet those standards.

CMS
(1) Congestion management systems; (2) Changeable message signs provide travelers with real-time information about traffic accidents, special events, and construction activities on the route ahead. CMS is also used to direct traffic to specific routes or parking facilities.

CNG - Compressed Natural Gas
A clean-burning alternative fuel for vehicles.

COG - Council of Governments
A voluntary organization of local governments that strives for comprehensive, regional planning.

COLA - Cost-of-Living Allowance
An increase or decrease in employees' wages or salaries made on the basis of changes in agreed-upon economic indices, usually the Consumer Price Index.

Collective Bargaining
Negotiations between labor union representatives and employers to reach agreement on a contract describing such matters as wages, hours, and working conditions.

Commitment
See "Obligation".

Commuter
A person who travels regularly between home and work or school.

Commuter Rail
See "Rail, Commuter".

Compulsory Arbitration
Arbitration that is required by law.

Conciliation
See "Mediation".

Conformity
A process in which transportation plans and spending programs are reviewed to ensure that they are consistent with federal clean air requirements; transportation projects collectively must not worsen air quality. Conformity ensures
that the planning for highway and transit systems, as a whole and over the long term, is consistent with the state air quality plans for attaining and maintaining health-based air quality standards; conformity is determined by metropolitan planning organizations (MPOs) and the U.S. Department of Transportation (U.S. DOT) and is based on whether transportation plans and programs meet the provisions of a State Implementation Plan.

**Connector Pathway**

A walkway, trail, stair, or other pedestrian facility not situated along a street. This may occur as a pathway within a public right-of-way where no street has been built, in a public walkway easement on private property, or as a path in a park or other open space.

**Continuous Path**

In the ADA, a continuous, unobstructed pedestrian circulation path within a public sidewalk connecting pedestrian areas, elements, and facilities in the public right-of-way to accessible routes on adjacent sites. The continuous path is similar to the “Accessible Route” on private property, but is subject to different guidelines.

**Contract Authority**

A federal budgetary term that refers to a form of budget authority permitting obligations to be incurred in advance of appropriations. Advance obligations, however, have been limited by the appropriations committees with obligation limitations.

**Contraflow Lane**

Reserved lane for buses on which the direction of bus traffic is opposite to the flow of traffic on the other lanes.

**Corridor**

A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways and transit route alignments.

**Crossing Improvement Projects**

Projects to make major changes to an intersection or intersections to improve crossing conditions for pedestrians. Examples of such improvements include elements such as curb extensions, raised crosswalks, or median refuges, as well as the installation, replacement, or modification of traffic signals.

**Crosstown**

Non-radial bus or rail service which does not enter the Central Business District (CBD).

**CTC - California Transportation Commission**

A state-level version of MTC that sets state spending priorities for highways and transit and allocates funding. Members are appointed by the governor.

**Cumulative Impacts**

Refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable, probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

**Curb Extension**

An area where the sidewalk and curb are extended into the parking lane, usually in order to shorten pedestrian crossing distance. Also called “bulb-out” or “curb bulb”.

**Curb Radius**

The length of the radius of the curve where a curb turns a street corner.
**Curb Ramp**
A combined ramp and landing to accomplish a change of level at a curb in order to provide access to pedestrians using wheelchairs.

**Curb Zone**
The portion of the Sidewalk Corridor that physically separates the sidewalk from the roadway.

**DBE - Disadvantaged Business Enterprise**
A business owned and operated by one or more socially and economically disadvantaged individuals. Socially and economically disadvantaged individuals include African Americans, Hispanic Americans, Native Americans, Asian Pacific Americans or Asian Indian Americans and any other minorities or individuals found to be disadvantaged by the Small Business Administration under Section 8(a) of the Small Business Act.

**Deadhead**
The movement of a transit vehicle without passengers aboard; often to and from a garage or to and from one route to another.

**Dedicated Funding Source**
A source of monies which by law is available for use only to support a specific purpose, and cannot be diverted to other uses.

**DEIR/DEIS**
See EIR/EIS. Draft EIR/Draft EIS.

**Demand Responsive**
Non fixed-route service utilizing vans or buses with passengers boarding and alighting at prearranged times at any location within the system's service area. Also called "Dial-a-Ride" (DAR).

**Dial-a-Ride**
See "Demand Responsive".

**Discretionary Spending**
A federal budgetary terms that refers to any funds whose distribution in not automatic. Discretionary spending encompasses programs controlled by annual appropriations bills and is subject to the constraints imposed by the discretionary spending limits set in the balanced budget law.

**DOT - Department of Transportation**

**Double Deck Bus**
See "Bus, Double Deck".

**Downtime**
A period during which a vehicle is inoperative because of repairs or maintenance.

**DPM - Downtown People Mover**
A type of automated guideway transit vehicle operating on a loop or shuttle route within the Central Business District (CBD) of a city.

**Dwell Time**
The scheduled time a vehicle or train is allowed to discharge and take on passengers at a stop, including opening and closing doors.

**Earmark**
A federal budgetary term that refers to the specific designation by Congress that part of a more general lump-sum appropriation be used for a particular project; the earmark can be designated as a minimum and/or maximum dollar amount.

**EA - Environmental Assessment**
A concise public document that a Federal agency prepares under the National Environmental Policy Act (NEPA) to provide sufficient evidence and analysis to determine whether a proposed agency action would require preparation of an environmental impact statement (EIS) or a finding of no significant impact. A Federal agency may also prepare an EA to aid its compliance with NEPA when no EIS is necessary or to facilitate preparation of an EIS when one is necessary. An EA must include
brief discussions of the need for the proposal, alternatives, environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted. [See finding of no significant impact, environmental impact statement, and National Environmental Policy Act.]

**EIR - ENVIRONMENTAL IMPACT REPORT**

A detailed statement prepared under CEQA describing and analyzing the significant environmental effects of a project and discussing ways to mitigate or avoid the effects.

(a) Draft EIR means an EIR containing the information specified in Sections 15122 through 15131 of the California Code.

(b) Final EIR means an EIR containing the information contained in the draft EIR, comments either verbatim or in summary received in the review process, a list of persons commenting, and the response of the Lead Agency to the comments received. The final EIR is discussed in detail in Section 15132 of the California Code.

**EIS - ENVIRONMENTAL IMPACT STATEMENT**

The detailed written statement that is required by section 102(2)(C) of the National Environmental Policy Act (NEPA) for a proposed major Federal action significantly affecting the quality of the human environment. The statement includes, among other information, discussions of the environmental impacts of the proposed action and all reasonable alternatives, adverse environmental effects that can not be avoided should the proposal be implemented, the relationship between short-term uses of the human environment and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources.

**EJ - ENVIRONMENTAL JUSTICE**

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations. (See minority population and low-income population.)

**ETC - EMPLOYEE TRANSPORTATION COORDINATOR**

Someone designated by a business or organization to assist its workers with forming carpools and vanpools, plotting their commute by public transit, and the like.

**ETHANOL**

An alternative fuel; a liquid alcohol fuel with vapor heavier than air; produced from agricultural products such as corn, grain, and sugar cane.

**EXCLUSIVE RIGHT-OF-WAY**

A highway or other facility that can only be used by buses or other transit vehicles.

**EXPRESS BUS**

See "Bus, Express".

**FAA - FEDERAL AVIATION ADMINISTRATION**

**Fare Box Recovery Ratio**

Measure of the proportion of operating expenses covered by passenger fares; found by dividing fare box revenue by total operating expenses for each mode and/or systemwide.

**Fare Box Revenue**

Value of cash, tickets, tokens and pass receipts given by passengers as payment for rides; excludes charter revenue.
**Fare Elasticity**
The extent to which ridership responds to fare increases or decreases.

**Fare Structure**
The system set up to determine how much is to be paid by various passengers using a transit vehicle at any given time. In addition to base fares, most transit operators provide discounts for seniors and persons with disabilities. The Federal Government requires recipients of federal funding to provide discounts of a minimum of 50% of the base fare during non-peak periods to seniors and persons with disabilities.

**FCR - Flexible Congestion Relief**
A state-directed funding program that applies state and federal dollars to local and regional transportation projects that ease traffic congestion, regardless of mode.

**Feeder Bus**
See "Bus, Feeder".

**FETSIM - Fuel-Efficient Traffic Signal Management**
State-provided financial fuel for local traffic signal coordination projects.

**FHWA - Federal Highway Administration**

**Fixed Cost**
An indirect cost that remains relatively constant, irrespective of the level of operational activity.

**Fixed Guideway System**
A system of vehicles that can operate only on its own guideway constructed for that purpose (e.g., rapid rail, light rail). Federal usage in funding legislation also includes exclusive right-of-way bus operations, trolley coaches and ferryboats as "fixed guideway" transit.

**Fixed Route**
Service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed-route trip serves the same origins and destinations, unlike demand-responsive and taxicabs.

**Fixed-Time Signal**
A signal that operates on a regular fixed cycle and has no actuated phases.

**Flare**
The sloped transition between the curb and sidewalk that helps prevent pedestrians from tripping over an abrupt change in level.

**Flexible Funding**
Federal funds which can be used for highway, transit or other transportation projects, as decided by regional Metropolitan Planning Organizations (MPOs) and state governments. Examples of such funds are the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality (CMAQ) fund.

**Fringe Parking**
An area for parking usually located outside the Central Business District (CBD) and most often used by suburban residents who work or shop downtown.

**FTA - Federal Transit Administration**

**Fiscal Year**
The yearly accounting period for Pasadena which begins July 1 and ends on the following June 30. The fiscal year is designated by the calendar year in which it ends (e.g., FY 05 is from July 1, 2004 to June 30, 2005).

**FONSI (Finding of No Significant Impact)**
A public document issued by a Federal agency briefly presenting the reasons why an action for which the agency has prepared an environmental assessment has no potential to have a significant effect on the human environment and, thus, will not require preparation of an environmental impact
state. (See environmental assessment and environmental impact statement.)

**FSP - Freeway Service Patrol**
(See Incident Management)

**Fully-Actuated Signal**
A signal where all signal phases are actuated (see “Actuated Signal”).

**Furnishings Zone**
A linear portion of the Sidewalk Corridor, adjacent to the curb that contains elements such as street trees, signal poles, utility poles, street lights, controller boxes, hydrants, traffic signs, street signs, parking signs, parking meters, driveway aprons, planting strip, or street furniture.

**General Plan**
A broad collection of goals, policies, and objectives adopted by the City Council that is intended to inspire, guide, and direct growth in the City.

**GIS - Geographic Information System**

**GPS – Global Positioning System**

**Gravity Model**
See Travel Demand

**Growth Management**
A longer-term tool for action against traffic problems through comprehensive land-use planning and policies.

**GSM – Global System for Mobile Communications**

**Gutter**
The trough that runs between the curb or curb ramp and the street.

**HAR - Highway Advisory Radio**

**HCM – Highway Capacity Manual**

**HCS – Highway Capacity Software**

**Headway**
Time interval between vehicles moving in the same direction on a particular route.

**Heavy Rail**
See "Rail, Heavy".

**High Pedestrian Use Areas**
Areas within ¼ to ½ mile of land uses such as commercial, hotel, and public facilities that attract high volumes of pedestrian activity.

**High Speed Rail**
See "Rail, High Speed".

**Highway Trust Fund**
The federal trust fund established by the Highway Revenue Act of 1956; this fund has two accounts — the Highway Account and the Mass Transit Account. Trust fund revenues are derived from federal highway-user taxes and fees such as motor fuel taxes; trust fund uses and expenditures are determined by law.

**Horizontal Alignment**
The horizontal alignment of a highway, railway, or transit guideway represents the projection of the facility on a horizontal plane.

**HOV - High-Occupancy-Vehicle Lane**
The technical term for a carpool lane, commuter lane or diamond lane.

**ICC – Intelligent Cruise Control**
(See AVCS)

**Incident Management**
Systematical monitoring of traffic flow on transportation systems that provides useful
information for identifying and responding to traffic incidents.

**IS - INITIAL STUDY**

A preliminary analysis prepared by the Lead Agency to determine whether an EIR or a Negative Declaration must be prepared, or to identify the significant environmental effects to be analyzed in an EIR. Use of the Initial Study is discussed in Article 5, commencing with Section 15060 of the California Code.

**INTERMODAL**

Those issues or activities which involve or affect more than one mode of transportation including transportation connections, choices, cooperation, and coordination of various modes. Also known as "multimodal." The term "mode" is used to refer to and distinguish from each other the various forms of transportation such as automobile, transit, ship, bicycle, and walking. Intermodal refers specifically to the connections between modes, whereas multimodal may refer to a system or corridor that supports various travel modes.

**INTERSECTION**

The area of a roadway created when two or more public roadways join together at any angle.

**ISTEA - INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT**

Pronounced "Ice Tea," this landmark $155 billion federal legislation, signed into law in December 1991, calls for broad changes in the way transportation decisions are made. ISTEA emphasizes diversity and balance of modes, as well as the preservation of existing systems before construction of new facilities.

**ITE – INSTITUTE OF TRANSPORTATION ENGINEERS**

(1) Intelligent Transportation Systems: The term refers to a wide range of advanced electronics and communications technology applied to roads and vehicles designed to improve safety and productivity.

(2) Institute of Transportation Studies, University of California. The stated goal of this multicampus research unit is to "improve the way transportation is organized, managed, and maintained." Projects cover transportation policy, new technology (see PATH), safety, traffic management, infrastructure, and freight and logistics.

**IVHS - INTELLIGENT VEHICLE-HIGHWAY SYSTEM**

**IVRG – IN-VEHICLE ROUTE GUIDANCE**

**JITNEY**

Privately owned, small or medium-sized vehicle usually operated on a fixed route but not on a fixed schedule.

**JOINT DEVELOPMENT**

Ventures undertaken by the public and private sectors for development of land. Joint ventures are commonly used around transit stations or stops.

**KINEMATICS**

The study of motion irrespective of the forces that cause it.

**KINETICS**

The study of motion that accounts for the forces that cause it.

**KISS AND RIDE**

A place where commuters are driven and dropped off at a station to board a public transportation vehicle.

**LANDING**

The level area at the top (or bottom) of a curb ramp.

**LAYOVER TIME**

Time built into a schedule between arrival at the end of a route and the departure for the return trip, used for the recovery of delays and preparation for the return trip.
LEAD AGENCY (CEQA TERM)
The public agency which has the principal responsibility for carrying out or approving a project. The Lead Agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared. Criteria for determining which agency will be the Lead Agency per CEQA are contained in Section 15051 of the California Code.

LIGHT RAIL
See LRT.

LNG - LIQUEFIED NATURAL GAS
An alternative fuel; a natural gas cooled to below its boiling point of -260 degrees Fahrenheit so that it becomes a liquid; stored in a vacuum bottle-type container at very low temperatures and under moderate pressure. LNG vapor is lighter than air.

LOAD FACTOR
The ratio of passengers actually carried versus the total passenger capacity of a vehicle.

LOS - LEVEL OF SERVICE
A report card that rates traffic flow from A (far below capacity) through F (at or above capacity), and compares actual or projected traffic volume with the maximum capacity of the intersection or road in question.

LOW PEDESTRIAN USE AREAS
Residential neighborhoods and areas outside of Pasadena’s commercial/retail core which have a lower intensity of pedestrian use.

LRT - LIGHT-RAIL TRANSIT
Fixed guideway transportation mode that typically operates on city streets and draws it electric power from overhead wires; includes streetcars, trolley cars, and tramways. Differs from heavy rail, which has a separated right of way and includes commuter and intercity rail, in that it has lighter passenger capacity per hour and more closely spaced stops.

LRV - LIGHT-RAIL VEHICLE
An alternative name for “streetcar”.

MAGLEV - MAGNETIC LEVITATION
This technology permits trains to move at high speed above a guideway on a cushion of air generated by magnetic force.

MASS TRANSIT
See "Public Transportation."

MASS TRANSPORTATION
See "Public Transportation."

MBE - MINORITY BUSINESS ENTERPRISE
A business owned and operated by one or more individuals who are defined as minorities under U.S. Department of Transportation regulations. See also "disadvantaged business enterprise."

MDBF - MEAN DISTANCE BETWEEN FAILURES
The average distance in miles that a transit vehicle travels before failure of a vital component forces removal of that vehicle from service.

MEDIAN REFUGE ISLAND
A refuge island located between vehicle travel lanes.

MEDIUM-SIZE BUS
See "Bus, Medium-Size."

METHANOL
An alternative fuel; a liquid alcohol fuel with vapor heavier than air; primarily produced from natural gas.

METRO
See MTA

METROPOLITAN RAILWAY
See "Rail, Heavy."
**Midblock Crossing**
A crossing treatment that occurs between intersections.

**Mitigated Negative Declaration**
A negative declaration prepared for a project when the initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur; and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

**Mobility Element**
Transportation Element of the General Plan for the City of Pasadena.

**Modal Split**
A term which compares the usage of various forms of transportation. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using public transportation.

**Model**
An analytical tool (often mathematical) used by transportation planners to assist in making forecasts of land use, economic activity, or travel activity, and their effects on the quality of resources such as land, air and water.

**Monorail**
An electric railway in which a rail car or train of cars is suspended from or straddles a guideway formed by a single beam or rail. Most monorails are either heavy rail or automated guideway systems.

**MPO - Metropolitan Planning Organization**
A federally required transportation planning body responsible for the RTP and the TIP in its region; the governor designates an MPO in every urbanized area with a population of over 50,000. The Southern California Association of Governments (SCAG) is the MPO for Pasadena.

**MTA – Los Angeles County Metropolitan Transportation Authority**
Recently renamed to Metro.

**MTS - Metropolitan Transportation System**
This is an integrated, multimodal transportation system consisting of major highways, arterials, bikeways, and transit routes used to move people and goods around a region.

**Multimodal**
Refers to the availability of multiple transportation options, especially within a system or corridor. A multimodal approach to transportation planning focuses on the most efficient way of getting people or goods from place to place, including trucks, trains, bicycles, automobiles, airplanes, buses, boats, or foot.

**MUTCD**
Manual on Uniform Traffic Control Devices, a publication of the Federal Highway Administration that establishes a national standard for traffic control.

**NAAQS – National Ambient Air Quality Standards**
Standards defining the highest allowable levels of certain pollutants in the ambient air (i.e., the outdoor air to which the public has access). Because the Environmental Protection Agency must establish the criteria for setting these standards, the regulated pollutants are called criteria pollutants. Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter: less than 10 micrometers (0.0004 inch) in diameter, and less than 2.5 micrometers (0.0001 inch) in diameter. Primary standards are established to protect public health; secondary standards are established to protect public welfare (e.g., visibility, crops, animals, buildings).
NARC - NATIONAL ASSOCIATION OF REGIONAL COUNCILS

The nationwide organization for MPO’s, COG’s and other such entities; based in Washington, D.C.

NEGATIVE DECLARATION

A written statement by the Lead Agency briefly describing the reasons that a proposed project, not exempt from CEQA, will not have a significant effect on the environment and therefore does not require the preparation of an EIR. The contents of a Negative Declaration are described in Section 15071 of the California Code.

NEPA - NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

NEPA is the basic national charter for protection of the environment. It establishes policy, sets goals (in Section 101), and provides means (in Section 102) for carrying out the policy. Section 102(2) contains “action-forcing” provisions to ensure that Federal agencies follow the letter and spirit of the Act. For major Federal actions significantly affecting the quality of the human environment, Section 102(2)(C) of NEPA requires Federal agencies to prepare a detailed statement that includes the environmental impacts of the proposed action and other specified information.

NEW LOOK BUS

See "Bus, New Look".

NEW START

Federal funding granted under Section 3(i) of the Federal Transit Act (formerly known as the Urban Mass Transportation Act). These discretionary funds are made available for construction of a new fixed guideway system or extension of any existing fixed guideway system based on cost-effectiveness, alternatives analysis results, and the degree of local financial commitment.

NHS - NATIONAL HIGHWAY SYSTEM

An approximately 155,000-mile network called for in the Intermodal Surface Transportation Efficiency Act to provide an interconnected system of principal routes to serve major travel destinations and population centers. The NHS is expected to be designated by Congress in 1995.

NONATTAINMENT AREA

An area that the U.S. Environmental Protection Agency has designated as not meeting (i.e., not being in attainment of) one or more of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants, but not for others. [See attainment area and National Ambient Air Quality Standards (NAAQS).]

NOTICE OF COMPLETION

A brief notice filed with the State Office of Planning Research (OPR) by a Lead Agency as soon as it has completed a draft EIR and is prepared to send out copies for review. The contents of this notice are explained in Section 15085 of the California Code.

NOTICE OF DETERMINATION

A brief notice to be filed by a public agency after it approves or determines to carry out a project which is subject to the requirements of CEQA.

NOTICE OF EXEMPTION

A brief notice which may be filed by a public agency after it has decided to carry out or approve a project and has determined that the project is exempt from CEQA as being ministerial, categorically exempt, an emergency, or subject to another exemption from CEQA. Such a notice may also be filed by an applicant where such a determination has been made by a public agency which must approve the project.

NOTICE OF PREPARATION

A brief notice sent by a Lead Agency to notify the Responsible Agencies, Trustee Agencies, and involved federal agencies that the Lead Agency plans to prepare an EIR for the project. The purpose of the notice is to solicit guidance from those agencies as to the scope and content of the environmental information to be included in the EIR.
NTS - NATIONAL TRANSPORTATION SYSTEM
An intermodal system consisting of all forms of transportation in a unified, interconnected manner to reduce energy consumption and air pollution while promoting economic development and supporting the Nation's preeminent position in international commerce. The NTS includes the National Highway System (NHS), public transportation, and access to ports and airports.

OBLIGATION
A federal budgetary term that refers to a binding agreement that will result in an outlay; an agreement by the federal government to pay for goods or services immediately or at some future time when the goods or services are delivered. Also known as a "commitment."

OBLIGATION LIMITATION
A federal budgetary term that refers to a limit placed in appropriations bills on the amount of federal assistance that may be obligated during a specified time period. It does not affect the scheduled apportionment or allocation of funds; it just controls the rate at which these funds may be used.

OBSTRUCTION-FREE AREA
At a street corner, the space between the curb and the lines created by extending the property line (or the line of a public walkway easement) to the curb face, in which no obstructions to pedestrian movement should be located.

OFF-PEAK PERIOD
Periods of the day when travel activity is generally lower. Also called "base period."

OPERATING ASSISTANCE
Financial assistance for transit operating expenses (not capital costs); such aid may originate with federal, local, or state governments.

OPERATING DEFICIT
The sum of all operating expenses minus operating revenues.

OPERATING EXPENSE
Monies paid in salaries, wages, materials, supplies, and equipment in order to maintain equipment and buildings, operate vehicles, rent equipment and facilities, and settle claims.

OPERATING REVENUE
Monies used to fund general, day-to-day costs of running transportation systems. For transit, costs include fuel, salaries and replacement parts; for roads, operating costs involve maintaining pavement, roadway repairs, labor costs, etc..

OUTLAY
A federal budgetary term that refers to a payment made to meet an obligation; the point at which an actual payment of money is made.

PARALLEL CURB RAMP
ADA term for the element described in this guide as a "dropped landing", in which the sidewalk ramps down to a landing at street level. Used only where constraints prevent accommodating a standard curb ramp.

PARATRANSIT
Comparable transportation service required by the Americans with Disabilities Act (ADA) of 1990 for individuals with disabilities who are unable to use fixed-route transportation systems.

PARK AND RIDE LOT
Designated parking areas for automobile drivers who then board transit vehicles from these locations.

PARKING CONTROL
The use of meters, signs, or curb markings to indicate where parking is and is not allowed.

PARTICULATE TRAP
A filter which removes a portion of the particulates (solids soot, etc.) from a vehicle's exhaust stream and generally includes a regenerative unit and associated control system to burn the collected solids.
**Passenger Miles**

The total number of miles traveled by passengers on transit vehicles; determined by multiplying the number of unlinked passenger trips times the average length of their trips.

**PATH - (California) Partners for Advanced Transit and Highways**

A leading research and development program for IVHS, sponsored by Caltrans and managed by ITS-Berkeley. Research is carried out by public and private academic institutions across the state.

**Pathway**

A pedestrian walkway other than a standard sidewalk.

**Pasadena DOT or PDOT**

Pasadena Department of Transportation

**Peak Period**

Morning and afternoon time periods when transit riding is heaviest.

**Peak/Base Ratio**

The number of vehicles operating for passenger service during the peak period divided by the number operated during the base period.

**Pedestrian**

A person afoot; a person operating a pushcart; a person riding on, or pulling a coaster wagon, scooter, tricycle, bicycle with wheels less than 14 inches in diameter, or a similar conveyance, or on roller skates, skateboard, wheelchair, or a baby in a carriage.

**Pedestrian Access to Transit Projects**

Projects to plan and construct improvements that enhance access to transit. Examples of these improvements include sidewalks, crossing improvements, and curb extensions with enhanced amenities at transit stops.

**Pedestrian Connection**

A sidewalk, pathway, trail, or other pedestrian facility not situated along a street. This may occur as a walkway within a public right-of-way where no street has been built, in a public walkway easement on private property, or as a trail in a park or other open space.

**Perpendicular Curb Ramp**

ADA term for a curb ramp in which the slope of the ramp is generally perpendicular to the line of the curb. This guide uses the term “curb ramp” to refer to such elements. See also “Parallel Curb Ramp” and “Dropped Landing”.

**PMS - Pavement Management System**

Computer-assisted scheduling program for preventative maintenance of roadway surfaces.

**Propane**

An alternative fuel; a liquid petroleum gas (LPG), with vapor heavier than air, which is stored under moderate pressure; produced as a by-product of natural gas and oil production.

**Public Stair**

A public facility of more than three steps, either in public right-of-way or a public walkway easement, for the use of the public.

**Public Transportation**

Transportation by bus, rail, or other conveyance, either publicly or privately owned, which provides to the public general or special service on a regular and continuing basis. Also known as “mass transportation,” “mass transit” and “transit”.

**Public Walkway Easement**

An easement granted by a property owner to the City of the purpose of providing public access to pedestrians. Construction and maintenance of the sidewalk or walkway facilities in the easement is the responsibility of the adjacent property owner, just as it is with walkways in the right-of-way.
**Rail, Commuter**
Railroad local and regional passenger train operations between a central city, its suburbs and/or another central city. It may be either locomotive-hauled or self-propelled, and is characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices and usually only one or two stations in the central business district. Also known as "suburban rail."

**Rail, Heavy**
An electric railway with the capacity for a "heavy volume" of traffic and characterized by exclusive rights-of-way, multi-car trains, high speed and rapid acceleration, sophisticated signaling and high platform loading. Also known as "Rapid Rail."

**Rail, High Speed**
A rail transportation system with exclusive right-of-way which serves densely traveled corridors at speeds of 124 miles per hour (200 km/h) and greater.

**Rail, Light**
An electric railway with a "light volume" traffic capacity compared to heavy rail. Light rail may use shared or exclusive rights-of-way, high or low platform loading and multi-car trains or single cars. Also known as "streetcar," "trolley car" and "tramway."

**Rapid Transit**
Rail or motorbus transit service operating completely separate from all modes of transportation on an exclusive right-of-way.

**Recession**
A federal budgetary term that refers to the cancellation, in whole or in part, of budget authority previously granted by Congress.

**Refuge Island**
A raised island in the roadway that separates a crosswalk into discrete legs and provides a refuge for crossing pedestrians.

**Reverse Commuting**
Movement in a direction opposite the main flow of traffic, such as from the central city to a suburb during the morning peak period.

**Ridesharing**
A form of transportation, other than public transit, in which more than one person shares the use of the vehicle, such as a van or car, to make a trip. Also known as "carpooling" or "vanpooling."

**Ridership**
The number of rides taken by people using a public transportation system in a given time period.

**Right-Of-Way**
An easement held by the City over land owned by the adjacent property owners that allows the City to exercise control over the surface and above and below the ground of the right-of-way. Property owners are typically responsible for the construction of transportation improvements adjacent to their property. The City maintains the street, while the property owner is responsible for maintaining the sidewalk.

**Rolling Stock**
The vehicles used in a transit system, including buses and rail cars.

**Route Miles**
The total number of miles included in a fixed-route transit system network.

**ROW or R.O.W.**
See “Right-Of-Way”.

**RTP - Regional Transportation Plan**
A blueprint to guide the region's transportation development for a 20-year period. Updated every two years, it is based on projections of growth and travel demand coupled with financial projections.
**RTPA - Regional Transportation Planning Agency**

A state designated agency responsible for preparing the RTP and RTIP; administering TDA and other tasks.

**Running Grade**

The slope of the sidewalk or roadway along the line of travel.

**SCAG - Southern California Association of Governments**

A six-county planning and coordinating agency that deals with transportation, water quality, housing, and land use. Also reviews and comments on applications for a variety of federal and state assistance programs.

**Semi-Actuated Signals**

Signals where only some phases (usually the side street) are actuated (see “Actuated Signals”).

**Separated Sidewalk**

A sidewalk separated from the curb by linear planting strip which may include lawn or groundcover and street trees (see “Detached Sidewalk”).

**Sequestration**

A federal budgetary term that refers to the permanent cancellation of budget authority.

**Shuttle**

A public or private vehicle that travels back and forth over a particular route, especially a short route or one that provides connections between transportation systems, employment centers, etc.

**Sidewalk**

An improved facility intended to provide for pedestrian movement; usually, but not always, located in the public right-of-way adjacent to a roadway. Typically constructed of concrete.

**Sidewalk Corridor**

The area located within the public right-of-way between the curb line of a street or roadway edge and the property line at the edge of right-of-way.

**Sightseeing Bus**

See “Bus, Sightseeing”.

**SIP - State Implementation Plan**

Metropolitan areas prepare local and regional SIP’s showing steps they plan to take to meet federal air quality standards (outlined in the CAA). Several SIP’s make up the statewide plan for cleaning up the air, also known as a SIP.

**Slip Lane**

A lane provided for ease of right-hand turns at the intersection of arterial streets. In new construction, this is often accomplished by the use of a large turning radius and an intermediate refuge island for pedestrian crossings.

**Small Bus**

See "Bus, Small".

**SOV - Single-Occupant Vehicle**

A vehicle with one occupant, the driver, who is sometimes referred to as a “drive alone.”

**Standard-Size Bus**

See "Bus, Standard-Size."

**STIP - State Transportation Improvement Program**

**Street Vacation**

The process of vacating the public right-of-way, the control of which reverts to the underlying property owners unless the City retains a Public Walkway Easement.

**Streetcar**

See "Rail, Light."

**Subscription Bus**

See "Bus, Subscription."
**Suburban Rail**
See "Rail, Commuter."

**Subway**
See "Rail, Heavy."

**Supplemental Appropriation**
An act appropriating funds in addition to those in an annual appropriation act because the need for funds is too urgent to be postponed until enactment of the next regular appropriation act.

**Tactile Warning**
A surface treatment, usually at a curb ramp or any unexpected edge such as a rail platform, that can be detected with a cane by a person with vision impairment.

**“T” Intersection**
An intersection where one street ends at a through street, forming an intersection shaped like the letter “T”.

**TCM - Transportation Control Measure**
A strategy to reduce traffic volumes and congestion in order to decrease auto emissions and resulting air pollution. Examples of TCM’s include incident management, new or increased transit service, or a program to promote carpools and vanpools.

**TDA - Transportation Development Act**
State law enacted in 1971. TDA funds are generated from a tax of one-quarter of one percent on all retail sales in each county. They are collected by the state for projects and programs within the county of origin, including transit, paratransit, bicycle and pedestrian purposes. Under certain circumstances, TDA funds may be used for streets and roads in non-urban areas.

**TDM - Transportation Demand Management**
Low-cost ways to reduce demand by automobiles on the transportation system such as programs to promote telecommuting, flextime, and ridesharing.

**TEA - Transportation Enhancement Activities**
An ISTEA-created funding category. Ten percent of STP monies must be set aside for projects that enhance the compatibility of transportation facilities with their surroundings.

**Through Pedestrian Zone**
A linear portion of the Sidewalk Corridor which contains no obstructions, openings, or other impediments that would prevent or discourage movement by pedestrians.

**Tiering**
Refers to the coverage of general matters in broader EIR’s (such as on general plans or policy statements) with subsequent narrower EIR’s or ultimately site-specific EIR’s incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIR’s is:

(a) From a general plan, policy, or program EIR to a program, plan, or policy EIR of lesser scope or to a site-specific EIR;
(b) From an EIR on a specific action at an early stage to a subsequent EIR or a supplement to an EIR at a later stage. Tiering in such cases is appropriate when it helps the Lead Agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.

**TIP - Transportation Improvement Program**
This is primarily a spending plan for federal funding expected to flow to the region from all sources for transportation projects of all types.
| **TMA** - **Transportation Management Association** | **Trolley Car**  
A voluntary group set up by employers or other entities to reduce vehicle trips within certain areas.  
**See "Bus, Trolley."** |
| **TMP** - **Transportation Management Plan** | **Trolley Coach**  
**See "Bus, Trolley."** |
| **TMC** - **Traffic Management Center** | **Trust Funds**  
Funds collected and used by the federal government for carrying out specific purposes and programs according to terms of a trust agreement or statute, such as the Social Security and highway trust funds. Trust funds are administered by the government in a fiduciary capacity and are not available for the general purposes of the government. See "Dedicated Funding Source". |
| **TOC** - **Traffic Operations Center** | **TSM** - **Transportation Systems Management**  
Alternative improvements to roadway widening that increase the efficiency of a transportation system, including intersection signalization, traffic signal synchronization, changeable message signs, etc. |
| **TOS** - **Traffic Operations System** | **UMTA** - **Urban Mass Transportation Administration**  
See "Federal Transit Administration (FTA)." |
| **TRB** - **Transportation Research Board** | **UZA** - **Urbanized Area**  
An U.S. Bureau of Census-designated area of 50,000 or more inhabitants consisting of a central city or two adjacent cities plus surrounding densely settled territory, but excluding the rural portion of cities. |
| **Trackless Trolley**  
See "Bus, Trolley." | **U.S. DOT** - **United States Department of Transportation**  
The federal cabinet-level agency with responsibility for highways, mass transit, aviation, and ports; headed by the Secretary of Transportation. The DOT includes the Federal Highway Administration and the Federal Transit Administration, among others. |
| **Tramway**  
See "Rail, Light." | **Vacation**  
See “Street Vacation”.

| **Transfer Center**  
A fixed location where passengers transfer from one route or vehicle to another. |  |  |  |  |
VANPOOL
An arrangement in which a group of passengers share the use and cost of a van in traveling to and from pre-arranged destinations together.

VARIABLE COST
A cost that varies in relation to the level of operational activity.

VFV - VARIABLE FUEL VEHICLE
Also known as “Flexible Vehicle”. This kind of vehicle can run on gasoline along with less polluting alternative fuels such as CNG.

VMT - VEHICLE MILES TRAVELED

WALKWAY
A pedestrian facility, whether in the public right-of-way or on private property, which is provided for the benefit and use of the public.

WBE - WOMEN’S BUSINESS ENTERPRISE
A business owned and operated by one or more women.

WTS - WOMEN’S TRANSPORTATION SEMINAR

ZONE FARES
A system of fares where a transit system's service area is divided into zones within which specified rates or fares apply.
PASADENA PEDESTRIAN PLAN
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APPENDIX E

ADDITIONAL RESOURCE MATERIALS
1. ADDITIONAL RESOURCE MATERIALS


2. ADDITIONAL WEB RESOURCES

America Walks: www.americawalks.org
California Safe Routes to School Initiative: www.dhs.ca.gov/routes2school/
Center for Livable Communities. www.lgc.org/center/
International Walk to School Day: www.iwalktoschool.org/
National Center for Chronic Disease Prevention and Health Promotion, Nutrition, and Physical Activity: www.cdc.gov/needphp/dnpa/idex/htm
National Center for Bicycling and Walking: www.bikewalk.org/
Pedestrian and Bicycle Information Center: www.walkinginfo.org/
Robert Wood Johnson Foundation: www.rwjf.org/