

**Table 8.2**  
**Citywide Project Costs**

Project Category Name	Total Cost	Average Annual Cost over 20 Years
Sidewalk Gap Infill	\$12,402,900	\$620,100
Diagonal Curb Ramp Retrofit	\$1,466,000	\$73,300
ADA Truncated Domes Retrofit	\$73,600	\$3,700
Signage Improvements	\$4,500	\$200
Signal Timing Adjustments	No Cost	N/A
Audible Signal Installations	\$153,600	\$7,700
High Visibility Crosswalk Markings	\$192,000	\$9,600
Pedestrian Warning Signs	\$4,500	\$200
<b>TOTAL COST CITYWIDE PROJECTS</b>	<b>\$14,297,100</b>	<b>\$714,800</b>

Source: Alta Planning + Design; June, 2008

**Table 8.3**  
**Priority Intersection and Corridor Project Costs**

	Location	Project Type	Project Cost
1	Plaza Camino Real	Sidewalk Infill, Wayfinding	\$139,706
2	Jefferson Street Corridor	Sidewalk Infill, Wayfinding	\$2,103,850
3	Carlsbad Boulevard (Lagoon Crossing)	Sidewalk Infill, Wayfinding	\$69,435
4	Buena Vista Elementary	Sidewalk Infill, Signage, Crosswalks	\$482,403
5	Carlsbad Village and Transit Center	Mid-block Crossing, Wayfinding, Sidewalk Infill	\$128,603
6	Chestnut Avenue Corridor	Sidewalk Infill, Bus Stop Improvements, Wayfinding	\$131,473
7	Harding Street Corridor	Stop Sign Control, Curb Extensions, Signage	\$374,143
8	Carlsbad High and Surrounding Schools	Sidewalk Infill, Curb Extensions, Crosswalks, Wayfinding	\$2,362,560
9	Jefferson Elementary	Crosswalks, Curb Extension	\$48,880
10	Calaveras Elementary & Middle Schools	Sidewalk Infill, Trail Connection, Wayfinding	\$237,374
11	Kelly Elementary	Trail Connection, Sidewalk Infill, Crosswalk	\$360,044
12	South Carlsbad Boulevard Corridor	Multi-use path	\$1,647,400
13	Palomar Airport Road Corridor	Mid-block Crossing, Wayfinding	\$76,553
14	Aviara Elementary and Middle School	Curb pad, Trail Connection, Wayfinding	\$401,572
15	La Costa Canyon and Surrounding School	Sidewalk Infill, Wayfinding	\$105,360
	<b>TOTAL COST TOP 15 PROJECTS</b>		<b>\$8,669,356</b>

Source: Alta Planning + Design; June 2008

### 8.1.4 Program Costs

Costs associated with the program related recommendations are shown in **Table 8.4**. The budgets for recommended programs, while annualized in the table, are likely to vary considerably from year to year and are subject to grant awards and budget conditions.

**Table 8.4**  
**Costs of Programs Recommended in the Plan**

Program Name	Average Annual Cost	Cost over 20 Years
<i>Maintenance</i> (see note)	\$100,000	\$2,000,000
<i>Promotional Efforts</i>		
Printed material (posters, brochures, maps)	\$20,000	\$400,000
Public Service Announcements	\$2,000	\$40,000
Website	\$2,000	\$40,000
Annual Events	\$50,000	\$1,000,000
Presentations	\$5,000	\$100,000
<i>Enforcement</i>	\$10,000	\$200,000
<b>TOTAL COST PROGRAMS</b>	<b>\$189,000</b>	<b>\$3,780,000</b>

Source: Alta Planning + Design; June, 2008

Note:

Maintenance for new facilities recommended in plan. This estimate does not include costs to alleviate the sidewalk repair backlog or emergency repairs.

### 8.2 Financial Plan

The total pedestrian capital and program costs and expected revenue for the next twenty years are presented in **Table 8.5**. The long-term costs are based on very broad assumptions about needs in the City, and will be refined as the Pedestrian Master Plan is updated. The total 20-year cost of the pedestrian improvements and programs in Carlsbad is estimated to be \$31.6 million or \$1.58 million per year. The City's FY 08/09 Capital Improvement Program identifies \$3.9 million dollars in funding for sidewalk construction through build-out. Based upon the assumption that 70% of the total capital project costs, or roughly \$22.1 million, could come from competitive grants, this leaves a shortfall of approximately \$5.57 million over 20 years, or about \$279,000 annually.

**Table 8.5  
City of Carlsbad Pedestrian Plan 20-Year Costs**

		20-Year Total Costs
<b>Priority Intersection and Corridor Costs (Top 15 Projects)</b>		\$ 8,669,356
<b>Citywide Projects Recommended in Plan</b>		
Sidewalk Gap Infill		\$ 12,402,900
Diagonal Curb Ramp Retrofit		\$ 1,466,000
ADA Truncated Domes Retrofit		\$ 73,600
Signage Improvements		\$ 4,500
Signal Timing Adjustments		n/a
Audible Signal Installations		\$ 153,600
High Visibility Crosswalk Markings		\$ 192,000
Pedestrian Warning Signs		\$ 4,500
<b>Subtotal</b>		\$ 14,297,100
<b>Programs Recommended in Plan</b>	<b>Annual</b>	<b>20-Year</b>
Maintenance (of new facilities)	\$ 100,000	\$ 2,000,000
Promotion	\$ 79,000	\$ 1,580,000
Enforcement	\$ 10,000	\$ 200,000
<b>Subtotal</b>	\$ 189,000	\$ 3,780,000
<b>Soft Costs (incl. Personnel)</b>	\$ 242,000	\$ 4,840,000
<b>Summary of Costs</b>	<b>Annual</b>	<b>20-Year</b>
Priority Intersection and Corridor Costs (Top 15 Projects)	\$ 433,468	\$ 8,669,356
Citywide Projects	\$ 714,855	\$ 14,297,100
Program Costs	\$ 189,000	\$ 3,780,000
Soft Costs (Personnel)	\$ 242,000	\$ 4,840,000
<b>Total Costs</b>	\$ 1,579,323	\$ 31,586,456
<b>Revenue</b>		
Sidewalk CIP project		\$ 3,900,000
		\$
		\$
<b>20-Year Funding Gap</b>		\$ 27,686,456
<b>Estimated Competitive Grant Revenue (70% of Capital)</b>		\$ 22,110,519
<b>Estimated Total 20-Year Shortfall</b>		\$ 5,575,937
<b>Annual Total Shortfall</b>		\$ 278,797

Source: Alta Planning + Design; June, 2008

### **8.3 Funding Sources**

Funding that can be used for pedestrian projects, programs, and plans come from all levels of government. This chapter covers federal, state, regional and local sources of pedestrian funding, as well as some non-traditional funding sources that have been used by local agencies to fund pedestrian infrastructure and programs. **Table 8.6** presents a summary of various federal, state, regional and local pedestrian project/program funding sources.

#### **8.3.1 Federal Funding Sources**

The primary federal source of surface transportation funding—including pedestrian facilities—is SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SAFETEA-LU is the fourth in a series of Federal transportation funding bills. The \$286.5 billion SAFETEA-LU bill, passed in 2005, authorizes federal surface transportation programs for the five-year period between 2005 and 2009.

SAFETEA-LU funding is administered through the State (Caltrans and Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections.

Specific funding programs under SAFETEA-LU include:

***Congestion Mitigation and Air Quality (CMAQ)*** – This program funds projects that are likely to contribute to the attainment of national ambient air quality standards. Funds are available for projects and programs in areas that have been designated as non-attainment or in maintenance for ozone, carbon monoxide or particulate matter.

***Recreational Trails Program*** – This program provides \$370 million nationally through 2009 for non-motorized trail projects.

***Safe Routes to School Program*** – A relatively new program with \$612 million nationally through 2009.

***Transportation, Community and System Preservation Program*** – This program provides \$270 million nationally over five years (2006-2011) reserved for transit-oriented development, traffic

calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers.

***Federal Lands Highway Funds*** – Federal Lands Highway funds may be used to build pedestrian facilities in conjunction with roads and parkways at the discretion of the department charged with administration of the funds. The projects must be transportation-related and tied to a plan adopted by the State and MPO. Approximately \$1 billion dollars are available nationally for Federal Lands Highway Projects through 2009.

### **8.3.2 Statewide Funding Sources**

The State of California uses both federal sources (such as the Recreational Trails Program) and its own budget to fund pedestrian projects and programs. In some cases, such as Safe Routes to School, Office of Traffic Safety, and Environmental Justice grants, project sponsors apply directly to the State for funding. Statewide funding sources are described below:

**Recreational Trails Program (RTP)** – The Recreational Trails Program (RTP) provides funds to States to develop and maintain Recreational Trails and trail-related facilities for both non-motorized and motorized Recreational Trail uses. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) defines the program at the federal level. In 2005, Congress reauthorized the RTP nationwide for \$60 million in Federal Fiscal Year (FFY) 2005, \$70 million in FFY 2006, \$75 million in FFY 2007, \$80 million in FFY 2008, and \$85 million in FFY 2009. Seventy percent of the funds received by California will be available for nonmotorized projects on a competitive basis to cities, counties, districts, state agencies, federal agencies and nonprofit organizations with management responsibilities over public lands. The RTP match amount is based on the cost of the total RTP Project. The maximum amount of RTP funds allowed for each project is eighty-eight (88) percent. The applicant is responsible for providing a match amount that is a minimum of twelve (12) percent. In California, RTP funds are administered by the California State Parks Department.

Recreational Trails Program funds may be used for the following:

- Maintenance and restoration of existing trails;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails;

- Acquisition of easements of property for trails; and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to 5 percent of a State's funds).

**Land and Water Conservation Fund** – The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The Fund is administered by the California State Parks Department and has been reauthorized until 2015. Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50 percent of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use. The grant process for local agencies is competitive. Annual apportionment allocates 60 percent of the funds to local agencies. Sixty (60) percent of those grants are reserved for Southern California.

Eligibility Criteria:

- Application package
- The Project must be consistent with issues identified in the California Outdoor Recreation Plan
- The applicant must have an assured source of eligible matching funds to meet the non-federal share of the cost of the project
- The applicant must have adequate land tenure for Development Projects

Project Proposal Criteria:

- Priority Statewide Recreation Needs
- Identification of CORP Priority Issues
- Outdoor Recreational Opportunities
- Public Involvement
- Population and Population Density
- Cost-Use Benefit
- Accessibility
- Priority Acquisitions (Acquisition Projects only)
- Suitability (Development Projects only)
- Readiness
- Performance
- Operation and Maintenance

***California State-Legislated Safe Routes to School (SR2S) Program*** – Established in 1999, the State Safe Routes to School (SR2S) program came into effect from the passage and signing of

---

Assembly Bill 1475 (AB 1475). In 2001, Senate Bill 10 (SB 10) was enacted which extended the program for three additional years. In 2004, SB 1087 was enacted to extend the program three more years. A new bill, AB 57, was introduced in December 2006 to extend the program until January 1, 2013. With the passage of SAFETEA-LU in 2005, federal Safe Routes to School funds were made available to states nationwide. For this reason, current statutes will be revised to reflect SAFETEA-LU provisions as the State program is phased out. This program is intended to improve the safety of walking and bicycling to school as well as encourage students to walk and bicycle to school by identifying existing and new routes to school and implementing pedestrian and bicycle safety and traffic calming projects.

Evaluation Criteria (Based upon 7<sup>th</sup> cycle of the program):

- Provide a detailed description of the project scope and locations targeted for improvement.
- Describe the reasons you are applying for SR2S funds.
- Describe how your proposed solution was developed, e.g. were alternatives explored or other remedies (such as educational or enforcement measures) tested?
- Describe any ongoing and/or planned Safe Routes to School program efforts specifically targeted towards education, encouragement and enforcement activities.
- Describe how the proposed project would encourage more students to walk or bicycle to and from school more frequently.
- If the proposed project has funding sources from other agencies or grant providers, identify the funding sources, their amounts, and how the funds will complement the SR2S funds, either in additional infrastructure improvements or in the development of education, enforcement and encouragement activities.
- Describe any environmental issues or concerns that may impact the delivery of the project.
- Attach the following (a general project map; site plan for each improvement; detailed engineer's estimate; letters of support; applicable 'warrants'; and photographs).

***Environmental Justice: Context Sensitive Planning Grants*** – The Caltrans-administered Environmental Justice: Context Sensitive Planning Grants Program funds planning activities that assist low-income, minority, and Native American communities in becoming active participants in transportation planning and project development. Grants are available to transit districts, cities, counties, and tribal governments. This grant is funded by the State Highway Account and an estimated \$1,500,000 in grants and up to \$250,000 per application are available annually, budget permitting.

---

## Project Criteria:

- Project Description
- Grant Objective
- State Transportation Planning Grant Goals
- Public Participation
- Project Outcomes

***Office of Traffic Safety (OTS) Grants*** – The California Office of Traffic Safety distributes federal funding apportioned to California under the National Highway Safety Act and SAFETEA-LU. Grants are used to establish new traffic safety programs and expand ongoing programs to address deficiencies in current programs. Pedestrian safety is included in the list of traffic safety priority areas. Eligible grantees include governmental agencies, state colleges and state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need.

## Evaluation Criteria:

- Potential Traffic Safety Impact
- Collision Statistics and Rankings
- Seriousness of Problems
- Performance of on Previous OTS Grants

### **8.3.3 Regional and Local Funding Sources**

Regional pedestrian grant programs come from a variety of sources, including SAFETEA-LU, the State budget, vehicle registration fees, bridge tolls and local sales tax. Most regional funds are allocated by regional agencies such as the San Diego Association of Governments (SANDAG).

***FY 2008 TDA and TransNet Bicycle and Pedestrian Projects Call for Projects*** – Each year, the SANDAG Board of Directors allocates funds under the Transportation Development Act (TDA) and the TransNet local sales tax program to support non-motorized transportation projects in the San Diego region. For FY 2007, approximately \$3.5 million to \$4.0 million was available for allocation.



These funds serve as part of the Regional Housing Needs Incentive Program. Board Policy No. 033 (Implementation Guidelines for SANDAG Regional Housing Needs Assessment Memorandum) sets forth guidelines for incentives related to the Regional Housing Needs Assessment (RHNA) for the 2005-2010 Housing Element cycle. Eligibility for the TDA/*TransNet* bicycle and pedestrian funds depend upon compliance with Board Policy No. 033, TDA Project Eligibility, and *TransNet* Project Eligibility.

In addition to the eligibility requirements, if applicable, certain SANDAG Claim Requirements must be met. The application must be completed and received in early February.

Key Pedestrian Criteria:

- Community Support/Consistency with Community Plan
- Minimum Design Standards
- Connect to Regional Transportation Corridor/Transit Linkage
- Completes Connection/Linkage in Existing Pedestrian Network
- Project Readiness
- Geographic Factors/GIS Analysis
- Safety Improvements
- Innovation and Design
- Regional Housing Needs Incentive
- Matching Funds
- Cost Benefit

***Pilot Smart Growth Incentive Program (SGIP)*** – This innovative pilot program is based on the SANDAG Regional Comprehensive Plan (RCP) using funding incentives to encourage coordinated regional planning to bring transit service, housing, and employment together in smart growth development. Initially, the Pilot SGIP was funded with federal Transportation Enhancement (TE) Funds. Total funding included \$19 million for 14 approved local projects in September 2005, with a \$2 million cap per project. A longer-term, smart growth incentive program will be funded through the local *TransNet* half-cent sales tax program. It will provide \$6 million in FY 2009 and grow over time as sales tax revenues increase.

Carlsbad has four Smart Growth Place Type classifications within the Smart Growth Concept Map: one Existing/Planned Town Center, one Potential Town Center and two Potential Community Centers. These designations qualify for application for future incentive program funds.

---

Project Screening Criteria:

- Local Commitment/Authorization
- Funding Commitment
- Funding Eligibility

Project Evaluation Criteria:

- Project Readiness (Level of Project Development)
- Smart Growth Area Land Use Characteristics (Intensity of Development; Land Use and Transportation Characteristics of Project Area; Urban Design Characteristics of Project Area; Related Land Development Projects; Affordable Housing)
- Quality of Proposed Project (Pedestrian Access Improvements; Bicycle Access Improvements; Transit Facility Improvements; Streetscape Enhancements; Traffic Calming Features; Parking Improvements)
- Matching Funds
- Low Income Household Bonus Points

**Table 8.6  
Summary of Federal, State, Regional and Local Pedestrian Facility/Programs Funding Sources**

<p><u>Acronyms:</u>                  AQMD - Air Quality Management District                  Caltrans - California Department of Transportation                  CMAQ - Congestion Management and Air Quality                  CTC - California Transportation Commission                  FHWA - Federal Highway Administration                  RTPA - Regional Transportation Planning Agency                  State DPR - California Department of Parks and Recreation (under the State Resources Agency)                  SAFETEA-LU - Safe, Accountable, Flexible, Efficient Transportation Equity Act</p>	<p><u>Jurisdictions for City of Carlsbad, California:</u>                  Caltrans - Caltrans District 11                  SANDAG – San Diego Association of Governments</p>
---	---

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/Education	Comments/Contact Information
<b>Federal Funding</b>									
Congestion Mitigation and Air Quality (CMAQ)		FHWA	\$8.6 billion nationwide under SAFETEA-LU (2005-2009)	20% local match	State DOTs, MPOs, transit agencies	X	X		Information: <a href="http://www.fhwa.dot.gov/environment/cmaqpgs/">http://www.fhwa.dot.gov/environment/cmaqpgs/</a>
Federal Lands Highway Funds		FHWA	\$1 billion total nationwide through 2009	None	State	X	X	X	Project must appear in STIP. Contact California Division, FHWA <a href="http://www.fhwa.dot.gov/cadiv/directory.htm">http://www.fhwa.dot.gov/cadiv/directory.htm</a>
Recreational Trails Program (RTP)	October 1	FHWA	\$5.5 to California	At least 12%	State, local, regional agencies, and nonprofit organizations		X		Administered by California State Parks: Jean Lacher, Manager, Office of Grants and Local Services 1416 Ninth St, Room 918 Sacramento CA 94814 Mail: PO Box 942896 Sacramento CA 94296-0001

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Transportation and Community and System Preservation Program (TCSP)	Varies	FHWA	\$61.25 million annually nationwide through 2008/09	20% local match	State,Local, MPOs	--	--	--	Projects that improve system efficiency, reduce environmental impacts of transportation, etc. Contact Kenneth Petty TCSP Program Officer, Office of Planning phone: (202) 366-6654 <a href="http://www.fhwa.dot.gov/tcsp/pi_tcsp.html">http://www.fhwa.dot.gov/tcsp/pi_tcsp.html</a>
<b>State Funding</b>									
California Center for Physical Activity Grant Program	Ongoing	Department of Health Services	Up to \$4,999 per grantee	None	Public Health Departments			X	For pedestrian encouragement programs Contact: Lisa Cirill, Acting Chief <a href="mailto:lcirill@dhs.ca.gov">lcirill@dhs.ca.gov</a> 916.552-9943
Coastal Conservancy Non-Profit Grants Program	Ongoing	Coastal Conservancy	Grants range from \$10,000 to several million	Not required but favored	California non-profit 501 (c) 3 organizations		X		Funds for trail planning and construction and restoration of coastal urban waterfronts. Contact Janet Diehl <a href="mailto:jdiehl@scc.ca.gov">jdiehl@scc.ca.gov</a>
Environmental Enhancement and Mitigation Program (EEMP)	Currently suspended (as of mid-2006)	State Resources Agency, Caltrans	\$10 million statewide	Not required but favored	local, state and federal government non-profit agencies	X	X	X	Projects that mitigate environmental impacts of planned transportation projects; can include acquisition or development of roadside recreational facilities. Contact Carolyn Dudley, State Resources Agency, (916) 653-5656

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Environmental Justice Grants: Context Sensitive Planning	October 14	Caltrans	\$1.5 million statewide	10% local	MPA, RPTA, city, county, tribal govmts, transit districts	X	X	X	Funds activities that include low-income and minority communities in transportation planning and project development. Contact Norman Dong at <a href="mailto:norman_dong@dot.ca.gov">norman_dong@dot.ca.gov</a> or (916) 651-6889.
Land & Water Conservation Fund (LCWF)	May 1	California Department of Parks and Recreation	\$720,000 in Southern California (2006)	50% match	Cities, counties, park districts		X		Recreational trails are eligible for funding. Applicants must fund the entire project, and will be reimbursed for 50% of costs.
Office of Traffic Safety Grants	Jan. 31	Office of Traffic Safety	\$66 million to be awarded statewide in 2009	None	Govmtal agencies, state colleges, and universities, local city and county government agencies, school districts, fire depts, and public emergency services providers			X	Grants are used to mitigate traffic safety program deficiencies, expand ongoing activity, or develop a new program. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Contact OTS Regional Coordinator Lisa Dixon at, (916) 262-0978 or <a href="mailto:ldixon@ots.ca.gov">ldixon@ots.ca.gov</a>
Recreational Trails Program (RTP)	Oct. 1	California Department of Parks and Recreation	\$9.7 million statewide (2008-09)	20% match	Jurisdictions special districts, non profits with mngmt responsibilities over land		X		For recreational trails to benefit bicyclists, pedestrians, and other users; contact State Dept. of Parks & Rec. , Statewide Trails Coordinator, (916) 653-8803

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Federal Safe Routes to Schools Program (SRTS)	February	Caltrans	\$46 million in Cycle 2 (FY09/10)	None	State, local, regional agencies; cities and counties; non-profit organizations; school districts	X	X	X	<a href="http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm">http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm</a>
<b>Regional Funding</b>									
Transportation ( <i>TransNet</i> ) sales tax	Varies	SANDAG	\$4.0 million per year regionwide for pedestrian, bicycle and neighborhood safety projects.	None	Cities, county	X	X		The Bicycle-Pedestrian Advisory Committee assists in the development of the bicycle facilities portion of the Regional Transportation Plan, and recommends projects for funding under the <i>TransNet</i> local transportation sales tax program, and other state and federal funding programs.
Smart Growth Incentive Program	Varies	SANDAG	\$6 million annually regionwide	11.47%	Cities, transit districts, public agencies	X		X	<a href="http://www.sandag.org/uploads/projectid/projectid_264_4156.pdf">http://www.sandag.org/uploads/projectid/projectid_264_4156.pdf</a>  Project Coordinator: Stephan Vance <a href="mailto:sva@sandag.org">sva@sandag.org</a> (619) 699-1924

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Transportation Development Act grants	January	SANDAG	Varies, 2% of County TDA funds are allocated for pedestrian and bicycle projects.	None	Cities, county	X	X	X	Contact Chris Kluth for more information <a href="mailto:ckl@sandag.org">ckl@sandag.org</a> (619) 699-1952
<b>Local Funding</b>									
Capital Improvement Program	N/A	City of Carlsbad	\$3,895,000 for construction of sidewalks	N/A	N/A	X	X		The City currently has a Capital Improvement Program project for the construction of sidewalks. The project has a current unspent balance of \$1,455,000 and it is programmed to receive \$640,000 in FY 2008/09, \$300,000 in FY's 2009/10 thru 2011/12 and \$900,000 from FY 2012/13 thru 2013/18.
<b>Nontraditional Sources</b>									
Community Development Block Grants	Varies	HUD	\$526 million statewide (2004/05)	None, but may be used as evaluation criteria	Public entities and 501(c)(3) non-profits and tax-exempt faith-based religious orgs				Primarily for community revitalization, but may be used to fund streetscape improvements, to eliminate slum and blight in low- and moderate-income areas.

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Mello-Roos Community Facilities Act	None	Various Public Agencies	Varies	None		X	X	X	Primarily used to fund public services such as libraries and fire depts., but may fund pedestrian infrastructure.



---

**Appendix A:**  
***Carlsbad Pedestrian Master Plan Public Involvement Process and Outcomes***

---

## ***A1.2 Public Participation Process***

This section summarizes the two phase public outreach effort undertaken as an aspect of the Carlsbad Pedestrian Master Plan planning process, and then synthesizes public input into a synopsis of pedestrian issues, recommendations, behaviors and attitudes of Carlsbad community members. The input obtained through this extensive outreach effort served as guidance for identifying pedestrian project opportunity areas and for developing program and infrastructure project recommendations.

### ***A1.2.1 Overview of Community Outreach***

The City of Carlsbad and their consultant employed a two phase outreach strategy to garner input from Carlsbad community members regarding their concerns about the pedestrian environment. The first phase of the effort focused on reaching out to the community at large to introduce the process and purpose of the Pedestrian Master Plan, invite participation and collect comments. The project team initiated the second, more extensive, phase of the outreach strategy while the team conducted a citywide inventory of pedestrian facilities. This second phase involved collecting detailed information through pedestrian surveying. It also entailed targeting outreach to community groups who have high pedestrian needs, such as the parents of schoolchildren.

#### ***Phase I Community Outreach Approach***

This section provides a brief chronological overview of the public outreach techniques utilized during phase I of the outreach effort.

- On June 4, 2007, the City and their consultant created and launched a project website describing the scope of the project, announcing upcoming workshops and community meetings, providing a place for public comment, and offering a contact person for further questions or concerns.
- On June 8, 2007, the City and their consultant produced and mailed a flyer inviting members of the public to an Open House to discuss the initial stages of the Carlsbad Pedestrian Master Plan. Fifty-seven flyers were mailed to homeowner associations in Carlsbad. The flyer was also sent via email to seven key contacts within the city, who then distributed the

---

flyer to various Commissioners. The flyer was posted on the project website in early June 2007.

- In early June 2007, the City of Carlsbad posted an announcement on the City's official website about the Pedestrian Master Plan Open House.
- On June 23, 2007, the *North County Times* announced the Pedestrian Master Plan Open House in the "Community Section" of the paper. The announcement included the date, time, and location of the Open House.
- The City and their consultant held an Open House on June 28, 2007, to provide an overview of the pedestrian environment, to describe initial existing conditions, and to present an initial assessment of the pedestrian project opportunity areas. There were six stations at the Open House, and members of the community were directed to circulate and provide input at each station. A comment card was also available for community members to fill out with their input. A total of 20 members of the public attended the Open House. All public input received at the Open House is summarized and provided on the project website.
- A "City of Carlsbad Pedestrian Master Plan Survey" was prepared and uploaded to the project website in mid-July in an attempt to solicit more information about pedestrian activity levels and pedestrian facility preferences from Carlsbad community members.
- The City's consultant disseminated and posted flyers at libraries, community centers and recreational facilities for four hours per day on September 28 and September 30, 2007 and repeated this effort on October 12 and October 14, 2007. Consultant staff devoted one day in September and one day in October to distribution in the southwestern and southeastern quadrants of Carlsbad and the other two days toward dissemination in the northern quadrants.
- In early October 2007 the City distributed a flyer via email to the City of Carlsbad's list of subscribers who receive email notifications related to planning topics. The flyer was created by the City's consultant to introduce community members to the Pedestrian Master Plan project and invite participation in the planning process.

---

### ***Phase II Community Outreach Approach***

This section itemizes efforts undertaken as elements of the extended Phase II outreach effort. The techniques and tasks were employed concurrently after the Existing Conditions Report was drafted. The extended outreach methods entailed direct contact with the public during community meetings and through intercept surveying at sites with high pedestrian activity. In total, the project team collected 98 pedestrian surveys, 10 pedestrian issue location maps, and detailed community meeting notes regarding the pedestrian issues and opportunities expressed by meeting attendees.

### ***Attendance at School-Affiliated and Community Meetings***

The consultant contacted numerous community organizations to request attendance at regularly scheduled meetings and to offer alternative or additional opportunities to reach out to organizations' constituents. The project team especially focused on engaging Parent Teacher Association (PTA) board members and parents. All of Carlsbad's 21 schools and affiliated PTA, Parent Organizations (PO), and Parent Associations (PA) boards were contacted. Nine of the 29 organizations were receptive to participating in the plan process either through reporting known concerns to the project team, distributing information about the plan to the school community, and/or by allowing project team members to present the project during a PTA meeting.

Within the concerted outreach timeframe, the project team was able to coordinate attendance at three PTA meetings: Jefferson Elementary on October 11, Olivenhain Pioneer Elementary also on October 11, and Aviara Oaks Middle School on October 16, 2007. In those meetings staff provided a brief overview of the project, answered questions and distributed written material related to the plan. Staff also requested that attendees complete the City of Carlsbad Pedestrian Master Plan Survey that inquires about pedestrian behaviors, attitudes, and issues related to walking in Carlsbad. This is the pedestrian survey also available on the project website. To complement the survey, staff supplied maps that were used by attendees to indicate specific problematic areas and issues by marking up the maps. Although unable to host project team members, Calvera Hills Elementary School PTA and La Costa Heights Elementary PTA presented project-related information during a school event and during a PTA meeting on October 3 and November 9, 2007, respectively.

In October the Mission Estancia Parent Teacher Association (PTA) also broadcasted the Pedestrian Master Plan general flyer and website link along with their school newsletter. Also in October, the Jefferson Elementary PTA and Aviara Oaks Middle School PTSA sent the flyer to their

---

organizations' lists of parents and administrators. The project team received several email inquires as well as online surveys as a result of school email broadcasting.

In addition to outreach to schools, on October 16, 2007 project team members attended a weekly meeting at the Carlsbad Senior Center to introduce the Plan and to survey senior citizens about pedestrian challenges in Carlsbad.

### ***Intercept Surveying***

The project team set up intercept stations at public facilities throughout Carlsbad to distribute project-related information to the public and to survey pedestrians using the City of Carlsbad Pedestrian Master Plan Survey. Teams of two consultant staff conducted outreach in this fashion for between two and four hours on seven days between September 22 and November 9, 2007. Intercepting took place throughout Carlsbad at four parks and community centers, three beach access locations, and two transit stations along with the Westfield Transit Center. The project team also operated stations at trailheads during the City of Carlsbad's Trail Blast events held on September 22 and September 29, 2007.

While intercept surveying, team members also distributed flyers to pedestrians and answered questions related to the planning process. Consultants recorded other public comments obtained through intercept surveying at various locations throughout the City of Carlsbad.

## **A1.2.2 Community Input Synthesis**

This section summarizes public input received through conducting Phase I and Phase II of the public outreach strategy.

### ***Summary of Phase I Public Input***

**Tables A.1** through **A.4** list the public comments received at the Pedestrian Master Plan Open House held June 28, 2007. Comments are categorized by table as those related to improving pedestrian facility connectivity, improving safety, improving walkability, and recommended pedestrian project opportunity areas. The tables presented reflect paraphrased commentary from the public rather than verbatim text.

**Table A.1  
Community-Recommended Locations for New Pedestrian Connections**

Location	Pedestrian Issue (as paraphrased from public comment)
Chestnut Avenue, between Tyler Street & Washington Avenue	New pedestrian connection.
Trails near Aviara Parkway & Ambrosia Lane	Poor trail connectivity. The trail that runs parallel to Alga Road/Aviara Parkway deadends before it reaches Aviara Oaks Middle School.
Carlsbad Boulevard, north of Laguna Drive	Sidewalks are needed along Carlsbad Boulevard. There is not enough separation or buffer between pedestrians and vehicular traffic.
Highland Drive, between Tamarack Drive & Carlsbad Village Drive	Lacking sidewalks, curbs, and gutters. This is a school route for children attending Magnolia Elementary School, Valley Junior High School, Carlsbad Seaside Academy, and Carlsbad High School.
Poinsettia Park	Sidewalks do not go completely around the park.
Carlsbad Boulevard, between Pine Street & Tamarack Avenue.	Signalized pedestrian crossing needed.
Carlsbad Boulevard, south of Avenida Encinas	There are diagonal parking spaces and no sidewalks, which causes pedestrians to walk along the street.
Laguna Drive	Need for pedestrian connection from Laguna Drive to City of Oceanside.

Source: Alta Planning + Design, 6/28/07 Pedestrian Master Plan Open House

**Table A.2  
Community-Recommended Locations for Pedestrian-Related Safety Improvements**

Location	Pedestrian Issue (as Paraphrased from Public Comment)
Carlsbad Boulevard, between Carlsbad Village Drive and Tamarack Avenue	It is unsafe to cross at the crosswalks due to high vehicle speed. Need for a lit pedestrian crossing.
Pamplona Way & Alicante Road	Unguarded trail along a steep embankment.
Buena Vista Circle & Laguna Drive	Needs a signalized intersection control due to nearby parks and schools.
Oak Street, between Roosevelt Street and Tyler Street	Needs a signalized intersection due to high pedestrian activity.
Intersections of Laguna Street/Madison Street and Laguna Street/Roosevelt Street	Intersections need signalization due to high traffic volumes and speeds.
Along Camino de Los Coches and Maverick Way	Create new trails or pedestrian routes to high school to promote walking.
Intersections at Carlsbad Village Drive and I-5 on/off ramps	Pedestrian crossing is dangerous; motorists do not yield to pedestrians.
All School Areas	Off street trails and traffic calming are needed to promote walking.
La Costa Canyon High School	Improvements to pick-up/drop-off area to facilitate pedestrian access and reduce vehicular traffic.

Source: Alta Planning + Design, 6/28/07 Pedestrian Master Plan Open House

**Table A.3**  
**Community-Recommended Locations for Improved Walkability**

Location	Pedestrian Problem (as Paraphrased from Public Comment)
State Street and the Village	Dog droppings are an issue.
Along Carlsbad Boulevard, beach boardwalk, and promenade	Litter and dog droppings make walking unpleasant.
Transit Stops	Need better signage and improved protection from the elements.
Walnut Avenue and Roosevelt Street (Barrio Area)	Fear caused by traffic issues and crime inhibits walking in this neighborhood.
Rancho Santa Fe and Camino de Los Coches	Need plants or vines to cover walls that developers have left blank.

Source: Alta Planning + Design, 6/28/07 Pedestrian Master Plan Open House

**Table A.4**  
**Community-Recommended Locations for Pedestrian Project Opportunity Areas**

Location	Pedestrian Problem (as Paraphrased from Public Comment)
Cannon Road and College Boulevard	New high school and residential development being built.
Palomar Airport Road and El Camino Real (Bressi Ranch)	New commercial and residential development should impact traffic and pedestrian flows.
Rancho Santa Fe Road and La Costa Avenue (La Costa Town Square)	New commercial developments need pedestrian routes.
Avenida Encinas and Embarcadero Lane (Ponto Area)	New commercial, residential, and school developments being created.

Source: Alta Planning + Design, 6/28/07 Pedestrian Master Plan Open House

### ***Summary of Phase II Public Input***

This section summarizes the survey responses and public comments collected by the project team while attending PTA meetings and events and intercept surveying at key locations across the city. Surveys and comments obtained via the project website are also incorporated into the following summary and in **Table A.5** through **Table A.11**.

Surveys collected represent a broad cross-section of the Carlsbad public. Of the 98 respondents, 66 percent are women, 26 percent are men and 8 percent did not state their gender. The age of respondents is evenly dispersed with the largest age group represented being between thirty-six and forty-five (31 percent). **Figure A1** displays the residential location of survey respondents as of October 31, 2007. As shown, public input was received from a geographically dispersed sample of

Carlsbad residents, reflecting each of the major neighborhoods across the city. The pedestrian survey asked respondents about their typical walking behaviors including frequency, distance and facility preferences. **Table A.5** exhibits the frequency in which survey respondents walk or jog in Carlsbad. The vast majority of community members surveyed reported that they walk at least once a week (91 percent) and very few respondents indicated that they rarely or never walk (7 percent).

**Table A.5  
Walking or Jogging Frequency**

Frequency	Percent of Respondents
Daily	57%
Weekly	34%
Monthly	0%
Rarely	4%
Never	3%

Source: Alta Planning + Design; March 2008

Of those who reported walking or jogging in Carlsbad, 60 percent of respondents primarily consider themselves exercise or recreational walkers, 15 percent are social walkers and 25 percent utilize walking most commonly as a mode of transportation to reach school, shopping, transit or work. In addition to frequency and reasons for walking, community members were asked about the distances they typically walk and the times of day that they walk in Carlsbad. **Table A.6** and **Table A.7** summarize responses.

**Table A.6  
Average Walking Distances**

Distance	Percent of Respondents
Under 2 Miles	37%
2 – 5 Miles	57%
6-10 Miles	6%
More than 10 Miles	0%

Source: Alta Planning + Design; March 2008



## 6.2.2 Americans with Disabilities Act (ADA) Improvements

This section presents several types of improvements that will enable the City of Carlsbad to better accommodate disabled populations and comply with Federal and State legislation. These improvements include installation of missing curb ramps and truncated domes at high priority intersections across the city.

### *Intersections without Curb Ramps*

Figure 6-2 displays locations of intersections in Carlsbad that have no curb ramps. There are a total of 733 intersections across the city that do not have curb ramps. This would translate into the installation of a total of 2,932 curb ramps (4 curb ramps at each intersection).

**RECOMMENDATIONS:** As a first priority, Carlsbad should identify opportunities to install curb ramps at all arterial/arterial intersections and then establish a schedule for constructing them as feasible. Curb ramps at arterial/collector intersections should be evaluated on a case-by-case basis when the City is undertaking construction, maintenance or repair projects that affect the public right-of-way.

### *Truncated Domes*

Truncated domes provide a cue to visually-impaired pedestrians that they are entering a street or intersection. Since 2002, ADA Guidelines (*Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities, September 2002*) have called for truncated domes on curb ramps. Most of Carlsbad's curb ramps lack truncated domes, because they were constructed prior to 2002. On streets that have been constructed since 2002, truncated domes should be installed.



Although it is not required for Carlsbad to install truncated domes at existing curb ramps that were built prior to 2002, the City may wish to install these devices at all high priority intersection locations. Truncated domes are a very visible improvement, and they are relatively inexpensive to install. The preferred option for retrofitting truncated domes requires saw-cutting out a 3x4 space in the ramp in order to embed the truncated dome panel flush with the surface. While more expensive

than simply epoxying the retrofit panel to an existing ramp, the saw-cutting ensures that the domes will not become detached and pose a tripping hazard.

Appendix B displays the forty-six (46) intersection locations recommended for installation of truncated domes on the curb ramps. Figure 7-2 displays the recommended locations for installation of truncated domes on curb ramps.

**RECOMMENDATION:** Carlsbad should consider retrofitting truncated domes at all forty-six (46) arterial/arterial intersections where they are currently lacking, as shown in Figure 6-2.

### 6.2.3 Signalized Intersection

This section discusses citywide and priority improvements to signalized intersections. Signage and striping is addressed, along with signal timing adjustments, countdown signals, and audible signals.

#### *Signage and Striping*

A signalized controlled intersection provides the greatest level of traffic control for both motor vehicles and pedestrians. However, even with traffic controls, there may be conflicts between vehicles and pedestrians, due to vehicles stopping partially in the crosswalk, failing to yield to pedestrians when turning, or making a right turn on red movement while pedestrians are crossing. Although these conflicts are primarily due to motorist behavior (generally failing to yield), signage and striping improvements can help to increase motorist awareness of their vehicle placement at intersections and their need to yield.

**RECOMMENDATION:** The City should consider the following improvements at all of the signalized priority intersections:

- 1) Install Stop Lines five feet in advance of the crosswalks, to help position motorists behind the crosswalk when stopped;
- 2) Install “Turning Traffic Must Yield to Pedestrians” MUTCD R10-15 signage (*California Manual on Uniform Traffic Control Devices*, 2003), and
- 3) If pedestrian conflicts appear to be related to right turn on red, consider prohibiting right turn on red at that location.

#### *Signal Timing Adjustment*

Signal timing controls the amount of time each phase of a signal is allotted for vehicles and bicycles to pass through or pedestrians to cross the street. Per the MUTCD, standard traffic engineering

---

design assumes that pedestrians travel at 4.0 feet per second, which together with the width of the street, is used to determine the amount of time to assign to the pedestrian clearance interval. In some cases, this assumed walking speed may result in pedestrian phases that do not allow slower pedestrians, such as the elderly and children, to cross the street before the light changes. By adjusting the signal timing to a slower walking rate, slower pedestrian will have more time to cross the street. Appendix B identifies the ten (10) priority intersections for signal timing adjustments, while **Figure 6-3** displays locations of signalized intersections recommended for signal timing adjustments.

**RECOMMENDATION:** As a first priority, Carlsbad should consider adjusting signal timing at the Jefferson Street / Carlsbad Village Drive intersection which is near the senior center, and at the eight (8) arterial/arterial intersections adjacent to elementary schools to allow for a pedestrian walking speed of 2.8 feet per second. This slower walking speed is consistent with MUTCD recommendations for walking rates for slower pedestrians. Consideration of signal operation and signal coordination by the Department of Public Works traffic engineers and signal technicians is necessary for this recommendation. As a next priority, consider implementing this signal timing walking speed for all high pedestrian demand locations in the City.

### ***Audible Signals***

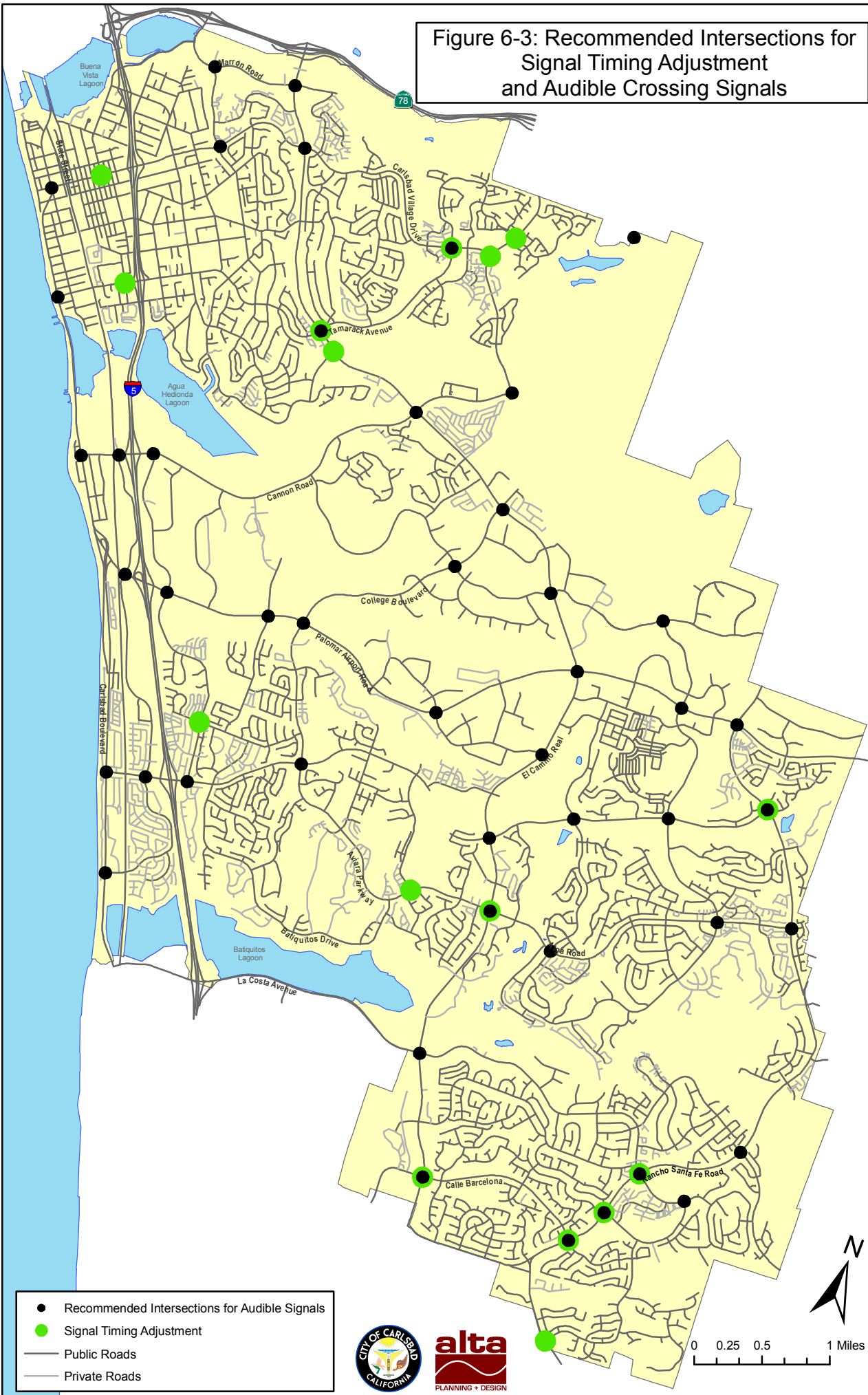
Audible signals emit sounds to guide visually-impaired pedestrians indicating when it is safe to cross. Audible signals typically vary by intersection approach to assist in orienting visually impaired pedestrians. Sounds are activated by the pedestrian push-button. The MUTCD (Section 4E-06) states that installation of audible signals should be based upon engineering studies that considers the following:

- Potential demand for accessible pedestrian signals;
- A request for accessible pedestrian signals;
- Traffic volumes during times when pedestrians might be present, including periods of low traffic volumes or high turn-on-red volumes; and
- The complexity of traffic signal phasing or intersection geometry.

Appendix B lists the forty-eight (48) priority locations for installation of audible signal heads, while Figure 6-3 displays the recommended locations for installation of audible signals.

**RECOMMENDATION:** Carlsbad should consider installing audible signals at all forty-eight (48) arterial/arterial installations as a first priority. Locations near senior centers or where there are visually impaired residents should also be high priorities.

Figure 6-3: Recommended Intersections for Signal Timing Adjustment and Audible Crossing Signals



- Recommended Intersections for Audible Signals
- Signal Timing Adjustment
- Public Roads
- Private Roads



0 0.25 0.5 1 Miles

Source: City of Carlsbad; Alta Planning + Design (2007)

## 6.2.4 Uncontrolled Crosswalk Improvements

Infrastructure improvements at uncontrolled crosswalk locations can help increase the visibility of pedestrians to motorists and improve the pedestrian's walking experience. These improvements are for both unmarked and marked crosswalks at intersections.

### *High-Visibility Crosswalk Markings*

There are a variety of different striping styles for crosswalks. The City of Carlsbad utilizes two different marking styles for pedestrian crosswalks: the standard “transverse” style, consisting of two parallel lines; and the “ladder” style consisting of the two parallel lines with perpendicular ladder bars striped across the width of the crosswalk. Ladder style crosswalks should be used in locations where heightened pedestrian visibility is important, such as in school



zones. Appendix B lists locations for upgrading currently marked crosswalks at uncontrolled intersections with high visibility ladder crosswalks, while **Figure 6-4** displays the recommended locations for upgrading currently marked crosswalks at uncontrolled intersections.

**RECOMMENDATION:** Carlsbad should upgrade currently marked crosswalks at uncontrolled intersections within the priority corridors to high visibility ladder crosswalks.

### *Parking Restrictions*

Implementing parking restrictions in the vicinity of crosswalks at uncontrolled intersections is a low-cost method of ensuring that pedestrian visibility is maintained.

**RECOMMENDATION:** Parking restrictions (red curb) should be installed one car length adjacent to both sides of all crosswalks recommended for upgrade to high visibility ladder crosswalks (listed in Appendix B and shown in Figure 6-4).

Figure 6-4: Recommended Locations for High Visibility Crosswalks, Parking Restrictions and Signage Improvements



## 6.2.5 Signage Improvements

The City of Carlsbad’s current pedestrian-related signage consists of a mix of current (California MUTCD) and older (California Traffic Manual) signs, in both standard yellow and high-visibility fluorescent yellow green. In accordance with MUTCD sign update schedule, the City of Carlsbad should develop a program to bring all signs up to current MUTCD standards. Of highest priority for pedestrians are the pedestrian advance warning (W11-2) and crossing signs (W11-2 with W16-7P down arrow).



The following considerations should be taken into account when installing signage:

1. Consistent use of standard yellow or fluorescent yellow green along a corridor or area. Avoid mixing signs of different color if possible.
2. To heighten visibility of specific pedestrian or school warning signs along major streets, consider using oversized (expressway size) sign plates.

**Appendix C** lists locations for upgrading signage at uncontrolled intersection crosswalks within the high priority corridors, while Figure 6-4 displays the locations of recommended signage upgrades.

**RECOMMENDATION:** Carlsbad should upgrade pedestrian signage along the high priority corridors at all currently marked crosswalks at uncontrolled intersections.

## 6.2.6 Safe Routes to School

Carlsbad has twenty-one schools located throughout the city. Proximity to schools is one of the primary factors in ranking and prioritizing the projects. Improvements near schools can benefit school-aged children walking to and from school, in addition to improving conditions for all pedestrians around the neighborhood. Several school-based projects are identified in the “top fifteen” projects presented in Section 6.3 of this chapter.

**RECOMMENDATION:** Carlsbad should pursue implementing a Safe Routes to School program as part of their effort to improve pedestrian safety in school areas. The City should actively pursue SR2S and SRTS grants for any needed pedestrian improvements location near school zones, several of which are included in the top 15 projects of this Plan (See Chapter 7.3 for additional information about Safe Routes to School programs).

### **6.3 Project Sheets**

This section provides specific project improvement sheets for high priority project areas across the City of Carlsbad. This subset of projects was selected from the overall ranking of priority corridors and intersections as presented in Chapter 5, as well as a number of other factors including: 1) potential improvement recommendations that can not be accomplished through one of the citywide infrastructure project categories; 2) providing for a range of different project types, such as intersections, corridors, crosswalks, transit access, and school access; and 4) providing for a geographic balance of project locations throughout Carlsbad.

The listing of projects 1 to 15 does not reflect implementation priority; rather project implementation is likely to be a flexible process that will be based on factors such as funding opportunities, schedules for street improvements, and development or redevelopment activities. This list provides the city with a guide for implementation, to be used in conjunction with the citywide infrastructure project lists described in Section 6.2. City staff should review both the citywide and top fifteen project lists at least annually to update them for projects that have been implemented, for re-adjusting priorities as needed, and for considering any opportunities to incorporate these projects into upcoming development or street improvement activities, as well as any upcoming grant funding cycles that could be targeted.

**Table 6.1** displays the top fifteen priority projects recommended for implementation in the City of Carlsbad.



**Table 6.1**  
**Top 15 Priority Projects**

1 – Plaza Camino Real Transit and Shopping Center
2 – Jefferson Street Corridor
3 – Carlsbad Boulevard (Buena Vista Lagoon Crossing)
4 – Buena Vista Elementary
5 – Carlsbad Village and Transit Center
6 – Chestnut Avenue Corridor
7 – Harding Street Corridor
8 – Carlsbad High and Surrounding Schools
9 – Jefferson Elementary
10 – Calaveras Elementary & Middle Schools
11 – Kelly Elementary
12 – South Carlsbad Boulevard Corridor
13 – Palomar Airport Road Corridor
14 – Aviara Elementary and Middle School
15 – La Costa Canyon High and Surrounding School

Source: Alta Planning + Design; June 2008

# 1. Plaza Camino Real Transit and Shopping Center

<p><b>Study Area Description</b></p>
<p>The Plaza Camino Real Transit and Shopping Center project area extends from Jefferson Street in the west to the future Hidden Canyon Park trail head at the eastern terminus of Marron Road. The transit center at this location has the highest ridership of any transit facility in Carlsbad and generates significant pedestrian activity. The intersection of El Camino Real and Marron Road experiences heavy pedestrian traffic as people travel between shopping centers on either side of El Camino Real as well as between transit stops on the east and west side of El Camino Real. The dense trail system in this study area creates unique opportunities to join residential, shopping and recreational uses within this area. A wayfinding network is envisioned to facilitate citywide east-west connections between the future Hidden Canyon Park Trail and the coast which is approximately two miles to the west. The Westfield Plaza Camino Real suffers from poor on-site pedestrian conditions and is in need of pedestrian facility enhancements.</p>
<p><b>Issues</b></p> <ul style="list-style-type: none"> <li>▲ High average daily traffic volumes along El Camino Real</li> <li>▲ Most heavily used transit station in Carlsbad; lack of connectivity between transit center and multiple surrounding shopping areas</li> <li>▲ Poor on-site pedestrian facilities at the Plaza Camino Real shopping center</li> <li>▲ Illegal mid-block crossings between Plaza Camino Real and bus facilities on the east side of El Camino Real</li> <li>▲ Major pedestrian barriers, including El Camino Real and SR-78</li> </ul>
<p><b>Proposed Improvements</b></p>
<ul style="list-style-type: none"> <li>▪ Sidewalk infill along Marron Road and Westfield Plaza Camino Real entrance at Monroe Street \$136,706</li> <li>▪ Wayfinding signage to connect major origins and destinations including trail access points, the shopping center, the Carlsbad Village, and coastal access points (8,430 feet of wayfinding network @ 1 sign/900 feet = \$3,000)</li> </ul>
<p><b>Cost</b></p> <ul style="list-style-type: none"> <li>▪ \$139,706</li> </ul>

## 2. Jefferson Street Corridor

Study Area Description
<p>Jefferson Street along the Buena Vista Lagoon presents a viable opportunity for a strong east-west pedestrian connection between Plaza Camino Real and the Carlsbad Village as it provides a grade-separated, interchange-free crossing of I-5 and generally circumvents the steep slopes along Monroe Street and El Camino Real.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Provides opportunity for east-west pedestrian linkage between Plaza Camino Real and downtown Carlsbad</li> <li>▲ Near sensitive habitat/ecology</li> <li>▲ High recreational pedestrian demands</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Sidewalk infill between Marron Road and Las Flores drive \$2,101,450</li> <li>▪ Network of signage promoting wayfinding to major origins and destinations including Plaza Camino Real shopping center, Carlsbad Village, coastal access points, and trail access points (6,470 feet of wayfinding network @ 1 sign/900 feet = \$2,400)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$2,103,850</li> </ul>

### 3. Carlsbad Boulevard (Buena Vista Lagoon Crossing)

<p><b>Study Area Description</b></p>
<p>Carlsbad Boulevard runs north to the City of Oceanside on a narrow strip of land across the Buena Vista Lagoon. A short segment of Carlsbad Boulevard is a bridge over the narrow estuary passage of the lagoon. There are currently no paved sidewalks or adequate buffers from vehicular traffic along the corridor. Plans for a future boardwalk servicing pedestrians across the lagoon to the Buena Vista Lagoon Nature Center are under consideration.</p>
<p><b>Issues</b></p>
<ul style="list-style-type: none"> <li>▲ Lack of paved pedestrian connection to City of Oceanside</li> <li>▲ Pedestrian safety</li> <li>▲ Environmental and ecological constraints</li> </ul>
<p><b>Proposed Improvements</b></p>
<ul style="list-style-type: none"> <li>▪ Install sidewalk facilities from Carlsbad’s northern boundary and the City of Oceanside, south to Laguna Drive \$67,635</li> <li>▪ Wayfinding network (4,620 feet of wayfinding network @ 1 sign /900 feet = \$1,800)</li> </ul>
<p><b>Cost</b></p>
<ul style="list-style-type: none"> <li>▪ \$69,435</li> </ul>

## 4. Buena Vista Elementary

Study Area Description
<p>The elementary school is situated along Buena Vista Way – a local residential street. Its parking lot, which also serves as the loading area, is located midblock between Pio Pico Drive and Highland Drive and is only accessible by vehicle from the west. Buena Vista Way becomes a one-way eastbound street immediately to the east of the school parking lot until its intersection with Highland Drive. Buena Vista Way is largely lacking sidewalks, except for small portions near the Pio Pico intersection. A drainage ditch runs along the south side of Buena Vista Way. The school is lacking adequate drop-off/pick-up areas along the street adjacent to the school’s parking lot. There is a double yellow line separating vehicular and pedestrian traffic along the street.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Poor visibility along Buena Vista Way due to overgrown landscaping</li> <li>▲ Lack of sidewalk facilities along Buena Vista Way and on blocks surrounding school</li> <li>▲ Inadequate drop-off/pick-up area in front of school</li> <li>▲ Non-conforming school sign assembly on Buena Vista Way and Highland Drive</li> <li>▲ Vehicular traffic during peak school periods</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Install missing sidewalk facilities along Buena Vista Way, Highland Drive, Pio Pico Way, Arland Road and Forest Avenue \$471,583</li> <li>▪ Enhanced sidewalks at drop-off/pick-up area in front of school \$9,000</li> <li>▪ Parking restrictions on the northeast corner of Highland Drive and Buena Vista Way \$20</li> <li>▪ High visibility restriping of the crosswalk along the east leg of Pio Pico Drive/Las Flores Drive intersection \$1,200</li> <li>▪ Updated school warning traffic assembly at the northwest and southeast corners of the Highland Drive/Buena Vista Way intersection \$600</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$482,403</li> </ul>

## 5. The Carlsbad Village and Transit Center

Study Area Description
<p>This study area focuses on Grand Avenue, Carlsbad Village Drive, the Carlsbad Village Transit Center, and the downtown shopping streets that intersect Carlsbad Village Drive and Grand Avenue. The Carlsbad Village has the highest concentration of pedestrian activity in the city. Pedestrian safety is a major concern along Carlsbad Village Drive, where several of its downtown intersections ranked among the highest in the city for pedestrian-vehicular accidents. The streetscape along Carlsbad Village Drive does not provide for pedestrian buffers from its regularly high vehicle traffic volumes. The pedestrian environment is also negatively impacted by Interstate 5 and the San Diego Northern Railway, both of which pose major barriers to pedestrian safety and connectivity.</p>
Issues:
<ul style="list-style-type: none"> <li>▲ High levels of pedestrian activity</li> <li>▲ Pedestrian-vehicular accidents occur along Carlsbad Village Drive</li> <li>▲ High average daily traffic volumes</li> <li>▲ Insufficient pedestrian buffers along Carlsbad Village Drive</li> <li>▲ Major barriers to pedestrian safety and connectivity caused by railroad line and I-5</li> <li>▲ Presence of key public transit station</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Signal timing adjustment at the intersection of Jefferson Street and Carlsbad Village Drive</li> <li>▪ Mid-Block crossing at Grand Avenue between Carlsbad Boulevard and State Street \$72,353</li> <li>▪ Crosswalk restriping (high visibility) \$9,600</li> <li>▪ Network of signage promoting wayfinding to major origins and destinations including points of coastal access, Carlsbad Village Transit Center, shopping and dining areas, and trail access points. (21,790 feet of wayfinding network@ 1 sign/900 feet = \$7,500)</li> <li>▪ Sidewalk infill along Madison \$39,150</li> </ul>
Cost:
<ul style="list-style-type: none"> <li>▪ \$128,603</li> </ul>

## 6. Chestnut Avenue Corridor

Study Area Description
<p>Chestnut Avenue is an important east-west corridor connecting neighborhoods separated by Interstate 5, where there is an underpass without on/off ramps. To the west of I-5, Chestnut Avenue is divided by the San Diego Northern Railroad. Pedestrian demand for coastal access in this area of Carlsbad is high – many pedestrians illegally cross the tracks to access coastal Carlsbad. Two parks are situated along Chestnut Avenue in the study area. There are sporadic gaps in sidewalk pavement along Chestnut Avenue in the study area.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Lack of east/west pedestrian connections across rail right-of-way</li> <li>▲ Segments of Chestnut Avenue with no sidewalk</li> <li>▲ Demand for coastal access</li> <li>▲ Pedestrian facilities near Holiday Park and I-5 underpass in poor condition</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Sidewalk infill and upgrade along Chestnut Avenue and Eureka Place \$89,373</li> <li>▪ Add bus stop improvements (bench, shelter, and signage) at Chestnut Avenue and Harding Street intersection \$40,000</li> <li>▪ Network of signage promoting wayfinding to major origins and destinations including points of coastal access, the Carlsbad Village, parks, shopping and dining areas, and trail access points (6,097 feet of wayfinding network @ 1 sign/900 feet = \$2,100)</li> <li>▪ Proposed Railway Crossing (costing not provided)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$131,473</li> </ul>

## 7. Harding Street Corridor

Study Area Description
<p>Harding Street provides a major north-south connection between multiple public facilities near Chestnut Avenue and Harding Street, and points north, near the Carlsbad Village. This corridor experiences high pedestrian demand, and also speeding vehicles. The lack of traffic control at Oak Avenue and Pine Avenue causes driver confusion. The intersection of Harding Street and Carlsbad Village Drive has high rates of pedestrian-vehicular collisions.</p>
Issues:
<ul style="list-style-type: none"> <li>▲ Safety issues at uncontrolled crosswalks</li> <li>▲ High rates of pedestrian-vehicular collisions</li> <li>▲ Vehicles frequently travel faster than posted speed limit</li> <li>▲ Poor visibility/placement of pedestrian warning signage</li> <li>▲ Non-conforming pedestrian signage</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Install north/south stop sign control along Harding Street at the Harding Street/Pine Avenue and Harding Street/Oak Avenue intersections \$1,200</li> <li>▪ Construct curb extensions at Harding Street/Pine Avenue and Harding Street/Oak Avenue intersections \$372,703</li> <li>▪ Remove two overhead pedestrian warning signals along Harding Street between Carlsbad Village Drive and Pine Avenue \$240</li> </ul>
Cost:
<ul style="list-style-type: none"> <li>▪ \$374,143</li> </ul>



## 8. Carlsbad High and Surrounding Schools

Study Area Description
<p>There are four schools within this study area in a six block area (including Carlsbad High School, Valley Middle School, Carlsbad Village Academy, and Magnolia Elementary situated at a single intersection). Several high pedestrian demand roadways are without sidewalk facilities, including most of Highland Drive. The neighborhood experiences some traffic problems during peak school periods. Chestnut Avenue provides an important connection to the Carlsbad Village across Interstate 5.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Lack of sidewalk facilities near schools; many roadways with the Alternative Design Street classification conflict with pedestrian demand generated by schools</li> <li>▲ Presence of four schools in study area</li> <li>▲ Lack of crosswalks at key pedestrian intersections</li> <li>▲ Vehicular traffic during school peak periods</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Missing sidewalk installation \$1,451,017</li> <li>▪ Enhanced 10' sidewalks near school drop-off/pick-up \$195,660</li> <li>▪ Curb extension installations (28 curb extensions) \$696,083</li> <li>▪ Crosswalks (12 high visibility) \$14,400</li> <li>▪ Wayfinding network (15,371 feet of wayfinding network @ 1 sign/900 feet = \$5,400)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$2,362,560</li> </ul>

## 9. Jefferson Elementary

Study Area Description
<p>Jefferson Elementary school is situated within a residential neighborhood bound by Hibiscus Circle on the west, Interstate 5 on the east, and Tamarack Avenue to the south, which is a busy truck route designated roadway. School-related pedestrian activity in the vicinity of these significant barriers is challenging. The residential neighborhoods adjacent to the Coastal Rail Trail lack direct connections to this facility and must travel out of the way to access it.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Near Tamarack Avenue freeway interchange</li> <li>▲ Pedestrian safety during school arrival and departure periods</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Install a crosswalk along the north leg of the Tamarack Avenue/Hibiscus Circle intersection \$1,200</li> <li>▪ Enhanced 10' sidewalks at pick-up/drop-off areas in front of school \$37,080</li> <li>▪ Adjust the signal timing at the Jefferson Street/Tamarack Avenue intersection</li> <li>▪ Provide a connection to the Coastal Rail Trail from Village Drive \$10,000</li> <li>▪ Upgrade school sign assembly at the northwest and southeast corners of the Jefferson Street and Carol Place intersection \$600</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$48,880</li> </ul>

## 10. Calaveras Elementary and Middle Schools

Study Area Description
<p>Calaveras Elementary and Middle schools are situated in a single family residential area near the recreational open space area of Lake Calavera. There are several additional recreational attractions in the vicinity of the school area including Calaveras Park, El Salto Falls, and connections to city trails.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Missing sidewalk and path infrastructure along segments of Tamarack Avenue</li> <li>▲ Vehicular traffic during school peak periods</li> <li>▲ Opportunities for enhanced trail connections</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Signal timing adjustments at three intersections</li> <li>▪ Sidewalk infill \$68,324</li> <li>▪ Enhanced 10' sidewalks at school drop-off/pick-up areas \$82,350</li> <li>▪ Install Class I path connecting Calaveras Elementary and Middle schools to the southeastern existing/planned trail \$75,000</li> <li>▪ Wayfinding signage to connect major origins and destinations including the school, trail access points, and parks (34,559 feet of wayfinding network @ 1 sign/900 feet = \$11,700)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$237,374</li> </ul>

# 11. Kelly Elementary School

<b>Study Area Description</b>	
<p>Kelly Elementary School is situated in a single family residential area at the corner of Kelly Drive and Hillside Drive. There are poor pedestrian connections between the residential neighborhoods to the northwest and Kelly Elementary. There are several opportunities to provide enhanced pedestrian connection via the existing and future trail system in the study area.</p>	
<b>Issues</b>	
<ul style="list-style-type: none"> <li>▲ Poor connectivity between school and nearby residential areas</li> <li>▲ Near major arterial road</li> <li>▲ Vehicular traffic during peak school periods</li> </ul>	
<b>Proposed Improvements</b>	
<ul style="list-style-type: none"> <li>▪ Signal timing adjustments at two intersections</li> <li>▪ Enhanced 10' sidewalks at school drop-off/pick-up area \$81,000</li> <li>▪ Install Class I path connecting High Ridge Avenue and Aura Circle \$143,400</li> <li>▪ Install missing sidewalk facilities along El Camino Real between Tamarack Avenue and Crestview Drive \$134,744</li> <li>▪ Wayfinding signage to connect major origins and destinations including the school, trail access points, and parks (2,248 feet of wayfinding network @ 1 sign/900 feet = \$900)</li> </ul>	
<b>Cost</b>	
<ul style="list-style-type: none"> <li>▪ \$360,044</li> </ul>	


## 12. South Carlsbad Boulevard Corridor

Study Area Description
<p>Carlsbad Boulevard is a key north-south coastal boulevard running the entire length of the city. This study area focuses on the segment south of Cannon Road. Demand for recreational pedestrian and bicycling use is high while pedestrian facilities are mostly unpaved, and pedestrian buffers from the high levels of vehicular traffic are lacking. The interchange with Palomar Airport Road is a major connectivity barrier for pedestrians using the east side of the right-of-way. The City is considering reconfiguring this interchange into a 'T' intersection. The southernmost segment of the corridor in the study area is subject to future redevelopment plans.</p>
Issues
<ul style="list-style-type: none"> <li>▲ High demand for recreational pedestrian and bicycle use</li> <li>▲ Palomar Airport Road interchange is major barrier to safety and connectivity</li> <li>▲ Large segments of roadway with no paved pedestrian facilities</li> <li>▲ City does not own portions of land along coast</li> </ul>
Proposed Improvements
<ul style="list-style-type: none"> <li>▪ Install a multi-use path connecting existing sidewalk facilities on NB Carlsbad Boulevard between Cannon Road and Avenida Encinas \$1,642,000</li> <li>▪ Network of signage promoting wayfinding to major origins and destinations including points of coastal access, Poinsettia Coaster Station, tourist destinations, shopping and dining areas, and trail access points (26,433 feet of wayfinding network @ 1 sign/900 feet = \$5,400)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$1,647,400</li> </ul>

### 13. Palomar Airport Road Corridor

<p><b>Study Area Description</b></p>
<p>Palomar Airport Road is a major east-west arterial running between Carlsbad Boulevard and the eastern Carlsbad boundary. This study area is focused on the area west of LegoLand California. The pedestrian environment suffers from barriers caused by Interstate 5 and the rail right-of-way, as well as from very high vehicular traffic volumes. Sidewalk facilities taper off due to the limited right of way along the narrow Palomar Airport Road overpass over the rail right-of-way. In addition to LegoLand, there are several other noteworthy attractions along this corridor: the Flower Fields, the Pacific Coast, a golf course and the outlet shopping center. These tourist-oriented uses are not well connected by pedestrian facilities.</p>
<p><b>Issues:</b></p>
<ul style="list-style-type: none"> <li>▲ High traffic volumes along Palomar Airport Road</li> <li>▲ Highly automobile-oriented land uses and roadway networks, with uninviting pedestrian environment</li> <li>▲ Limited pedestrian accessibility to coastal areas and tourist sites within project area</li> <li>▲ Major barriers to pedestrian safety and connectivity caused by railroad line, interchange with Carlsbad Boulevard, and topographical and engineering constraints of Palomar Airport bridge over railroad line</li> </ul>
<p><b>Proposed Improvements</b></p>
<ul style="list-style-type: none"> <li>▪ Install a mid-block crosswalk at Armada Drive \$72,353</li> <li>▪ Network of signage promoting wayfinding to major origins and destinations including points of coastal access, tourist destinations, shopping and dining areas, and trail access points (12,002 feet of wayfinding network @1 sign/900 feet = \$4,200)</li> </ul>
<p><b>Cost:</b></p>
<ul style="list-style-type: none"> <li>▪ \$76,553</li> </ul>

## 14. Aviara Oaks Elementary and Middle School

Study Area Description
<p>Aviara Oaks Elementary and Middle school is situated at the corner of Ambrosia Lane and Aviara Parkway. The school is in a ravine and surrounded by steep slopes on all sides. The school's on-site loading area experiences severe traffic problems, prompting many parents to drop-off/pick-up along Ambrosia Lane. This phenomenon is also contributing to a high number of U-turns on Ambrosia Lane after parents have picked up their children. There is an activity center to the east of the schools, including a city branch library and retail uses. There are several trails in the study area, though the school is not directly served by any of them. The library lacks direct pedestrian connections to the school and nearby residential developments. The library is isolated from the rest of the shopping center with only a narrow sidewalk through the parking lot providing on-site connections.</p>
Issues
<ul style="list-style-type: none"> <li>▲ Poor connectivity to nearby shopping and library land uses</li> <li>▲ Circulation issues during drop-off/pick-up periods</li> <li>▲ Safety of student pedestrians during peak school periods</li> <li>▲ Inadequate sidewalk waiting areas</li> </ul>
Proposed Improvements

<ul style="list-style-type: none"> <li>▪ Install curb landing at the NE corner of the Ambrosia Lane and Conosa Way intersection \$100,000</li> <li>▪ Signal timing adjustment at two intersections</li> <li>▪ Enhanced 10' sidewalks at school drop-off/pick-up \$103,410</li> <li>▪ Install Class I path facility connecting the library to Aviara Oaks schools via the northeastern baseball path. \$190,362</li> <li>▪ Wayfinding signage to connect major origins and destinations including the school, trail access points, public library, and parks. (22,618 feet of wayfinding network @1 sign/900 feet = \$7,800)</li> </ul>
Cost
<ul style="list-style-type: none"> <li>▪ \$401,572</li> </ul>

## 15. La Costa Canyon High and Surrounding Schools

<b>Study Area Description</b>	
<p>The schools in the La Costa study area are fairly modern and thus have no major infrastructural deficiencies. School drop-off/pick-up periods create traffic and safety issues at Mission Estancia and Olivenhain Pioneer elementary schools. Future development is underway north of La Costa Avenue.</p>	
<b>Issues</b>	
<ul style="list-style-type: none"> <li>▲ Vehicular traffic near schools during peak school periods</li> <li>▲ Missing sidewalks</li> <li>▲ Speeding vehicular traffic</li> </ul>	
<b>Proposed Improvements</b>	
<ul style="list-style-type: none"> <li>▪ Enhanced 10' sidewalks at school pick-up/drop-off \$95,760</li> <li>▪ Signal timing adjustment at four intersections</li> <li>▪ Wayfinding signage to connect major origins and destinations including schools, trail access points, and parks (27,995 feet of wayfinding network @1 sign/900 feet = \$9,600)</li> </ul>	
<b>Cost</b>	
<ul style="list-style-type: none"> <li>▪ \$105,360</li> </ul>	



## **7.0 Encouraging People to Walk**

Public awareness and education programs are important complements to the proposed pedestrian improvements in this Plan. In addition to programs merely promoting walking, an educational effort should be made to cover pedestrian and motorist laws. For example, many people do not understand that motorists must yield to pedestrians crossing at intersections, regardless of whether there is a marked crosswalk in place or not. Others may be confused as to when crossing a street mid-block constitutes jaywalking. The recommended projects in this Plan promise to be most effective when accompanied by a robust campaign of enforcement of the existing laws that protect pedestrians.

### **7.1 Pedestrian Awareness Programs**

A public awareness campaign that promotes walking as a means of transportation and emphasizes safe behavior will contribute to helping people make healthier lifestyle choices. Carlsbad's population covers a wide spectrum that can benefit from walking, including an active senior community, students, families, and employees. In a time of escalating rates of obesity and diabetes, encouraging people to walk can provide the invitation necessary to start a lifestyle change.

#### **7.1.1 Trail Blast Fitness Program**

The City of Carlsbad Recreation Department organizes annual Spring and Fall Trail Blast events to encourage use of the Citywide Trails System for walking, hiking and running. Trail Blasts are a series of trail walks/hikes led by a professional fitness instructor and held on four consecutive Saturdays during the Spring and Fall. The program's emphasis is promoting physical fitness but Trail Blasts have also been combined with civic activities such as a clean-up day on National Public Lands Day. It is recommended that the City continue its Trail Blast Fitness Program and consider expanding it to serve as a broad pedestrian awareness/encouragement program. Similar to the National Public Lands celebration, the final day of a Trail Blast series could incorporate information, promotional materials and other media related to the benefits of walking and pedestrian opportunities. Bumper stickers, posters, window signs, and brochures could include the following information:

- Easy ways to incorporate walking into daily activity
- Rules of the road for motorists and pedestrians
- Health benefits of walking

- Website/telephone number for more information

Existing educational materials are available through national and state agencies, or the City could develop materials for distribution that specifically promote the Trail Blast program and walking in Carlsbad. If materials are generated, sponsors could be secured to offset the cost of design and printing to the City. Sponsors' logos can be added at the bottom of the materials. Brochures, maps, and bumper stickers could be distributed in and around Carlsbad at civic buildings, libraries, schools, local businesses and merchants associations, and community groups. The City could also develop a "Trail Blast and Walking in Carlsbad" webpage linked to the Parks and Recreation webpages that includes downloadable files and provides information on current walking events and activities in Carlsbad.

City of Carlsbad staff or a consultant can produce and arrange the distribution of printed materials and identify sponsors and funding sources to offset the costs associated with the printed material.

### **7.1.2 Walk to School**

During the first week in October, schools around the world celebrate International Walk to School Week. The purpose of the week-long event is to educate children and their families about the social and physical benefits of walking, to teach children safe walking behaviors and to advocate for walkable communities. The National Center for Safe Routes to School promotes this event and maintains an International Walk to School in the USA website which contains promotional material and media resources. California Walk to School also assists schools throughout California with organizing Walk to School events. In Carlsbad, Calavera Hills Elementary School held a successful Walk to School event in October of 2007. It is recommended that the City promote Walk to School by coordinating with Carlsbad Unified School District to make internet resources and printed information about Walk to School available to schools, associations, parents and teachers. The City could also distribute information to the public during events such as the Trail Blasts. Walk to School promotion could serve as a facet of a citywide pedestrian safety education campaign.

### **7.1.3 Public Service Announcements**

A cost-effective way for the City of Carlsbad to promote walking as an effective and enjoyable way to travel is to use existing television public service announcements (PSAs) made available through the National Highway Traffic Safety Administration (NHTSA), Safe Kids Coalition, and the

California Office of Traffic Safety (OTS). These agencies provide existing award-winning television public service announcements on the following topics:

- Pedestrian education for seniors
- Pedestrian education for the general public
- Pedestrian education for children and their families
- Driver education on pedestrians
- Drivers running red lights

In addition to running the PSAs on local television, the City of Carlsbad could provide local movie theatres with the public service announcements to be included as trailers on-screen.

Finally, to further utilize television and radio media to promote walking, the City could solicit the interest of local television and radio public service directors to interview a Carlsbad spokesperson to discuss the importance of walking as an alternative mode of transportation in Carlsbad. The production, arrangement, and distribution of public service announcements can be done by either City of Carlsbad staff or consultants. In addition, costs associated with production and promotional activities can be offset by sponsors and other funding sources. All activities can be conducted under the supervision of Carlsbad staff.

#### **7.1.4 Walking Maps and Guides**

One of the most effective ways of encouraging people to walk is through the use of maps and guides to show that the walking infrastructure exists, to demonstrate how easy it is to access different parts of the city on foot, and to highlight unique areas or routes. Excellent trail maps are already available including an overview map of the entire Citywide Trails System as well as digital aerial maps of trails within the citywide system. The City should consider developing similar maps that highlight pedestrian facilities intermixed with streets and roadways. An effective map could display the entire City of Carlsbad and include information on popular walking destinations including schools, parks, civic buildings, libraries, key grocery stores and markets and restaurants. Pedestrian-friendly amenities and routes could be indicated and street grades could be color-coded so that pedestrians know how steep the streets are.

### 7.1.5 Other Promotions

A variety of other promotions or programs could be implemented to promote walking as an effective, fun and economical way to travel in Carlsbad.

***Commuter of the Month*** – Implement a contest for residents and employers to nominate a person who walks and/or uses transit to get around Carlsbad. Entry forms available at employer sites, retail sites, churches, and recreation and community centers could promote the contest. Monthly winners could receive prizes that may include gift certificates to dinner, retail stores, and merchandise.

***Murals*** – Murals have successfully been used to promote ideals and inform the community of important issues. The mural program could solicit help from local volunteers, artists, children, seniors, and other community members. Costs for the production of the murals could be generated by grants through public art foundations or as part of a City of Carlsbad Cultural Arts project.

***Walk Exhibit*** – Carlsbad could produce a traveling mobile exhibit promoting walking and bicycling. The exhibit could feature the following elements:

- Photo displays of new facilities
- Photos of residents and employees walking
- Walking maps and guides

This exhibit could be featured at all community events including the EGGstravaganza Spring Festival, Carlsbad Loves Kids Day, Pumpkin Plunge, Fall Festival, Trail Blasts, and other events. The exhibit could be built to allow assembly and attendance to be done by one person.

***Event Producers' Obligation*** – Carlsbad could require all community events to promote walking (and bicycling) in all event literature, advertisements, and other collateral materials as a mode of transportation to their event. The City could include this requirement as part of the permit process for events.

***Monthly Events*** – *First Wednesday Walks*. The first Wednesday of every month could be designated as Everybody Walks day. This type of promotion has been effective in communities throughout California, such as the City of Berkeley. *Sidewalk Strolls* - Organized walks could be implemented for seniors at local centers. The goal of these events could be to generate interest in recreational walking for health reasons with the ultimate goal of promoting walking as a form of transportation. The production, coordination, and implementation of all promotional activities can be done by

either City of Carlsbad staff or local volunteers. In addition, costs associated with the promotional activities can be offset by sponsors and other funding sources.

## **7.2 Pedestrian Education Programs**

Education can make pedestrians and motorists more aware of potentially hazardous environments and teach them the skills needed to make walking a more effective and enjoyable way to travel. A number of broad-based educational subjects address particular issues, with individual programs that can be tailored around a specific theme or themes.

### **7.2.1 Safety Education Campaign**

A variety of safety education campaigns could be undertaken by the City in order to educate motorists on the rights of pedestrians, and to educate pedestrians on safe behavior. The campaign could include messages related to speeding, yielding to pedestrians in crosswalks, stopping at stop signs, red light running, or jaywalking. Particular emphasis should be given to the safety of children, seniors and people with disabilities.

Sample messages might include:

- “Save A Life – Your Own. Don’t Jaywalk.”
- “STOP! It could be someone you love in the crosswalk.”
- “Use the other pedal and slow down.”
- “Slow Down! It could be someone you love.”
- “Want to meet cops? Don’t stop for pedestrians in the crosswalk.”

Elements of a successful pedestrian education program would include:

**Media Coverage and Events** – including statements of support from city officials, support of the Carlsbad Police Department, and development of a press kit outlining the program to get media coverage.

**Print Campaign** – incorporating the promotional themes in maps, posters, bumper stickers, guides, and television public service announcements.

**Street Banners** – that display a safety message such as “SLOW DOWN.” Rotating the banner to different neighborhoods on a regular basis can keep the message fresh and reach new audiences.

### **7.2.2 Enforcement Education**

City staff should cooperate with the Carlsbad Police Department on ways to educate motorists during enforcement of pedestrian violations. This could include distributing materials on pedestrian rights and the benefits of walking to motorists. Bicycle patrol officers are in a particularly good position to educate pedestrians on safe and proper behavior as part of their routine activities. City staff and the Police Department should coordinate on ongoing programs to encourage pedestrian activity.

### **7.2.3 Senior Citizen and Disabled Pedestrian Education**

This program could include instructors and guest speakers to provide information specific to the needs of the seniors and disabled. Presentations would be conducted by an instructor, either City of Carlsbad staff or a consultant, at community centers, churches, clubs, senior citizen centers, physician offices, and hospitals. The presentation could address the sensitive issues of physical limitations of many seniors and the crucial need for them to reach their destinations (e.g. medical appointments, food shopping, etc.). In addition, presentations can include guest speakers including officials from Carlsbad, transit providers, retailers, physicians, and officers from the Police Department. City of Carlsbad staff or a consultant can coordinate the participation of guest speakers and identify sponsors and funding sources to offset the costs associated with the presentations.

### **7.2.4 Teen & Adult Pedestrian Education Video**

The program could produce a video and encourage teens and adults to walk for commuting, improved health, and fun. The City could coordinate with the Carlsbad Unified School District and San Dieguito Union High School District to have the video be produced by video production classes at Carlsbad Village Academy, Carlsbad High School and La Costa Canyon High School. The video could be made available to employers, recreational centers, libraries, community groups and Neighborhood Watch organizations. In addition, the video could be made accessible to the general public via the City's website. Existing technology could allow the production of this interactive video to be cost effective and a valuable source of on-going education.

### **7.3 Safe Routes to School Program**

Safe Routes to School (SR2S) refers to a variety of multi-disciplinary programs aimed at promoting walking and bicycling to school, and improving traffic safety around school areas through education, incentives, increased law enforcement, and engineering measures. Two funding sources are available to local jurisdictions to develop SR2S projects, the state-legislated Program (SR2S) and the federally-legislated Program (SRTS). Safe Routes to School programs typically involve partnerships among municipalities, school districts, community and parent volunteers, and law enforcement agencies. SR2S efforts in Carlsbad can serve as an important component of the Pedestrian Master Plan, as they help facilitate the implementation and funding for specific improvements that will help meet the Plan goals of making walking an integral mode of transportation in Carlsbad. Comprehensive Safe Routes to Schools programs are developed using a four complementary strategies, referred to as the “Four Es”:

**Engineering** – Design, implementation and maintenance of signing, striping, and infrastructure improvements designed to improve the safety of pedestrians, bicyclists, and motorists along school commute routes.

**Enforcement** – Strategies to deter the unsafe behavior of drivers, bicyclists and pedestrians and encourage all road users to obey traffic laws and share the road.

**Encouragement** – Special events, clubs, contests and ongoing activities that encourage more walking, bicycling, or carpooling through fun and incentives.

**Education** – Educational programs that teach students bicycle, pedestrian and traffic safety skills, and teach drivers how to share the road safely.

A fifth “E”, Evaluation, is sometimes included in Safe Routes to Schools programs. Evaluating the success of a program helps to determine which programs are most effective and helps to identify ways to improve programs. Although most children in the United States walked or biked to school pre-1980’s, since then, the number of children walking or bicycling to school has sharply declined. This decline is due to a number of factors, including urban growth patterns, increased traffic, and parental concerns about safety. The situation is self-perpetuating: as more parents drive their children to school, there is increased traffic at the school site, resulting in more parents become concerned about traffic and driving their children to school.

According to a 2005 survey by the Center for Disease Control, parents whose children did not walk or bike to school cited the following barriers<sup>5</sup>:

- Distance to school 61.5 percent
- Traffic-related danger 30.4 percent
- Weather: 18.6 percent
- Crime danger 11.7 percent
- Opposing school policy 6.0 percent
- Other reasons (not identified) 15.0 percent

A comprehensive Safe Routes to Schools program addresses the reasons for reductions in biking and walking through a multi-pronged approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors and physical infrastructure that improve the walking and biking environment.

### **7.3.1 Benefits of a Safe Routes to School Program**

Safe Routes to Schools programs directly benefit schoolchildren, parents and teachers by creating a safer travel environment near schools and by reducing motor vehicle congestion at school drop-off and pickup zones. Students that choose to bike or walk to school are rewarded with the health benefits of a more active lifestyle, with the responsibility and independence that comes from being in charge of the way they travel, and learn at an early age that biking and walking can be safe, enjoyable and good for the environment. Safe Routes to Schools programs offer ancillary benefits to neighborhoods by helping to slow traffic and provide suitable facilities for walking by all age groups. Identifying and improving routes for children to safely walk and bicycle to school is also one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution. In addition to safety and traffic improvements, a SR2S program helps integrate physical activity into the everyday routine of schoolchildren. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce health risks associated with being overweight. Children who bike or walk to school have an overall higher

---

<sup>5</sup> U.S. Centers for Disease Control and Prevention. Barriers to Children Walking to or from School United States 2004, Morbidity and Mortality Weekly Report September 30, 2005. Available: [www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm). Accessed: December 28, 2005.

---



activity level than those who are driven to school, even though the journey to school makes only a small contribution to activity levels<sup>6</sup>. Core strategies of a Safe Routes to School Program are its educational and encouragement programs. Educational programs serve to identify safe behaviors and encouragement programs can serve to encourage people to bike, walk and drive safely.

### **7.3.2 Educational Measures**

Educational programs can teach pedestrians, bicyclists and drivers safe behaviors and can create awareness of the benefits and goals of a Safe Routes to Schools program. In developing an educational strategy, each school's stakeholder group should consider **who** the audience is, **when** the education should be delivered, **what** information should be shared and **how** the message should be conveyed. Curriculum programs implemented in schools can teach children the basics regarding pedestrian and bicycle safety. Classroom educational materials should be presented in a variety of formats (safety videos, printed materials, and classroom activities) and should continually be updated to make use of the most recent educational tools available. Classroom education programs should also be expanded to promote the health and environmental benefits of bicycling and walking. Outside schools, educational materials should be developed for different audiences, including elected officials (describing the benefits of and need for a SR2S program), parents (proper school drop-off procedures, obeying speed limits near school, yielding to bicyclists and pedestrians and safety for their children) and neighbors (keeping pedestrian ways clear, obeying speed limits, yielding to bicyclists and pedestrians). Educational programs should be linked with events and incentive programs when appropriate, and students should be included in task force activities, such as mapping locations for improvements. Instruction may include:

#### **Pedestrian Safety Topics**

- Crossing the street with an adult • Crossing at intersections and crosswalks
- Crossing around school buses • Walking at night
- Driveways and cars backing up • Using sidewalks
- Understanding traffic signals • Crossing around parked cars
- Walking where no sidewalks exist

---

<sup>6</sup> Cooper A, Page A, Foster L, Qahwaji D. Commuting to school: are children who walk more physically active? *American Journal of Preventive Medicine*. 2003 November; 25(4):273-6.

Cooper A, Andersen L, Wederkopp N, Page A, Frosberg K. Physical activity levels of children who walk, cycle, or are driven to school. *American Journal of Preventive Medicine*, 2005 October; 29(3):179-184.

---

## **Bicycle Safety Topics**

- On-bike skills training • How to adjust and maintain a bicycle
- Night riding (clothes, lights) • Rules of the road
- Riding on sidewalks • How to negotiate intersections
- Riding defensively • Use of hand signals
- Importance of wearing helmets • Common crash causes

The City may want to consider working with local pedestrian groups (e.g. School Traffic Safety Committees), as well as the School Districts, to develop a standard safety handbook and make it available to each school in a digital format for customization. Each school should develop a school area pick-up/drop-off circulation map of the campus and immediate environs to include in the handbooks, clearly showing the preferred pick-up, drop-off and parking patterns and explaining in text the reason behind the recommendations. This circulation map should also be a permanent feature in all school newsletters. More ideas for classroom activities and lessons, including lessons tailored to specific subject areas, can be found through the National Highway Traffic Safety Administration's (NHTSA) website.

### **7.3.3 Encouragement Measures and Incentives**

Encouragement strategies are meant to be fun and are intended to generate excitement and enthusiasm about biking and walking. Encouragement activities can be quick and easy to start and relatively inexpensive. Programs include special events, such as International Walk to School Day (described in section 7.1.2 of this chapter), contests such as a mileage club, and ongoing activities such as a walking school bus. Several encouragement programs are described below. Additional programs can be found in the on-line Safe Routes to School Guide published by National Highway Traffic Safety Administration ([www.saferoutesinfo.org/guide/](http://www.saferoutesinfo.org/guide/)). Schools may also designate additional days or weeks during the school year as special "Walk and Roll to School Days," or may piggyback on an existing day such as Earth Day or Bike to Work Week. Mileage clubs and contests can be established to encourage children to increase their levels of activity in general, and to walk to school specifically. Children are asked to keep a record of the number of miles they bike or walk. Contests are generally established as an individual child monitoring their progress, as a classroom tracking their combined progress, or as schools competing against each other. Winners are rewarded with gift certificates or prizes. Some programs set up a "Walk Across America" program

---

where children keep track of how far they walk, with the ultimate goal of walking enough distance to walk across America. Other contests and event ideas to encourage bicycling and walking to school include: competitions in which classrooms compete for the highest proportion of students walking or biking to school, themed or seasonal events, and keeping classroom logs of the number of miles biked and walked by children and plotting these distances on a map of California or the US.

Ongoing activities are used to promote biking and walking on a daily or weekly basis. They include programs such as a Walking School Bus, which involves parents taking turns walking (or bicycling in a “Bike Train”) with groups of children to school. In areas where students cannot easily or safely walk or bike to school, programs such as “Park and Walk,” which ask parents to park at a designated spot and walk their children the rest of the way to school, allow all students to participate. Park and Walk programs also can reduce traffic congestion at schools. Events related to bicycling and walking should be incorporated into existing curricula when practical. Involving local celebrities or publishing the names of student participants in events can be an effective means of encouraging student involvement. Another key to successful events is promotion. Ensuring that parents are aware of events, whether classroom-specific or district wide, is key to gaining maximum student participation.

#### **7.4 Enforcement of Pedestrian Laws**

Targeted enforcement of pedestrian laws should be focused in those areas with high pedestrian volumes or where pedestrians are especially vulnerable. Law enforcement efforts should be scheduled during periods and at locations where motorists and the general public can become aware of pedestrian laws and their penalties. It is recommended that such targeted enforcement occurs at least four times per year and last one week. Focused enforcement should also take place at the start of the school year at selected schools near their primary access points for children walking. The Carlsbad Police should also be surveyed for input on appropriate educational materials, advisory and warning signs, and other tools to help them accomplish their mission. Finally, it is recommended that in the event of a pedestrian fatality or injury, the Police Department and eventually the District Attorney vigorously pursue legal action against the responsible motorist. Pedestrians are protected in the public right-of-way by the California Vehicle Code, as enforced by the Carlsbad Police Department.

### **7.4.1 Targeted Enforcement**

Law enforcement agencies can increase the presence of police near schools or high-conflict areas in order to curb unlawful behavior. People tend to slow down and improve their driving behavior if they expect law enforcement to be present. These targeted enforcement activities can be effective but are labor intensive in that they require dedication of police officer resources in a single location. In addition, once the targeted enforcement period has ended and motorists realize that the police presence is gone, they may revert to speeding or driving unsafely. Grant funding is available for these types of programs through the California Office of Traffic Safety (<http://www.ots.ca.gov>).

### **7.4.2 Radar Trailer**

Speed Radar Trailers can be used to reduce speeds and enforce speed limit violations in known speeding problem areas. In areas with speeding problems, police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. The trailer can be used as both an educational and enforcement tool. By itself, the unmanned trailer serves as effective education to motorists about their current speed in relation to the speed limit. As an alternative enforcement measure, the police department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit. Because they can be easily moved, radar trailers are often brought to streets where local residents have complained about speeding problems. If frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and increase their speeds.

### **7.4.3 Neighborhood Speed Watch**

In areas where potential speeding problems have been identified by residents, a Neighborhood Speed Watch can be used to warn motorists that they are exceeding the speed limit. A radar unit is loaned out to a designated neighborhood representative to record speed information about vehicles. The person operating the radar unit must record information, such as make, model, and license number of offending vehicles. This information is sent to the local law enforcement agency having jurisdiction at the location of the violations, and the department then sends a letter to the registered vehicle owner, informing them that the vehicle was seen on a specific street exceeding the legal speed limit. Letters are typically sent out to those driving at least 5 mph over the speed limit. Although not a formal citation, the letter explains that local residents are concerned about safety for their families and encourages the motorist to drive within the speed limit.

---

## **8.0 Implementation and Funding**

This chapter focuses on implementation and funding for the Pedestrian Master Plan. This plan sets out an ambitious list of projects to be implemented over the next 20 years. The Pedestrian Master Plan and future updates should serve as a guide in the allocation of capital, maintenance, administrative, and matching funds. The Plan is also designed to provide staff and the public with flexibility as opportunities and needs arise. The Pedestrian Master Plan should be updated every five years as needed, to reflect changes in needs and conditions. As part of this update, information on cost, feasibility, need, and other items should be included in the analysis of priorities and identification of projects.

### **8.1 Capital Improvement Program**

Pedestrian projects and enhancements identified in this Pedestrian Master Plan and in future revisions should be included in the City's Capital Improvement Program. This may be accomplished by a combination of funding capital and maintenance efforts, providing matching monies for competitive grants, and/or integrating pedestrian features into larger public projects. The City should actively seek competitive grant sources and allocate adequate matching monies to implement pedestrian projects.

#### **8.1.1 Cost Elements**

A summary of projected cost estimates is presented in the following tables. Each of the major programs is presented in a separate table, along with an estimate of the capital or annual cost. All cost estimates are at a planning level and amounts are subject to further refinement once feasibility and engineering work has been completed, or as budget conditions change within the City.

Pedestrian unit costs are presented in **Table 8.1**. These costs are the basis for the planning-level cost estimates used in the following tables.

**Table 8.1  
Pedestrian Improvement Basic Unit Costs**

Item	Unit	Unit Cost
Bus Stop (Shelter, Bench, Curb Cut, Bus Pad)	EA	\$40,000
Class I Path Construction	LF	\$100
Countdown Signal Heads	EA	\$800
Crosswalk - High Visibility	EA	\$1,200
Crosswalk - Tranverse	EA	\$500
Curb Extension	EA	\$100,000
Curb & Gutter	LF	\$40
Curb Ramp Retrofit (diagonal)	EA	\$2,000
Curb Ramp Retrofit (perpendicular)	EA	\$5,000
Parking Restrictions -- Red Curb	EA	\$20
Remove Curb	LF	\$4
Remove Sidewalk	SF	\$4
Remove Striping	LF	\$1
Remove Sign/Mast Arm	EA	\$120
Resurface Sidewalk - 5' Wide	LF	\$40
Sidewalk - 10' Wide	LF	\$90
Sidewalk - 5' Wide	LF	\$45
Sidewalk Widening	LF	\$46
Signs, Warning	EA	\$300
Truncated Domes (retrofit plastic)	EA	\$400

Source: Alta Planning + Design; June, 2008

### 8.1.2 Citywide Project Costs

Costs for the citywide projects are shown in **Table 8.2**. Costs are shown for the total improvements recommended in the plan, and then an average cost over 20 years is shown. Some of the lower cost improvements such as signage and crosswalk restriping would likely be done in a phased corridor approach in less than 20 years. The total cost for the citywide projects is estimated at approximately \$14.3 million.

### 8.1.3 Top 15 Priority Projects Costs

Costs for the Top 15 priority pedestrian projects are presented in **Table 8.3**. The total cost for these improvements is estimated at \$8.67 million. The costs for these major projects may vary considerably depending on a variety of conditions and assumptions. Further feasibility and design work are required to refine these estimates.