



### 3.0 Issues and Potential Solutions

This chapter discusses issues affecting walkability and the pedestrian environment. The existing issues and potential solutions associated with the safety goals of the Pedestrian Master Plan are discussed.

*A safe pedestrian environment depends on the quality, continuity, and perceived safety of the walking environment.*

### 3.1 Safety Related Issues and Solutions

A safe pedestrian environment is part of the city’s vision for a balanced transportation system. Establishing a pedestrian environment that is safe and efficient for all users depends in part on the quality, continuity, and perceived safety of the network. This section describes the existing conditions as it relates to pedestrian safety and collision factors in Oceanside.

*Between 2000 and 2008, there were 615 pedestrian related collisions in the City of Oceanside, all but 38 of which resulted in injury or fatality.*

#### Pedestrian Collisions and Injuries

Pedestrian collision and injury data was derived from the Oceanside Police Department collision database for the years 2000 to 2008. Between the years 2000 and 2008, there were 615 pedestrian related collisions. Figure 4 shows the general location of the pedestrian collisions. Pedestrians are at a significant disadvantage when involved in a vehicular-pedestrian accident. As seen in Table 2, twenty-nine of the 615 accidents resulted in a pedestrian fatality and 549 accidents resulted in some type of physical injury to the pedestrian as a result of the collision. Of the 615 collisions, only 38 did not result in injury or fatality to the pedestrian involved.

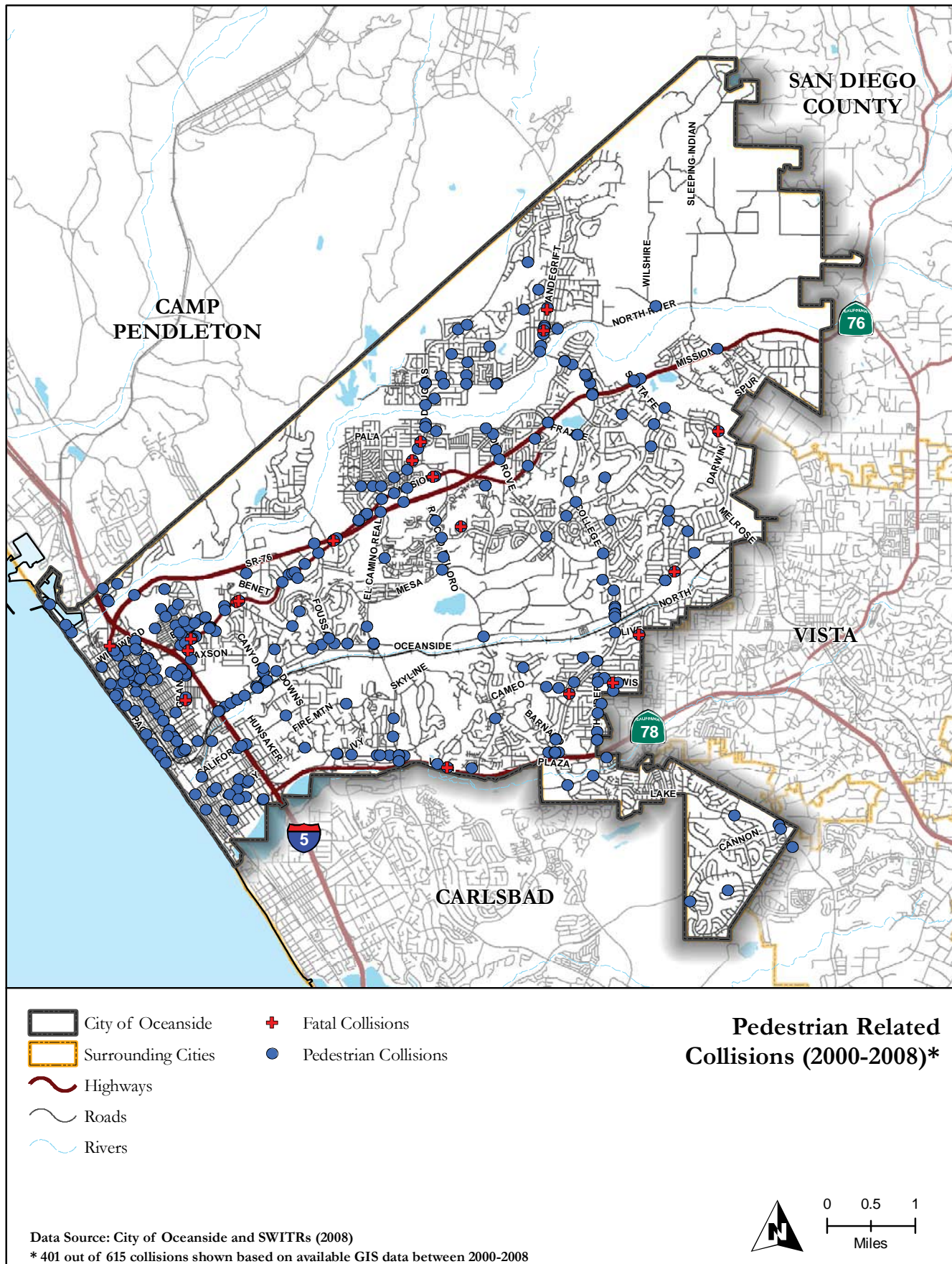
**Table 2: Pedestrian Related Accidents by Year (2000-2008)**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
<b>Total No. of Pedestrian Collisions</b>	57	73	77	60	67	72	55	79	75	<b>615</b>
<b>Injury-Related Collisions<sup>a</sup></b>	53	71	71	53	62	59	41	74	64	<b>549</b>
<b>Non-Injury Collisions</b>	3	1	5	6	1	6	6	2	8	<b>38</b>
<b>Fatalities<sup>b</sup></b>	1	1	1	1	4	7	8	3	3	<b>29</b>
<b># Collisions Involving Alcohol/ Drug Impaired Drivers</b>	2	2	2	4	4	4	8	1	5	<b>32</b>
<b># Collisions Involving Alcohol/Drug Impaired Pedestrians</b>	5	11	6	7	4	9	8	1	4	<b>55</b>

*Footnote:*

- a. The number of accidents that resulted in pedestrian injuries.
- b. The number of fatalities is not included in the number of injury related accidents.

Figure 4: Location of Pedestrian Collisions



There are several cases in which the collision was due in part to drivers or pedestrians under the influence of drugs or alcohol. Table 2 shows that 32 of the 615 accidents involved an alcohol or drug impaired driver. However, there is a larger portion (55 out of the 615 pedestrian related collisions) of alcohol or drug impaired pedestrians that contributed to the cause of the collision.

Other local jurisdictions in San Diego County and surrounding regions were examined as a comparison to the number of pedestrian related collisions that occur in Oceanside. The data presented in Table 3 is what was available for each jurisdiction and does not directly correlate to the exact years of data available within Oceanside. The available data for each city was normalized per 1,000 persons per year to determine a rate of pedestrian collisions. Oceanside is found to have a rate of 0.38 collisions per 1,000 people per year. The rates were determined assuming an even distribution of accidents over the available time period provided for each city. In addition, the pedestrian collision rate was determined by the number of collisions per city street mile. Oceanside is found to have a rate of 0.44 collisions per city street mile which is comparable to the neighboring City of Carlsbad that has a rate of 0.42.

*In a five city comparison, Oceanside's pedestrian collision rate per 1000 per year comes in fourth, following Santa Barbara, Huntington Beach and San Diego.*

**Table 3: Pedestrian Collisions Compared to Other Cities**

City	Years	Population	Miles of Streets	Total Number of Accidents	Rate per 1,000 per year	Rate per mile of street	Fatalities	Injury Related Accidents <sup>b</sup>
Oceanside	2000-2008	178,806	1,407	615	0.38	0.44	29 <sup>a</sup>	549
Carlsbad	2001-2006	103,811	295	123	0.20	0.42	N/A	N/A
San Diego	2000-2004	1,336,865	4,207	2,936	0.44	0.69	107	2,777
Santa Barbara	1998-2002	90,305	N/A	428	0.95	N/A	5	387
Pima County (includes Tucson, AZ)	2001-2005	946,362	N/A	1,387	0.29	N/A	117	N/A
Huntington Beach	2005	198,025	1,121	78	0.39	0.07	5	75

**Footnote:**

a. The number of fatalities is not included in the number of injury related accidents.

b. The number of accidents that resulted in pedestrian injuries.

N/A – information not available

*The locations with the highest percentage of pedestrian-vehicular accidents are often at high volume, high speed roadways with unmarked mid-block crossings.*

### Pedestrian and Driver Actions

As seen in Table 4, the driver was at fault approximately 44 percent of the time in pedestrian related collisions. Pedestrians were at fault approximately 31 percent of the time. The fault for the remaining 25 percent was undetermined. Table 5 shows the locations with the highest percentage of pedestrian-vehicular accidents over the nine year period. These roadways often have accidents that are caused by pedestrians crossing mid-block on high volume, and some high speed, roadways where there are no marked mid-block crossings. Crossing a roadway mid-block without the proper pedestrian signage or roadway markings is a risky and sometimes fatal action for the pedestrian. Both driver and pedestrian educational programs should be supported to avoid these types of collisions.

Unfortunately, approximately 19 percent of the pedestrian related collisions that occur in Oceanside are “hit and run” incidents. Studies have shown that drivers involved in a “hit and run” collision are more likely to have had a previous arrest for driving under the influence and were more likely to be driving with an invalid or suspended license. The percentage of “hit and run” collisions in Oceanside suggests the need for more driver educational strategies that target offenders and risk-taking drivers, particularly since the rate of “hit and runs” have increased over the nine year period.

**Table 4: Pedestrian Collisions Based on Fault (2000-2008)**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total	%
<b>Pedestrians at Fault</b>	22	21	25	22	10	22	24	24	19	<b>189</b>	<b>31%</b>
<b>Drivers at Fault</b>	15	34	30	30	25	43	19	37	40	<b>273</b>	<b>44%</b>
<b>No Fault/No Fault Assigned</b>	20	18	22	8	32	7	12	18	16	<b>153</b>	<b>25%</b>
<b>Hit and Run</b>	7	8	18	9	11	15	10	15	26	<b>119</b>	<b>19%</b>

**Footnote:**

a. No fault/no fault assigned includes the number of Hit and Run collisions.

**Table 5: Comparison of Collision Locations (2000-2008)**

Location	Total Number of Accidents	Percentage of Total Accidents	Injury Related Accident	Fatalities <sup>a</sup>
<b>Roadways:</b>				
Mission Avenue	79	13%	69	8
Oceanside Boulevard	47	8%	42	2
Coast Highway	47	8%	47	0
College Boulevard	39	6%	37	1
Vista Way	26	4%	23	1
Pacific Street	15	2%	14	0
<b>Intersections:</b>				
Oceanside Boulevard and El Camino Real	9	1.5%	8	0
Oceanside Boulevard and College Boulevard	9	1.5%	8	0
Coast Highway and Mission Avenue	6	1%	6	0
Coast Highway and Pierview Way	6	1%	4	0
Mission Avenue and Canyon Drive	5	1%	4	0
College Boulevard and Vista Way	5	1%	5	0
El Camino Real and Vista Way	5	1%	5	0

**Footnote:**

a. The number of fatalities is not included in the number of injury related accidents.

Only a small percentage of pedestrian collisions are caused by external conditions such as slippery or wet streets, lack of proper lighting, or lack of pedestrian control measures.

### Other Conditions Related to Collisions

There is often the perception that pedestrian related collisions are caused by some type of external conditions such as slippery or wet street surfaces, the lack of proper lighting, or the lack of pedestrian control measures. These types of conditions are present only for a small percentage of pedestrian collisions that occur in Oceanside. As seen in Table 6, the majority of accidents and fatalities occur when the street conditions are clear and pedestrian controls and lights are present.

**Table 6: Pedestrian Collisions based on External Roadway Conditions (2000-2008)**

	Total Number of Accidents	Percentage of Total Accidents	Non-Fatal Accident	Fatal Accidents
Slippery/Wet Road Conditions	22	4%	21	1
Pedestrian Controls Present	251	41%	234	17
Dark with Street Lights	171	28%	155	16
Dark with No Street Lights	25	4%	19	6

*Note:*

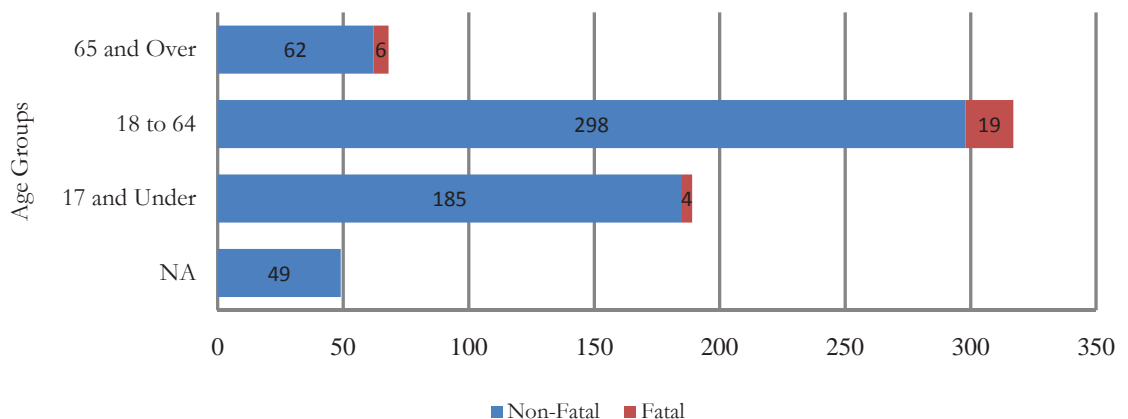
The total number of accidents per variable can overlap.

Children and seniors are the most at-risk to be involved in a pedestrian collision (42%) and are also the most likely to be injured.

### Pedestrian Collisions and Age

As seen in Table 7, both the young and elderly are the most at-risk and vulnerable to pedestrian collisions and injuries. While seniors are less likely to be hit by a vehicle than children, when hit they are more likely to die or suffer severe injuries as a result of the collision. In Oceanside, seniors account for 11 percent of the total pedestrian collisions. Children, ages 17 and under, account for approximately 31 percent of the total pedestrian collisions in Oceanside.

**Table 7: Pedestrian Collisions for Oceanside based on Age (2000-2008)**



Given that both children and the elderly account for approximately 42 percent of the pedestrian collisions in Oceanside, the city should support or sponsor a new educational safety campaign for motorists and pedestrians with a focus on outreach efforts to the elderly population and local schools. The campaign should begin by familiarizing residents with local laws for walking across the street, including the operation of pedestrian signals. It should also focus on the responsibilities of motorists and how they relate to safe pedestrian mobility.

### School Aged Pedestrians

According to SANGIS, the City of Oceanside has 21 elementary schools and 6 middle schools located throughout the city. Figure 5 depicts the location of the schools within Oceanside. In the years 2000 to 2008, the City of Oceanside had 189 collisions involving children ages 17 and under. Of these accidents, 4 resulted in a fatality.

Typically, elementary school children are more likely to walk to school based on close proximity of their home to the school. Table 8 shows the elementary schools with the highest number of collisions over the nine-year time period (2000-2008). School children are at a greater risk for injury when involved in a pedestrian-vehicular collision. Children are often smaller and less visible to drivers, particularly in areas where there is heavy landscaping or parked cars. In particular, elementary school children are generally developmentally unable to assess the safety of a situation and perceive speeds and distance in order to judge whether it is safe to cross a street. This poses a great challenge and disadvantage for children. Nationwide efforts have traditionally focused on providing cities with the attractive benefit of promoting walking as a way to encourage active lifestyles among students. However, creating a safe, inviting pedestrian route for school children can be approached in a number of different ways.

**Table 8: Elementary School Collisions**

Elementary Schools	Number of Collisions <sup>a</sup>
South Oceanside Elementary	7
Ditmar and Mission Elementary Schools	6
E.G. Garrison, Laurel and Temple Heights Elementary Schools	2
Alamosa Park, Del Rio, Ivey Ranch, Lake, Pacifica, Palmquist and Reynolds Elementary Schools	1

Footnote:

a. Within ¼ mile distance from each school.

A nationwide, multi-disciplinary approach known as the “5 E’s” has become the preferred way for cities to coordinate and develop suggested routes to schools. The concept of the 5 E’s, consist of five elements that are designed to ensure a comprehensive and successful program to increase walking and bicycling to and from school. These 5 E’s are education, encouragement, enforcement, engineering, and evaluation. The 5 E’s are described below in more detail.

**Engineering** - The Federal Highway Administration produces a design document, The California Manual on Uniform Traffic Control Devices, Part 7 Traffic Controls for School Areas, which defines the standards used by road managers nationwide to install and maintain traffic control devices on all streets and highways. Engineering components for this program must be in compliance with the CA MUTCD.

*Education programs can help keep the number of pedestrian collisions down, especially for children and seniors.*

*The “5 E’s,” Education, Encouragement, Enforcement, Engineering, and Evaluation, are the elements that should be taken into account when planning school routes.*



The engineering task involves creating operational and physical improvements to the infrastructure surrounding schools to lower speeds, reduce potential conflicts with traffic, and establish safer and fully accessible crossings, walkways, trails, and bikeways. Engineering improvements should:

1. Create school walking and bicycling route maps using a variety of assessment tools and exercises.
2. Identify and regulate the school zone.
3. Provide and maintain bicycle and pedestrian facilities along the school route including sidewalks, on-street bicycle facilities, paths, bridges and tunnels.
4. Provide safe street crossings for bicyclists and pedestrians.
5. Slow down traffic.

In 2009, the city applied for three separate State-level SR2S grants aimed at engineering and traffic calming measures around schools. These include:

- A grant to install sidewalks at three school locations: Nichols Elementary School, Ditmar Elementary School, and South Oceanside Elementary School. This grant would give funding to provide continuous sidewalk for students going to and from school. Each of these school locations have portions of sidewalk that were never constructed.
- Install a sidewalk on the west side of the College Boulevard Bridge located between Mance Buchanon Park and North River Road. **(This project was completed in August 2009 and funded using the City CIP funds.)**
- A grant to install flashing beacons and/or radar feedback signs at various school locations. The schools included in this grant application were Mission Elementary School, Ivey Ranch Elementary School, King Middle School, Foussat Elementary School, Ditmar Elementary School, Lake Elementary School, Mission Meadows Elementary School, Madison Middle School, Reynolds Elementary School, Alamosa Park Elementary School, and Roosevelt Middle School.

The city did not receive funding for all these projects but will continue to seek funding for these and other projects.

**Education** - Aside from engineering improvements, education efforts are arguably the most effective component of a successful Suggested Routes to School Program. Activities include teaching pedestrians and bicyclists traffic safety and creating awareness of the benefits and goals of Suggested Routes to School.

One of the most popular education efforts done by other cities include small, laminated “tip sheets” or bookmarks (often in English and Spanish) to offer helpful guidelines for educating parents, teachers and children on suggested ways to walk and bike to school. These can be behavioral tips or wayfinding tips designed to educate pedestrians on suggested routes to school and what to do in the presence of high-speed traffic or challenging intersections. Tip sheets should be developed for students of all ages and grade levels.

**Encouragement** - Successful encouragement strategies for schoolchildren focus on using walkability and Suggested Routes to School to encourage activity and have fun; they generate excitement and interest in walking and bicycling. Special events like the International Walk to School Day, mileage clubs, contests, and other ongoing activities all provide ways for parents and children to discover, or rediscover, that walking and bicycling are possible, even preferred, and are a lot of fun.

*Engineering entails operational and physical improvements aimed to lower speeds, reduce potential conflicts with traffic, and establish safer and fully accessible crossings, walkways, trails, and bikeways near schools.*

*“Tip Sheets” offer helpful guidelines for educating parents, teachers, and children on suggested ways to walk and bike to school. “Tip Sheets” have been successful in other cities.*

*Generate excitement in walking and bicycling through special events that are inexpensive, quick, and easy.*

*Deter unsafe behaviors and encourage users to obey traffic laws through the use of local law enforcement or Schools Resource Officers (SRO).*

*Create a standing committee of school personnel and city staff designed to evaluate and monitor suggested routes to school.*

Encouragement activities often:

- Are quick and easy to start.
- Require little funding.
- Can be organized by parents, students, teachers or community volunteers.
- Catalyze a community's interest in walking and bicycling.
- Return quick success and generate enthusiasm for other strategies that may require a greater investment of time and resources.
- Reinforce safe walking and bicycling behaviors.

**Enforcement** - The primary goal for enforcement strategies is to deter unsafe behaviors of drivers, pedestrians and bicyclists, and to encourage all road users to obey traffic laws and share the road safely.

Enforcement can include partnering with local law enforcement or School Resource Officers (SRO) to ensure traffic laws are obeyed in the vicinity of schools (including enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), as well as initiating community enforcement such as crossing guard programs.

Potential Enforcement activities include:

- Identifying unsafe driver behaviors on the streets around the school such as: speeding through residential streets and school zones; failing to yield to students walking or bicycling, especially in crosswalks; running red lights or stop signs; passing stopped school buses; and parking or stopping in crosswalks.
- Teaching safety issues to children, school officials, parents and the community.
- Evaluating local traffic concerns, observe problem areas and behaviors, and providing input about safe routes.
- Providing an enforcement presence that discourages dangerous behavior on and off the school campus. This may mean issuing warnings to drivers breaking traffic laws. Drivers who have made a minor error will often respond to a warning from an officer by being more careful. Drivers who continue to violate traffic laws need to be ticketed.
- Monitoring crossing guards and making sure they are acting safely in the street and are not taking chances or over-stepping their duties as guards.
- Monitoring students to ensure that they cross at the suggested locations and do not take unnecessary risks.

**Evaluation** - This task involves monitoring outcomes and documenting trends through data collection before and after suggested route to school activities. Data collection examples can include surveys of students, educators, and parents are to determine how many students walk and bike to school, and why or why not.

In addition to surveys and other formal activities, the creation of a standing committee of school personnel and city staff designed to evaluate and monitor suggested routes to school should be done. City staff have indicated the existence of this committee in the past in Oceanside, and the existence of a current committee for the neighboring City of Vista. An evaluation committee could provide a quick, efficient way to develop and maintain an inventory of possible issues and potential improvements to be addressed as funding for improvements become available.

### State and Federal Safe Routes to School Programs

There are two separate and distinct Safe Routes to School programs. One is the State-legislated program referred to as SR2S and the other is the Federal program called SRTS. It is important to understand the differences between the two programs to fully understand the available funding opportunities and source.

While the Federal SAFETEA-LU designated a total of \$612 million towards the development of nationwide SRTS programs, this money is largely apportioned at this point in time. Additional federal legislation will likely continue to provide SRTS funding, and the city should monitor legislative efforts to best-position itself for funding when the new cycle commences. SR2S funding is ongoing and the key characteristics of each program are summarized in Table 9 along with existing Federal SRTS legislation.

*Funding from both the State and Federal Safe Routes to School Programs is very competitive. New cycles of funding will continue to appear, so the City of Oceanside should monitor these opportunities closely.*

**Table 9: State and Federal Safe Routes to School Programs**

Program Features	State-Legislated Program - SR2S	Federal Program - SRTS
<b>Legislative Authority</b>	Streets & Highways Code Section 2330-2334	Section 1404 in SAFETEA-LU
<b>Expires</b>	AB 57 extends program indefinitely	SAFETEA-LU expires September 30, 2009
<b>Eligible Applicants</b>	Cities and counties	State, local, and regional agencies experienced in meeting federal transportation requirements
<b>Eligible Projects</b>	Infrastructure projects	Stand-alone infrastructure or non-infrastructure projects
<b>Local Match</b>	10% required	None
<b>Project Completion Deadline</b>	Within four state FYs after project funds are allocated	Within four federal FYs after funds are obligated
<b>Restriction on Infrastructure Projects</b>	Must be located in the vicinity of a school	Infrastructure projects must be within two miles of a grade school or middle school
<b>Targeted Beneficiaries</b>	Children in grades K-12	Children in grades K-8
<b>Cycles Completed</b>	Eight cycles	Two cycles
<b>Current Status</b>	Cycle eight project lists were released on 8/10/09	Cycle two projects list approved in October, 2008
<b>Funding</b>	\$48.50M worth of projects were released in Cycle 8	\$46M was available in Cycle 2

Source: <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

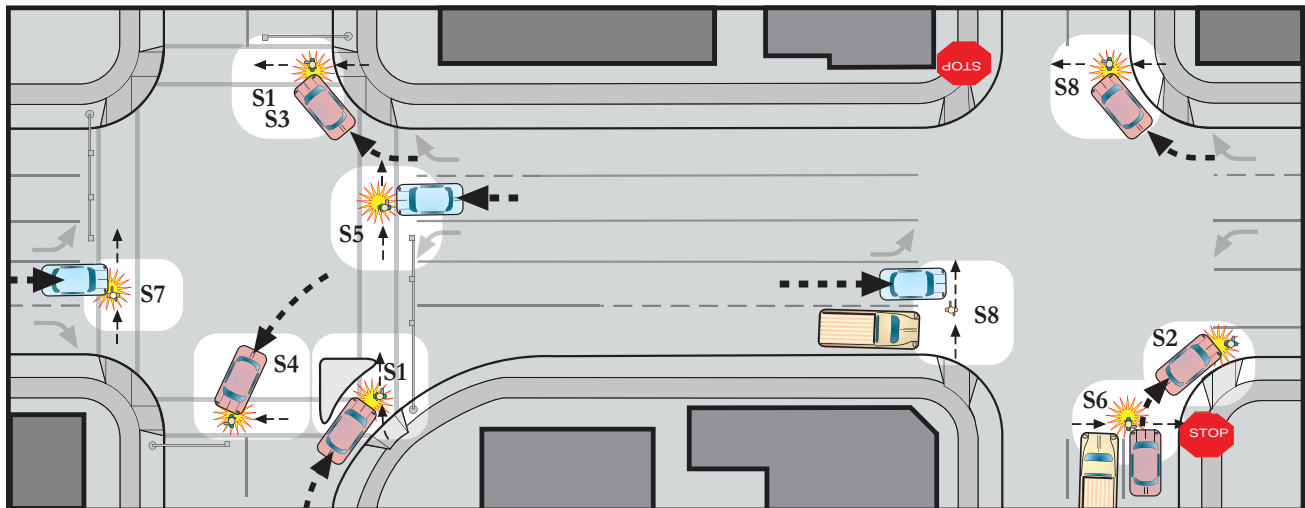
### Solutions that Address Safety Issues

There are several typical safety issues and solutions associated with pedestrian crossings at intersections, driveways, and mid-block crossings. Figure 6 and 7 have been developed to describe the typical safety issues associated with pedestrians crossing at intersections and walking or crossing along roadway segments. Figure 8 makes recommendations for possible solutions that can fully or partially address the safety issues. Examples of these solutions are illustrated on the pages following.

Figure 6: Intersection Safety Issues

## Safety Issues (at Intersections)

These tables and graphics are for illustrative purposes only and are not to be used for engineering analysis or design.



**Issues**

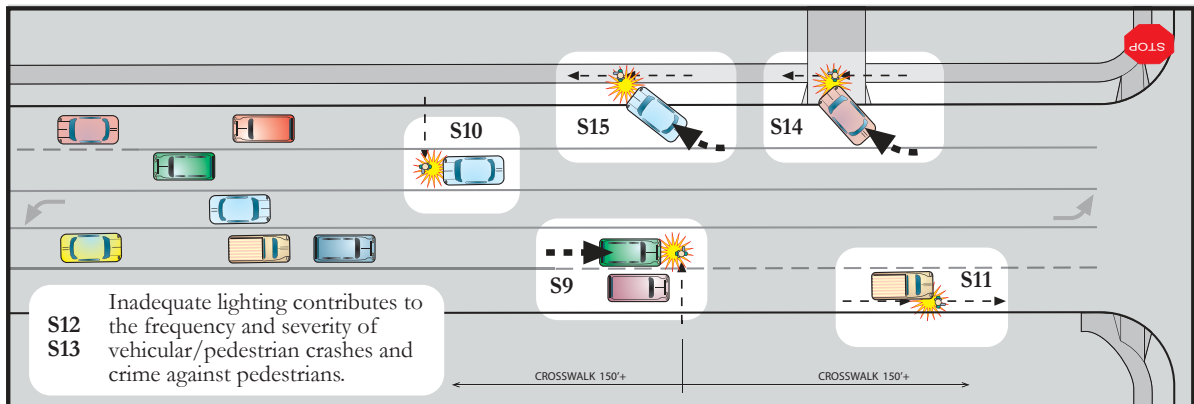
Potential Solutions (See legend\*)

<p><b>S1 - Right turning collisions.</b> Collisions can occur between right turning vehicles and pedestrians even though both may have a green light. High speed right turns may divert the driver's attention from watching for pedestrians, to watching for vehicles approaching from the left. Dual right turn lanes and wide-radius corners with channeled right turn lanes can make collisions more frequent and severe.</p>	<p>2S, 3S, 4S, 7S, 8S, 9S, 11S, 17S, 18S, 19S</p>
<p><b>S2 – Turns from minor road stop-controlled intersection.</b> Turning vehicles may violate the pedestrian right-of-way.</p>	<p>2S, 3S, 4S, 7S, 17S, 19S</p>
<p><b>S3 – Right turns at red lights.</b> Right turning vehicles at red lights may violate the pedestrian right-of-way during the pedestrian signal or when the pedestrian illegally walks against the red light.</p>	<p>2S, 3S, 4S, 17S, 19S</p>
<p><b>S4 - Left turning collisions.</b> Left turning vehicles at permissive left turns (green light yield) may violate pedestrian right-of-way, or at protected left turn (green arrow) if pedestrians walk illegally against the light.</p>	<p>1S, 3S, 4S, 8S, 11S, 17S, 19S</p>
<p><b>S5 – Wide streets.</b> Age, ability and street crossing distance may make it difficult for some pedestrians to cross wide streets in one cycle. Pedestrians may enter the crossing signal phase illegally without time to cross.</p>	<p>1S, 2S, 3S, 4S, 8S, 11S, 17S, 18S, 19S</p>
<p><b>S6 - Multiple lane crosswalk collisions.</b> Pedestrian collisions with vehicles can occur in crosswalks at stop signs with multiple lanes in each direction. Larger vehicles can shield views of pedestrians and drivers from each other. Drivers may also encroach on the crosswalk in an attempt to see oncoming traffic.</p>	<p>2S, 3S, 4S, 5S, 17S, 18S, 19S</p>
<p><b>S7 - Controlled intersection collisions.</b> Pedestrian collisions with vehicles may occur at intersections with signals or stop signs. Collisions may occur due to high speeds, signal running, or either a driver or pedestrian violating the other's right-of-way.</p>	<p>1S, 2S, 3S, 4S, 6S, 9S, 11S, 17S, 18S, 19S</p>
<p><b>S8 - Uncontrolled intersection collisions.</b> Collisions may occur at intersections with no stop signs or traffic signals. Multiple lanes in each direction intensify this problem dramatically, as well as poor visibility and lack of median refuges. Drivers may not understand that pedestrians have the right-of-way at intersections, regardless of crosswalk markings.</p>	<p>1S, 2S, 3S, 4S, 5S, 7S, 17S, 18S, 19S, also see 5W</p>

Figure 7: Roadway Safety Issues

### Safety Issues (along Streets)

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Issues	Potential Solutions (See legend*)
<b>S9 – Lack of legal or safe crossings.</b> Uncontrolled, restricted or excessively spaced crossings without stop signs or signal control can encourage mid-block crossings (whether legal or illegal).	<b>1S, 5S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S</b>
<b>S10 – Mid-block “jay walking.”</b> Safe, controlled intersection crossings often exist within typical blocks. However, some adjacent uses and high levels of pedestrian use may encourage illegal crossings, putting the pedestrian at risk, especially if crossing from between parked vehicles.	<b>1S, 5S, 10S, 11S, 12S, 13S, 14S, 17S, 18S, 19S</b>
<b>S11 - Street collisions where no sidewalk exists.</b> Where sidewalks are missing or damaged pedestrians may be required to walk in the street, exposing them to collisions. Walking in the street is especially unsafe if vehicular speeds are above 25 mph, the travel lane is next to the curb or edge of the roadway, and the roadway is relatively narrow.	<b>18S, 19S, 20S</b>
<b>S12 - Unsafe conditions in the dark.</b> Where lighting and/or building forms do not allow for defensible space, the walker may be subjected to robbery or personal harm.	<b>17S, 18S</b>
<b>S13 - Disincentive to walk in the dark.</b> Inadequate light levels can influence a pedestrian's decision to not walk at night and can also result in collisions due to low visibility.	<b>17S, 18S, 19S</b>
<b>S14 - Turning into or out of driveways and alleys.</b> Vehicles turning into or out of curb-cuts, driveways or alleys can collide with pedestrians on sidewalks. The driver is violating pedestrian right-of-way, but this collision is difficult to control through physical changes.	<b>15S, 16S, 17S, 18S, 19S</b>
<b>S15 - Out-of-control collisions on sidewalks.</b> Pedestrians may be exposed to high speed vehicles where no buffers exist (such as trees, bike lane or parked cars). The problem is worse where there is no buffer between travel lanes and sidewalks.	<b>6S, 15S, 16S, 17S, 18S, 19S</b>

Figure 8: Safety Solutions

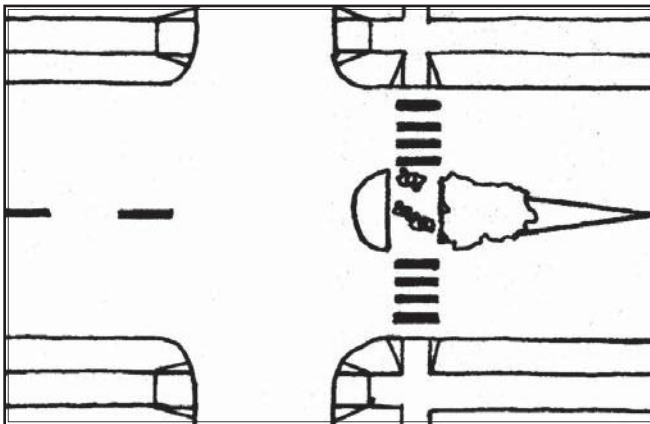
<ul style="list-style-type: none"> <li>1S) Median refuges (a safe place to stand in the street)</li> <li>2S) Pedestrian pop-outs (curb/sidewalk extensions into street)</li> <li>3S) High-visibility crosswalk striping</li> <li>4S) Elevated and/or specially paved crosswalks</li> <li>5S) Advance stop bars at least 15 feet but ideally 30 feet from crosswalks</li> <li>6S) Radar speed monitoring and display</li> <li>7S) Reduced curb radii</li> <li>8S) Early pedestrian start at crossing signal</li> <li>9S) No right turn on red at intersection</li> <li>10S) Mid-block crosswalks with pedestrian flashers, but no traffic control</li> <li>11S) Automatic pedestrian detection and signal control</li> <li>12S) Mid-block crosswalks with signs, median or curb extensions and flashing lights in the roadway</li> <li>13S) Mid-block crosswalks with pedestrian-actuated traffic control devices</li> <li>14S) One-lane mid-block crossing with high contrast markings, signs, and center lane marker )</li> <li>15S) Parkway planting buffer between cars and pedestrians</li> <li>16S) On-street parking buffer between cars and pedestrians</li> <li>17S) Adequate pedestrian lighting levels</li> <li>18S) Various traffic calming measures</li> <li>19S) Enforcement and education solutions</li> <li>20S) Missing sidewalk added or provide adequate walkway width clear of obstructions</li> </ul>	<p>* The potential solutions are a possible list of methods to address the problem. Implemented solutions will be determined by actual site conditions, interpretation of policies and engineering evaluation.</p>
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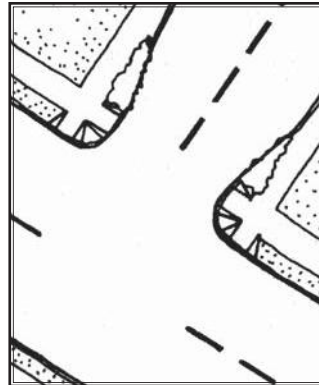
1S) A good example of a median refuge that provides access without ramps and protects a walker unable to make it across. Photo credit: Andy Hamilton



2S) Pedestrian pop-outs (curb extensions) can provide increased safety, improved visibility of pedestrians, protection for parked cars, and a shorter crossing distance for the pedestrian. They also provide for street furnishings, landscaping and social areas. Photo credit: Dan Burden



1S) Median refuges should be considered at intersections with or without traffic control. Multi-lane roadways should utilize solutions that include traffic control. Illustration credit: Planning & Designing for Pedestrians, SANDAG, June 2002

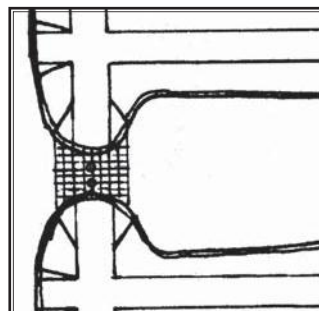
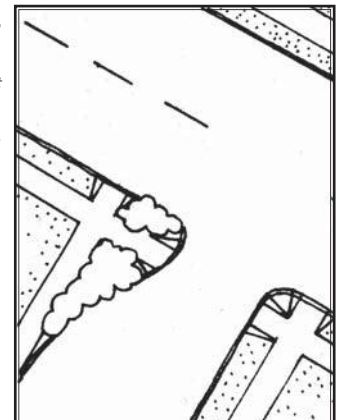


2S) Pedestrian pop-outs (sometimes referred to as curb extensions when not on all edges) decrease crossing distance and can help slow down traffic. Illustration credit: Dan Burden

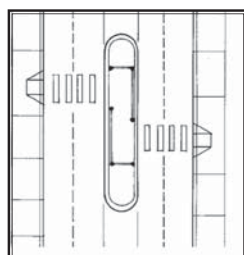


1S) Median refuges are essential where mid-block crossings are contemplated. They can include a straight cut-through or a staggered or coral style crossing. Photo credit: Dan Burden

2S) Pedestrian pop-outs can also serve to narrow a two lane one-way street into one lane or restrict entrance onto a two-way or one-way street. Illustration credit: Dan Burden



2S) Pedestrian pop-outs in conjunction with bollards can serve to block a street from vehicular traffic. Illustration credit: Dan Burden





3S) Ladder style markings can be modified and spaced to lower the wear from vehicle tires. Photo credit: Dan Burden



4S) Raised crosswalks (speed tables) provide clear signs of a pedestrian crossing but need to be limited to lower speed, lower volume streets. Photo credit: Andy Hamilton



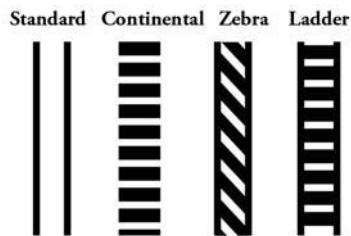
3S) Increased visibility can be obtained through a change of paving materials and striping. Photo credit: Mike Singleton



5S) Adequate lighting, pop-outs, the latest MUTCD approved signs and high visibility markings are essential for non-controlled multi-lane mid-block crossings. Note the stop bar should be located at least 15 feet from the actual crosswalk (see image on right). Photo credit: Michael Ronkin



3S) Certain urban areas (that are pedestrian dominant) should utilize high visibility markings in the entire intersection. Photo credit: Michael Singleton



3S) A variety of crosswalk stripings are used in the United States. All are typically used in California except for the solid and the dashed. The standard would suffice for many intersections. Intersections with higher levels of pedestrian use, should utilize a spacing modified continental style (see 3S at the top of the page). Illustration credit: Dan Burden



6S) Many cite increased regulation and enforcement as the solution to controlling speeding and reckless driving. Physical improvements provide a long term solution. However, some devices such as radar speed display systems, can help to educate the public and will slow the driver down while in use. Photo credit: Joe Punsalan



7S) Wide radius corners can promote high speed turning movements that can conflict with pedestrians. A high speed right turn can also take the driver's focus away from the crossing and its users and place the focus only on vehicles approaching from the left instead of pedestrians in the crosswalk. Photo credit: Michael Ronkin



9S) Right turn on red restrictions can lessen the conflicts between users and, if signs are properly handled, can increase awareness of these types of pedestrian / vehicle conflicts. Photo credit: Michael Ronkin



7S) Reducing the radius of corners also serves to decrease the crossing distance for a pedestrian and places them in a higher visibility zone. Illustration credit: Dan Burden



8S) Right turn on red restrictions with an advance lead for the pedestrian crossing phase can reduce right hand turning conflicts. Photo credit: Michael Ronkin



10S) A number of flashing pedestrian crossing warning signs are used throughout the region. Other solutions may be more appropriate where multi-lanes of travel on high volume streets exist. This crossing has visible signage and crosswalks along with a median refuge. Improved street lighting and advance stop bars could increase safety, but a pedestrian actuated traffic signal would provide for the safest condition. Photo credit: Mike Singleton

Safety Solutions



**11S)** A traffic signal or special pedestrian crossing can be controlled by sensors that note when a pedestrian approaches and / or leaves an intersection or a mid-block area. Photo credit: Michael Ronkin



**11S)** This signal uses both a pedestrian crossing symbol as well as a red light when actuated. Photo credit: Michael Ronkin



**12S)** This crossing utilizes lighting in the pavement and in the signs to indicate a pedestrian is in the walkway. Sensors pick up when a pedestrian approaches and if the crosswalk is clear of pedestrians. Photo credit: Mike Singleton





**13S)** This mid-block crossing utilizes standard traffic signals, a stop bar, ladder style crosswalks, median refuge and a pedestrian controlled actuator. Photo credit: Mike Singleton



**14S)** If traffic control is not provided at an intersection, signage and striping along with a center pedestrian zone marker may help to make these crossings as safe as possible. This type of sign may require changes to existing policies, though it is allowed under MUTCD. Photo credit: Joe Punsalan



**13S)** The response time for stopping traffic for this mid-block crossing was quick, assuring that pedestrians will tend to wait for the lights. The design of the adjacent walkways concentrated pedestrians into this walkway crossing. Photo credit: Mike Singleton



**14S)** This type of crossing should only be used on streets with one lane each direction or two one way lanes. The center marker is collapsible. It works to slow traffic and concentrate attention on the crosswalk. Photo credit: ITE Pedestrian and Bike Council

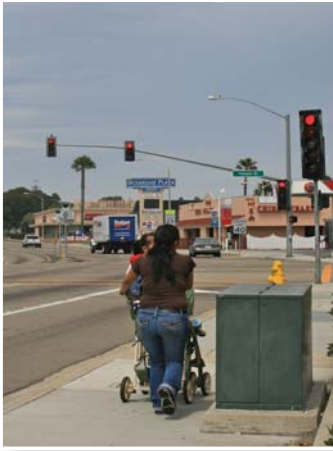


**13S)** This mid-block pedestrian activated crosswalk in Linda Vista includes standard traffic signals, ladder style markings, signage and a median refuge. Photo credit: Mike Singleton



**14S)** This crossing is on a one lane in each direction street with curb extensions, striping, signage and trees that all help to slow a driver down. There is no multi-lane, multi-direction threat to this use of an uncontrolled mid-block crossing. Photo credit: Portland Office of Transportation

**Safety Solutions**



**15S)** Sidewalks placed against the curb, against a high speed and high volume street are not comfortable to walk on because of a fear (perceived or real) of being hit by a passing vehicle. Photo credit: Mike Singleton



**15S)** Having an outside striped shoulder or bike lane along with a parkway strip and street trees can dramatically reduce collision potential and increase comfort levels for pedestrians. Photo credit: Michael Ronkin



**15S)** Trees placed in a parkway strip with the sidewalk away from the edge of the curb are much safer for pedestrians since the trees provide a level of collision protection and the distance increases the ability to get out of the way. Tree lined streets also tend to slow speeds slightly. Photo credit: Brooke Pietz



**16S)** Adjacent parallel or angled parking provides an increased level of protection and comfort along major streets. Photo credit: Mike Singleton



**15S)** Even if a parkway strip does not exist, such as in this urban area, trees planted within close proximity of each other afford some level of comfort and protection for the pedestrian. Photo credit: Mike Singleton



**16S)** As a last resort, barriers may be required to protect pedestrians along high speed streets, especially on high speed horizontal curves. Photo credit: Mike Singleton



**17S)** Adequate levels of pedestrian lighting are critical for public safety related to vehicular collisions or for the avoidance of crime related incidents. Photo credit: Mike Singleton



**17S)** Lighting levels are determined by spacing, height, lumens of the light fixture and orientation. Lighting should be concentrated in areas with collision potential. However, a minimal amount of lighting is needed along the entire walkway in order to make the general public feel safe when walking at night. Photo credit: Mike Singleton



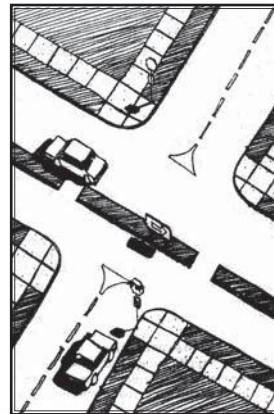
**18S)** Roundabout. Photo credit: Michael Ronkin



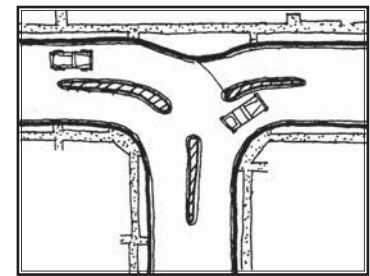
**18S)** Mini-traffic circle. Photo credit: Michael Ronkin



**18S)** Modern roundabout with properly planned pedestrian crossings, markings, signage and lighting. Photo credit: Dan Burden



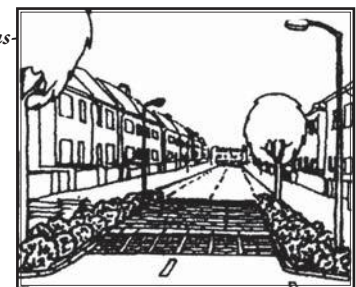
**18S)** Traffic divertors and median control points. Illustration credit: Dan Burden



**18S)** Speed tables (raised intersection). Illustration credit: Dan Burden



**18S)** Raised crosswalks. Illustration credit: Dan Burden



**19S)** Engineering, education or enforcement solutions can include, engineered physical solutions, increased regulatory enforcement through citations and warnings and the development of a public campaign to improve pedestrian and driver actions and awareness or other programs that encourage proper driving and awareness of pedestrian and cycling safety.

**20S)** Fill in missing sidewalks or provide adequate walk width clear of obstructions.

**Safety Solutions**

## 3.2 Walkability Issues and Solutions

Walkability is defined as a mixture of physical and perceptual elements that make up the built environment that are conducive to walking. The physical elements include the walkway itself, amenities along the walkway, items that provide protection from harsh environmental conditions adjacent to or above the walkway and the uses (usually vehicular on one side and some form of development on the other side). The perceptual elements are factors that contribute to the feeling of safety, protection from collisions, avoidance of crime, buffering from activity, noise, and the comfort and interest that the visual environment provides. The ultimate measure of walkability is whether pedestrians seek out the walking environment, ignore the environment as they pass through it, or actually avoid it because of it being perceived as not being walkable.

### Basic Requirements for Walkability

In addition to providing a safe, accessible and connected pedestrian environment, a walkable environment includes some additional elements and requirements including:

- The introduction of elements such as shade trees, subdued pedestrian-level lighting, street furniture and appealing plazas not only enhance the pedestrian walking experience, but create streetscapes of superior urban design that improve the city's image and even make the driving experience more pleasant.
- Protection from the elements: This is mostly handled through the use of street trees that add shade and reduce ground reflection of heat and light during warm weather. They provide protection from wind and rain during cold weather. They add visual interest to the streetscape. Trees also serve an important role in increasing safety from passing traffic and the improved perception of safety by buffering adjacent busy uses.
- The arrangement of physical elements must be handled in a way that promotes defensible space. Any element that can block the view of a person standing or crouching will not promote spaces where people feel safe and comfortable.
- Visual access into adjacent land uses such as windows of stores or residences, or an unfenced yard, park, or garden add interest and provide a sense that other people are providing "eyes on the street."
- Public art, water fountains, benches, trash receptacles, drinking fountains and quality lighting is welcoming and inviting and encourages people to linger. These amenities can improve the success of business establishments.

### Solutions that Address Walkability Issues

Figure 9 has been developed to describe the typical environmental elements that prevent an area from being considered as walkable and proposes changes to this environment that will make it more walkable. In order for a facility to be truly walkable, however, it must also be mostly void of the issues shown on the Safety, Accessibility and Connectivity matrices. Figure 10 provides solutions to the walkability issues. Examples of these solutions are illustrated on the pages following.

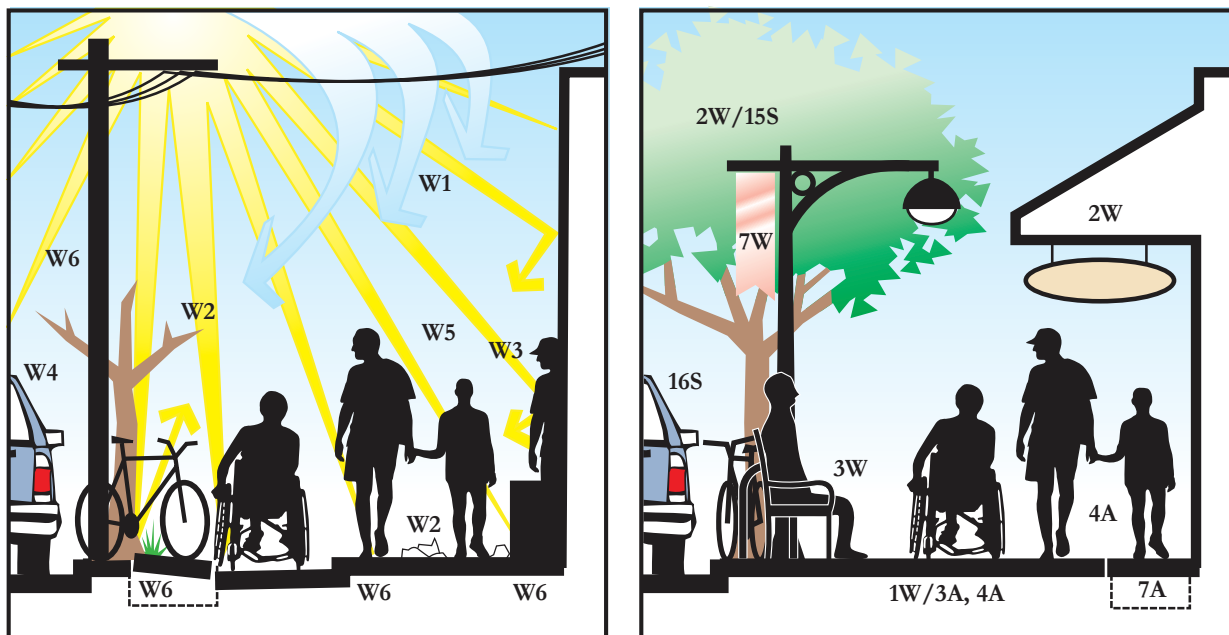
*The ultimate measure of walkability is whether pedestrians seek out the walking environment, ignore the environment as they pass through it, or actually avoid it because of it being perceived as not being walkable.*

*For a facility to be truly walkable, it must be void of major issues related to safety, accessibility, and connectivity.*

Figure 9: Walkability Issues

### Walkability Issues

These tables and graphics are for illustrative purposes only and are not to be used for engineering analysis or design.



An unwalkable environment...made walkable

**Issues**

**Potential Solutions (See legend\*)**

<b>W1 - Harsh environmental conditions.</b> Direct sun, noise, vehicle fumes and wind can all contribute to an unpleasant walking environment.	<b>1W, 2W, also see 15S, 16S</b>
<b>W2 - Poor maintenance.</b> Trash, weeds, derelict structures and graffiti can discourage people from walking.	<b>1W, also see 19S</b>
<b>W3 - Perceived unsafe walkways due to fear of crime.</b> The actual or perceived threat of theft, assault or panhandling can discourage walking.	<b>1W, 7W, also see 19S</b>
<b>W4 - Lack of buffer from high speed or high volume traffic.</b> Proximity to high speed, high volume traffic creates an unpleasant walking environment.	<b>1W, 2W, 3W, also see 2S, 15S, 16S, 18S</b>
<b>W5 - Absence of site amenities.</b> Streets lack amenities such as places to sit, shade, drinking fountains, trash receptacles, bicycle racks and pedestrian signage.	<b>3W, 7W, also see 15S</b>
<b>W6 - Walkway obstructions.</b> This issue goes beyond minimum ADA standards and includes obstructions that force a sidewalk user to go around an obstruction, crowded sidewalks, or the presence of multiple surfaces, slopes and trip hazards.	<b>1W, also see 3A, 4A, 7A</b>
<b>W7 - Limited street crossing options.</b> Walkability can be impaired when it takes a long time to get from origin to destination.	<b>4W, 5W, 6W, also see 2S, 7S, 8S, 10S, 11S, 12S, 13S, 14S, 20S</b>

Figure 10: Walkability Solutions

- 1W) Provide greater than minimum walkway widths (>5 feet)
- 2W) Provide trees, awnings or building overhangs to shade walkways
- 3W) Provide street furnishings for comfort and enjoyment
- 4W) Provide countdown display crosswalk signals
- 5W) Provide traffic control for crossings such as traffic signals or "all way stops"
- 6W) Provide "pedestrian scrambles" (simultaneous crossing allowed in any direction, including diagonally)
- 7W) Provide public art such as decorative paving, tree grates, banners, art pieces, signage, etc.

\* The potential solutions are a possible list of methods to address the problem. Implemented solutions will be determined by actual site conditions, interpretation of policies and engineering evaluation.



**1W)** Match the sidewalk width to the intended use. Only suburban residential areas should be allowed at or below a 5' width. Photo credit: Mike Singleton



**2W)** Trees provide filtered shade as well as protection from adjacent cars. Other site amenities compel people to stop for a while. Photo credit: Mike Singleton



**1W)** Commercial area widths should approach at least 10' in width since they must accommodate a variety of uses, street furniture and utilities. Photo credit: Andy Hamilton



**3W)** If an active street is desired, then accommodations for street furnishings and street uses must be made. Photo credit: Mike Singleton



**1W)** Residential area widths should be at least 5' in width but no more than 10'. A walkway can feel smaller or larger depending on adjacent walls or fences and the presence of a landscape buffer. Photo credit: Andy Hamilton



**3W)** Public art or public amenities with varied and interesting materials can be used for their aesthetic value, as well as for their functional value. Photo credit: Mike Singleton

### 3.3 Connectivity Issues and Solutions

Connectivity refers to the existence of safe, direct pedestrian paths (generally along streets) between where a walker starts and where she or he wants to go. A 1993 study of pedestrian activity in Portland, Oregon found that connectivity was one of the four neighborhood factors that most influence the decision to walk. The other three were ease of street crossings, sidewalk continuity and topography.

Community structure is the basis for a pedestrian-friendly environment. Neighborhoods should be compact, walkable, and mixed-use. The ideal size for a walkable neighborhood is just over a quarter-mile radius from center to edge, less than 2,000 lineal feet. Where this environment already exists, it is often coined as a “village” or “district”. This 1/4 mile distance is equivalent to a five- to ten-minute walk at an easy pace. Within this ten-minute radius, residents should be able to walk to the center from anywhere in a neighborhood to take care of daily needs or to use public transit. The pedestrian system is an integral component of the overall transit system and serves as a connector between where we live and where we work and how we connect to the city. It is an objective of this pedestrian master plan to create a safe, highly functional and complete pedestrian network that provides a pragmatic and appealing transportation alternative.

#### Typical Connectivity Issues

In Oceanside, sidewalk obstacles that make walking difficult include gaps in the sidewalks, difficult to cross roads and rail line barriers, and sidewalk capacity and obstruction barriers especially along the coast and in the downtown area.

**Sidewalk Gaps-** Throughout the city, there are gaps where sidewalks have not been completed because of development phasing. A typical situation occurs where development takes place on a parcel that is only a portion of an undeveloped block and the sidewalk is constructed to serve only the developed parcel. Until the remainder of the block is developed, there is no connection to other sidewalks in the area. Lack of sidewalk facilities exist at the local site level as well. Often movement around a development, community or commercial center is difficult because there is no separation between the vehicular driving and parking environment and the pedestrian.

**Road and Rail Road Barriers -** Designing for the movement of cars had often relegated the pedestrian to a secondary status. This included practices of wide curb radii that allowed cars to make turns without reducing speed, and freeway-like ramping, turn lanes and merge lanes that required a pedestrian to thread themselves through high speed traffic. Also, high speed, high volume and wide streets represent barriers because of the length of time to wait between cycles, the overall crossing distance and the fear of safety issues. These roadway related barriers do affect connectivity. In addition to roads, the Coaster rail line that runs north and south through the city acts as a major barrier limiting pedestrian access in the east/west direction, and the Sprinter light-rail line that runs east and west acts as a major barrier limiting pedestrian access in the north/south direction.

**Unlit Area Barriers -** The typical spacing of streetlights is often a deterrent to pedestrian movement. In some areas of the city, the streetlights are located only at the intersections. The lack of pedestrian scale streetlights deters walkers who do not feel comfortable or safe on the dark sidewalks. This becomes a deterrent for transit riders if, after alighting from the bus, they must walk from a bus stop located at the opposite corner from the streetlight to reach their destinations. Longer routes may be selected that are well lit, avoiding the darker areas, thereby contributing to a connectivity problem.

*Connectivity is one of the four neighborhood factors that most influence the decision to walk. The other three are ease of street crossings, sidewalk continuity and topography.*

*In Oceanside, sidewalk obstacles include: sidewalk gaps, road and rail road barriers, unlit areas, sidewalk capacity and obstruction, and street patterns that limit or extend pedestrian connections.*

*The typical suburban street layout, with its hierarchal designation of streets, long blocks without cross-streets and streets ending in cul-de-sac, make it difficult for pedestrians to walk from home to school, to shopping, or to recreation, because the street pattern does not allow easy access to destinations, even if they are relatively close by.*

**Sidewalk Capacity & Obstruction Barriers** - The location and size of sidewalks can also be a connectivity problem if the route is avoided because of other walkability issues. A sidewalk, even one that meets the city's minimum required width, is often a deterrent to pedestrian travel. Poles for streetlights, traffic signal poles, utility boxes, newspaper racks, backflow preventors, vending machines, etc., are often located in the path of travel making it difficult to maneuver even if there is only a small number of pedestrians using the walkway. There are also several key locations where sidewalk widths do not allow for the number of pedestrians utilizing the walkway forcing pedestrians off the sidewalk.

**Street Patterns that Limit or Extend Pedestrian Connections** - The typical suburban street layout, with its hierarchal designation of streets, long blocks without cross-streets and streets ending in cul-de-sac, make it difficult for pedestrians to walk from home to school, to shopping, or to recreation, because the street pattern does not allow easy access to destinations, even if they are relatively close by. In turn, this forces potential walkers to rely on the automobile. In some of the region's newer developments, a "connected" street system has been put in place. While not as formalized and geometrically arranged as the street systems in older communities, these systems do allow many options for people to walk to their destinations and they allow people to walk around the block. In neighborhoods where the street connectivity is not possible due to topography or traffic, pedestrian-only walkways have been put in place and some cul-de-sacs have pedestrian connections to adjacent areas.

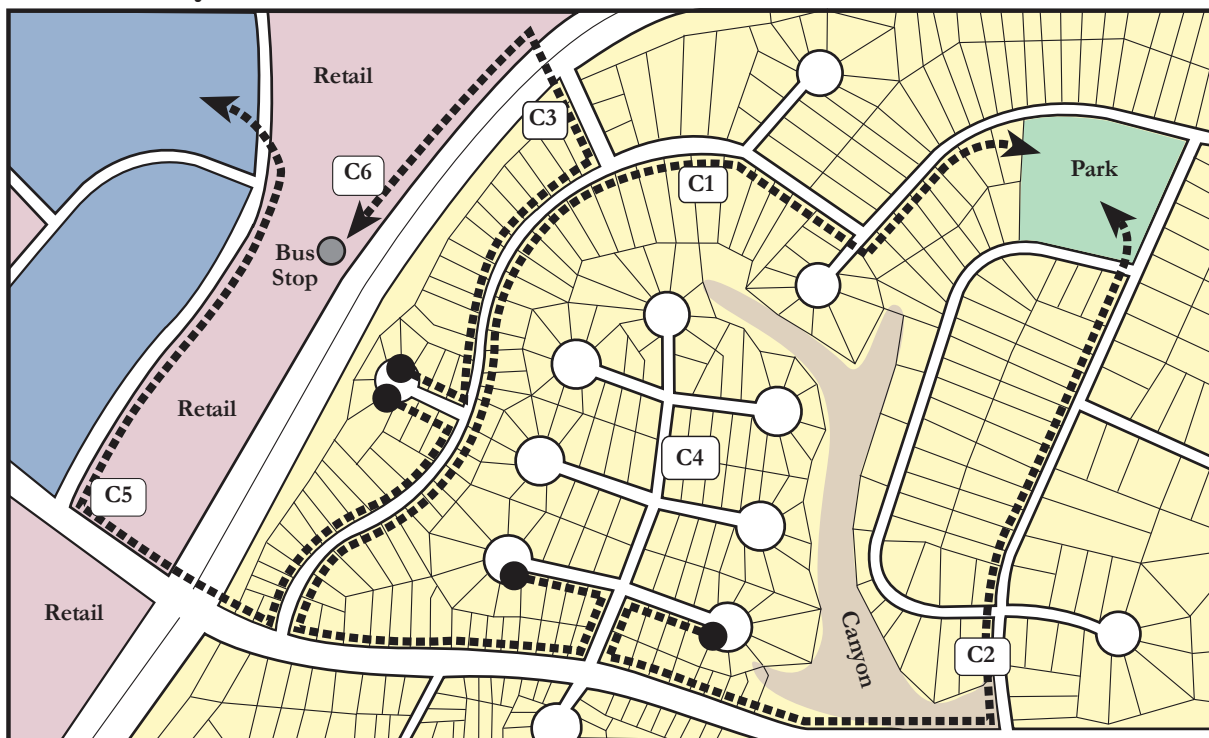
### **Solutions that Address Connectivity Issues**

Figure 11 has been developed to describe the typical connectivity issues associated with public rights-of-way and development patterns. Many of these solutions need to occur at the site planning and project approval stage. Under new policies and smart growth strategies, it is incumbent upon the developer or property owner to prove that the new project will be connected with land uses with direct facilities. This requires connections that lead beyond the immediate limits of the project parcel. The distance that most are willing to walk is a real determinant on intra-community vehicular use, trip generation and off-street parking since walking and transit use tends to reduce multiple car ownership and vehicular trips. If the new or retrofitted environment is not fully connected at a pedestrian scale, then it will not support the objectives of smart growth.

Figure 11: Connectivity Issues

### Connectivity Issues

These tables and graphics are for illustrative purposes only and are not to be used for engineering analysis or design.



Issues	Potential Solutions (See legend*)
<b>C1 - Street patterns are not connected.</b> Pedestrians are required to take a long route to reach neighborhood attractors, schools and transit. Curvilinear and dead-end streets (cul-de-sacs) tend to discourage walking.	1C, 2C, 3C, 5C
<b>C2 - Walking barriers.</b> Natural barriers (canyons or slopes) or man-made barriers (freeways or rail lines) tend to discourage walking.	6C
<b>C3 - High speed roadway barriers.</b> High volume, multi-lane and high speed roads create a perceptual and/or safety barrier that discourages crossing and may require pedestrians to walk blocks out of direction to safely cross.	4C, 5C, 6C, 7C, also see 1S, 2S, 3S, 4S, 10S, 11S, 12S, 13S
<b>C4 - Complete lack of walkways.</b> Entire neighborhoods may lack pedestrian facilities. Except in some rural locations or other special circumstances, all streets should have sidewalks.	2C
<b>C5 - Isolated land uses.</b> If the distance between where people live and where they work, shop, learn or play is more than a mile, most people will never walk. Curvilinear streets and non-connected street patterns contribute to this effect.	3C, 5C, 8C
<b>C6 - Isolated transit facilities.</b> Transit systems are often not close enough to origins (generators) or destinations (attractors) to make walking between them feasible. Transit systems generate pedestrian activity, which, in turn, supports transit if the stops are within a reasonable walking distance.	1C, 2C, 3C, 4C, 5C, 6C, 7C, 8C

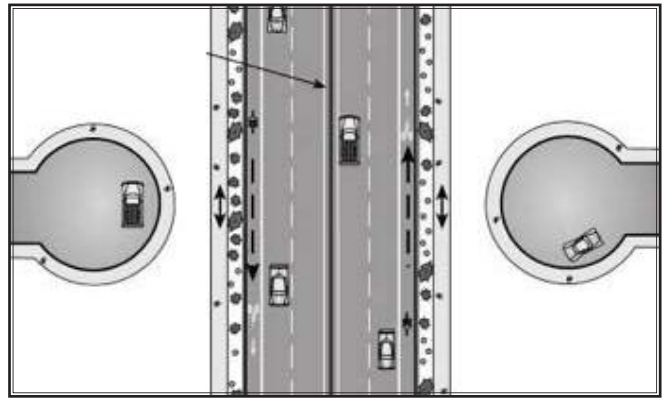
Figure 12: Connectivity Solutions

<p>1C) Missing sidewalk segments added in areas where sidewalks mostly exist                  2C) Missing sidewalks added in areas where no sidewalks exist at all                  3C) Connecting pathways added between streets                  4C) Street widths reduced or features added to narrow crossing distance                  5C) Destinations added or made more connected within walking distance of origins                  6C) Pedestrian bridges added that avoid excessive ramp lengths                  7C) Pedestrian crossing opportunities added for all sides (legs) of intersections                  8C) When reviewing projects, verification that pedestrian routes and distances between land uses are reasonable and direct</p>
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\* The potential solutions are a possible list of methods to address the problem. Implemented solutions will be determined by actual site conditions, interpretation of policies and engineering evaluation.



**1C)** Sidewalk gaps affect the ability to connect areas by walking. They are especially unfair to those with physical challenges. All urban areas need to have sidewalks. Photo credit: Mike Singleton



**3C)** Missing connections for pedestrians between streets designed not to allow through vehicular traffic are unfriendly to walkers but sometimes can be retrofitted or at least avoided with new development. Illustration credit: Michael Ronkin



**2C)** Where signs of continual pedestrian use are present along higher volume and higher speed streets, the addition of sidewalks should be a top priority. Photo credit: Michael Ronkin



**3C)** A variety of barriers exist in the curvilinear and hierarchical street patterns of many suburbs. These should be avoided since fixing them later is very difficult. Photo credit: Michael Ronkin



**2C)** In areas currently without sidewalks, where the street volume and speed is very low and the character is rural, sidewalks may not be needed. Photo credit: Brooke Pietz



**3C)** Even heavily traveled urban streets can act as barriers to pedestrians if appropriate crossings have not been provided. Photo credit: Mike Singleton

**Connectivity Solutions**



**4C)** Wide intersections are more difficult for pedestrians to feel comfortable crossing because of the distance to travel and wait time between crossings. Those that enter the crossing after the pedestrian light begins flashing can find themselves caught in traffic. Photo credit: Mike Singleton



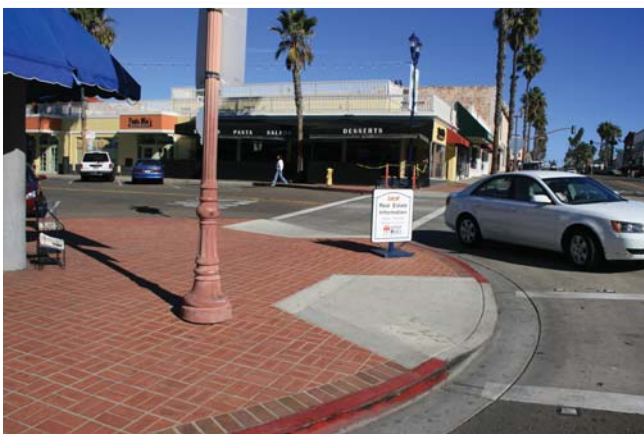
**5C)** Mixed use compact development supports both transit and walking by providing destinations within short distances of trip origins. Photo credit: Dan Burden



**4C)** Wide streets negatively affect walkability and pedestrian safety. Narrow streets on the other hand, calm traffic and are more conducive for walking along and crossing. Photo credit: Joe Punsalan



**5C)** The proper pedestrian environment can support a variety of retail businesses and mixed land uses while offering a pleasant urban design. Photo credit: Brooke Pietz



**4C)** Retrofitting wide streets and intersections to improve walkability, can be very expensive. It is generally far less expensive to build these streets with pedestrians and cyclists in mind than to retrofit later. Photo credit: Mike Singleton



**5C)** Streets should be designed for more than moving vehicles. When all elements come together, a socially interactive environment will evolve. Photo credit: Dan Burden

**Connectivity Solutions**



6C) Grade separated pedestrian crossings should generally be avoided because of the expense and low level of use. Some circumstances warrant their use such as over freeways, railroads and other intensive surface uses where at-grade crossing may not be safe. Bridges that limit the amount of vertical climbing or do not go dramatically out of direction, will be used. Photo credit: Joe Punsalan



7C) Some circumstances, such as dual left turn lanes, may require pedestrian restrictions on crossing in order to avoid safety issues. In other locations, the restrictions may have been primarily used to increase turning movements through the intersection. A case-by-case analysis is required to determine the right balance. Photo credit: Mike Singleton



6C) To meet accessibility requirements, long ramps are required to access activity centers such as beaches. Photo credit: Mike Singleton



7C) There are valid reasons for closing one or more segments of an intersection including intersection geometry, such as shown above. Photo credit: Mike Singleton



8C) Verify that pedestrian distances between land uses are reasonable and direct. Projects claiming reduced parking requirements and density bonuses for supporting smart growth, transit oriented development or mixed use projects, should provide for access and walkability in and around their sites. The applicant should submit plans showing actual distances along walking routes to transit, neighborhood services, parks, schools and other destinations found within the normal 1/4 mile walking distance radius.

### 3.4 Accessibility Issues and Solutions

This section discusses the existing issues of pedestrian access with regards to the Americans with Disabilities Act (ADA). The city's accessibility goal focuses on compliance with federal and State standards. This section will highlight locations within the city that are potentially in need of additional design treatments to accommodate a disabled person or those with limited mobility.

The existing issues identified within the City of Oceanside that present challenges for those with limited mobility include the following:

- Tripping hazards on sidewalks or driveways
- Discontinuous sidewalks
- Driveways with visibility issues (particularly for those in a wheelchair or a small child)
- Driveways with greater than 2% cross slope
- Single curb ramps that force wheelchairs into the lanes of oncoming traffic
- Slopes steeper than ADA standards
- Other features identified by ADA as impediments to access and mobility

#### Federal and State Disabled and Universal Access Guidelines

The Americans with Disabilities Act was enacted in July 1990 and effectively set the Federal standard for disabled accessibility. Prior to this federal law, California had some of the most comprehensive standards regarding accessibility. The standards are contained in the published State Title 24, first enacted in 1978 and updated periodically. Newly constructed facilities must be free of architectural barriers that restrict access or use by individuals with disabilities.

Cities in California use two technical standards for accessible design: the Americans with Disabilities Act Accessibility Guidelines (ADAAG) for places of public accommodation and commercial facilities covered by Title 3 of the ADA and the State Architectural Regulations for Accommodation of the Physically Handicapped in Public Facilities, found in Title 24 of the California Code of Regulations, also known as the California Standards Building Code.

Although local building agencies are limited in that they can only enforce the provisions of the state of California (Title 24), a provision was added to the California Civil Code that determines that a violation of ADA is also a violation of the California Civil Code. Compliance with Title 24 does not preclude a potential violation of the Federal ADA standard.

A relatively new set of access guidelines has recently been developed for all users of public facilities. Known as "Universal Access," it is defined as the ability of all citizens to reach every destination served by the public circulation network. With regards to pedestrian and disabled design, these principles dictate that if an access point is provided for motor vehicle traffic, reasonably safe accommodation must also be provided for pedestrians and cyclists, including disabled and senior pedestrians, who may require additional treatments.

*Universal Access is defined as the ability of all citizens to reach every destination served by the public circulation network.*

The City of Oceanside currently adheres to the State Title 24 guidelines and the Federal ADA legislation in lieu of developing its own additional set of disabled access standards, so fieldwork was conducted towards identifying state and federal disabled access issues.

It is important to understand that the design of pedestrian facilities takes into account the disabilities and abilities of all pedestrians. While mobility impairment is most often considered when referring to a disabled individual, sensory and cognitive disabilities must also be considered. With these distinctions in mind, the following eight summary characteristics of ADA design-compatible design were the focus of the field inspections.

- Grades
- Walkways
- Ramps
- Curb Cuts at Ramp Intersections
- Driveway Design
- Textural Audible, Vibrating, and Visual Cues at Crossings
- Surfaces

The following sections present summaries of the ADA design guidelines for each of these characteristics and illustrate existing issues found within Oceanside.

### Grades

There should be adequate sidewalk cross-slope to allow sufficient drainage and yet the cross-slope should not exceed 2 percent for ADA compliance.

Where grades are excessively long or steep, the City should provide level rest areas every 400 feet for the pedestrian to stop and rest. In areas where a rest area is impossible to accommodate, an alternative route should be provided.

As seen in the picture to the left, Oceanside Pier (built in 1987) contains some pedestrian features which are not up to current ADA or California Title 24 standards. The City of Oceanside should examine ways to incorporate current ADA design treatments to the Pier and ensure that all future developments at the Pier meets the current ADA standards.



*Older segments of the Oceanside Pier present challenges to disabled visitors*

### Walkways

Disabled individuals often lack the mobility necessary to navigate excessive obstructions in their path of travel, including utilities, signposts, news racks, or other impediments.

ADA Accessibility Guidelines for Buildings and Facilities state that the minimum clear width of an accessible route shall be 36 inches except at doors. However, current transportation industry guidelines generally exceed the 36-inch minimum and provide a minimum of 48 inches of unobstructed walkway. The minimum width should be expanded when there is either a vertical barrier fronting the walkway or a vehicle travel lane. If a walkway is less than 60 inches (5 feet) wide there shall be a 60 inch x 120 inch (5 feet x 10 feet) passing space every 200 feet of length along the walkway.



*The Oceanside Pier*

Oceanside is home to hundreds of miles of public walkways, and the large majority of them are free of obstacles. In constrained areas, measures should be taken to retrofit existing access challenges such as the one seen in the picture to the right, at the intersection of Oceanside Boulevard and Crouch Street, in a way that allows for freedom of movement and the accommodation of the disabled.

### Curb Ramps and Curb Cuts

Curb ramps create a transition between the raised sidewalk and the crosswalk at street grade. Curb ramps are necessary for people who use wheelchairs, scooters, or other mobility aides, but their presence benefits all pedestrians.

According to the ADA, ramps are defined as locations where the grade exceeds 5 percent, but may be a maximum ratio of 1:12 or 8.3 percent. The maximum rise for any single run should be 30 inches. Where grades exceed 5 percent, hand rails are required with the exception of curb ramps and some other special conditions.

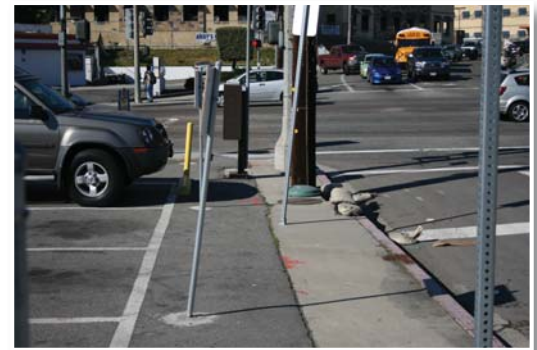
Two common curb ramp types exist in Oceanside: diagonal and perpendicular. ADA language dictates that wherever possible, curb ramps should align in the direction of crosswalks, with two ramps per corner at each intersection and at right angles to the curb, rather than having one diagonal curb ramp per corner. The majority of curb ramps found in Oceanside are diagonal.

Existing standards dictate perpendicular curb ramps are preferred for pedestrian safety because they align directly with the crosswalk, unlike diagonal crosswalks, which force wheelchair users and other pedestrians to travel a less direct route into the crosswalk.

However, perpendicular ramps take up more space, and in some cases are not feasible at a corner due to site conditions, drainage, or utilities. Often, a single diagonal curb ramp at the apex of the corner may be the only option.

At crossings, curb ramps or full cut-thrus 48 inches in width should be provided at channelization and pedestrian refuge islands. The installation of pedestrian bulb-outs should be considered in areas with a concentration of disabled pedestrians (such as senior living facilities) or other facilities in order to reduce crossing times and exposure to traffic. Bulbouts also allow extra maneuvering space for those in wheelchairs, as well as larger pedestrian ramps.

Crossings that are unusual or uncommon, such as at midblock locations, should receive additional attention to assist disabled pedestrians, such as tactile warning strips, truncated domes at ramp accesses, or audible signals.



*Constrained, poorly-designed path of travel*



*Examples of truncated domes at intersections*



*Higher contrast crosswalk materials and striping can be seen from a distance*

### Driveway Design

Driveway crossings permit cars to cross the sidewalk and enter the street. Driveway crossings can be both dangerous and inconvenient for pedestrians. Driveway curb cuts that extend into the through passage zone can present a tripping hazard to pedestrians or wheelchair users.

Driveway designs without level landings – ones that force sidewalk users to travel over the sidewalk flare – are not allowed under ADA guidelines; the maximum allowable cross slope is 2 percent. A design greater than a 2% change in cross slope, compromises balance and stability for people in wheelchairs and can also increase tripping hazards for pedestrians.



*Countdown timer and ADA-compliant pushbutton control*



### Pedestrian Crossings (Intersection or Mid-block)

To comply with ADA and California Title 24 language, the following conditions should be met:

Tactile cues should be used where crossings occur in an unexpected location. Wayfinding strips should extend between the expected and actual crossing location, while tactile bumps or grooves may be placed at either side of the crossing itself.

In areas with significant numbers of vision-impaired pedestrians, audible signals and Braille instructions at pushbuttons should be considered. Pedestrian pushbuttons should be installed at signalized intersections in accessible locations and located no higher than 36 inches on the support pole. In addition to these cues designed for visually impaired pedestrians, all pedestrians and drivers benefit from the use of countdown timers at intersections.

Since 2002, the use of truncated domes has become the predominant tactile cue in use at crossings and curb ramps throughout the region. There are few crossings in Oceanside that feature truncated domes, but Oceanside should continue to retrofit existing crossings with this beneficial design treatment.

### Surfaces

Not all pedestrians travel on paved surfaces, and not all disabled pedestrians can adapt to the challenges of uneven, loose, or difficult terrain. For maximum ADA compliance, all surfaces should be stable, firm, and slip-resistant.

In addition, surface treatments which include irregular surfaces such as cobblestone can be difficult to navigate and should be avoided within the primary walkway area. In paved areas prone to slippage, sand should be added to the paint or thermoplastic used at crosswalks to reduce the risk of slipping in both wet and dry conditions.

As the city continues to retrofit existing built environments, it would be desirable to examine ways to employ visually appealing yet ADA-compliant materials and designs to increase the mobility of disabled individuals.



*Example of slippery, unpaved path at transit stop*

### Solutions that Address Accessibility Issues

There are typical accessibility issues associated with the public right-of-way that requires pedestrian access and non-vehicular access. Figure 13 shows a summary of typical accessibility issues and Figure 14 provides a summary of solutions to address accessibility issues. The following photos depict solutions that have been implemented throughout Oceanside and other jurisdictions that can be utilized to resolve the identified accessibility issues in Oceanside.

Several solutions are suggested, but it remains the responsibility of the property owner or agency to make sure that all reasonable efforts have been made to make as much of the environment universally accessible as possible and that the intent and the letter of ADA and Title 24 regulations have been met.

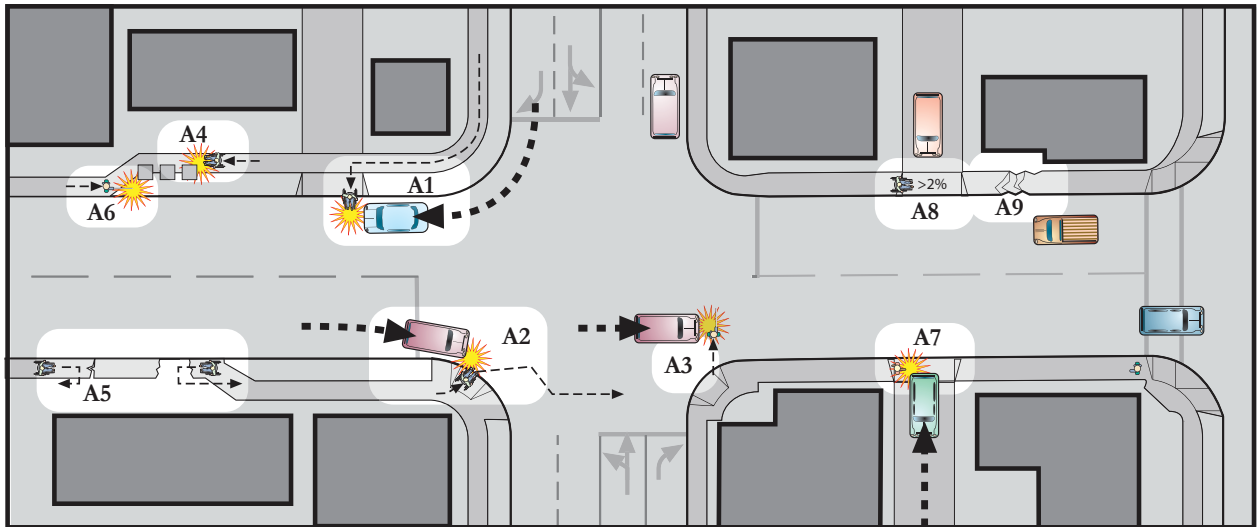
The PMP suggests that accessibility is second only to safety in terms of priority for projects and solutions to public issues faced by pedestrians. This plan also suggests that coordination of standards, guidelines, policies, field inspection and repair of facilities all need to take into account the importance and responsibility for creating an accessible public realm along the full travel route. Substantial savings can be accomplished when improvements are centered on combining the goals of pedestrian safety, accessibility, connectivity and walkability. New development and redevelopment are resolving a substantial percent of the non-compliant facilities. However, older neighborhoods, where redevelopment or infill development often only affects a small portion of the right-of-way, remains substantially out of conformance with no significant funding source to correct. It is imperative that all funds (public or private) spent on pedestrian improvements address the existing serious compliance issues and strive to make all portions of the walking environment accessible.

*This plan suggests that coordination of standards, guidelines, policies, field inspection and repair of facilities all need to take into account the importance and responsibility for creating an accessible public realm along the full travel route.*

Figure 13: Accessibility Issues

### Accessibility Issues

These tables and graphics are for illustrative purposes only and are not to be used for engineering analysis or design.



Issues	Potential Solutions (See legend*)
<b>A1 – Missing pedestrian ramps.</b> Pedestrians requiring the use of ramps for maneuverability may not be able to cross the street, or may be forced to travel in the street, increasing the risk of vehicular/pedestrian collision.	1A, 2A
<b>A2 – Pedestrian ramps do not meet standards.</b> Ramps that lack tactile indicators, or ramps that are constructed with steep running slopes, large gutter transitions or excessive cross slopes, decrease accessibility. Some intersections require two ramps per corner for safety and access.	2A, 3A, 4A, 6A, 7A
<b>A3 – Missing pedestrian signals.</b> Missing or non-accessible (height or location) pedestrian signals or signal actuators diminish maneuverability.	2A
<b>A4- Sidewalk obstacles.</b> Site furnishings, above-grade utilities and temporary construction fencing can create vertical clearance and protruding barriers.	3A, 4A
<b>A5 – Sidewalk gaps.</b> Missing sidewalk segments can make an entire route inaccessible for some pedestrians.	4A, also see 20S
<b>A6 – Inconsistent sidewalk design.</b> Meandering walkways or abrupt changes in the travel path can be difficult for the visually impaired to navigate.	4A
<b>A7 – Cross slopes.</b> Excessive cross slopes, often at driveways, can decrease accessibility.	5A
<b>A8 – Steep grades.</b> Excessive grades, often at intersections with alleys, can make maneuverability difficult.	6A
<b>A9 – Substandard walking surfaces.</b> Slick or uneven walking surfaces, or trip hazards, can make maneuverability difficult.	7A

Figure 14: Accessibility Solutions

<ul style="list-style-type: none"> <li>1A) Pedestrian ramps</li> <li>2A) Audible/visual crosswalk signals</li> <li>3A) Walkways and ramps free of damage or trip hazards</li> <li>4A) Pedestrian paths free of gaps, obstructions and barriers</li> <li>5A) Sidewalks with limited driveways and minimal cross-slope</li> <li>6A) Re-grade slope of walkway to meet ADA/Title 24 standards</li> <li>7A) Repair, slice or patch lifts on walking surfaces and re-set utilities boxes to flush</li> </ul>
---



1A) Typical Two Directional Curb Ramp (note: tactile strips and truncated domes needed but not shown). Photo credit: ITE Pedestrian Bike Council



2A) Pole mounted pedestrian signal actuator placed in accessible area next to the curb ramp. Photo credit: Michael Ronkin



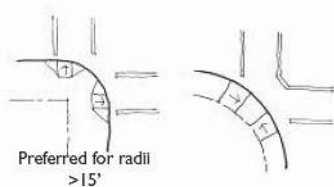
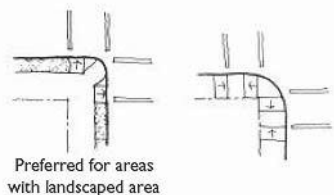
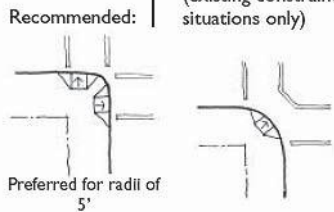
1A) Curb ramp meeting latest tactile strip and truncated dome requirements. Photo credit: Mike Singleton

1A) Apex ramps (single ramp on corner), should be avoided on high volume streets with travel lanes at the curb. Photo credit: Dan Burden



2A) Pedestrian actuator (Polara). Photo credit: ITE Pedestrian Bike Council

Not Recommended for New Construction: (existing constrained situations only)



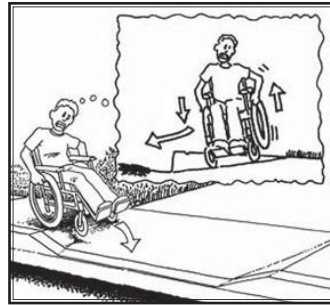
1A) Match the right ramp to the right circumstance. Source: Planning & Designing for Pedestrians, SANDAG, June 2002



2A) Accessible and audible crossing pedestrian heads are required on most major intersections in Oceanside. Audible signals do need to meet warrants. Photo credit: Dan Burden

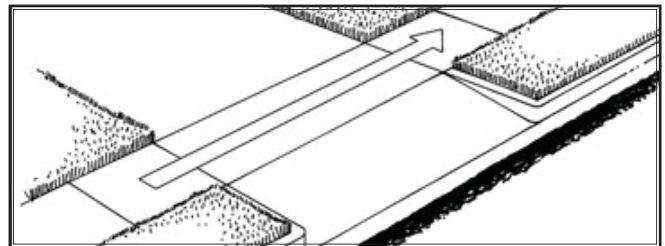


3A) Some of Oceanside's sidewalks are in disrepair and represent both trip hazards as well as accessibility issues. Shared cost programs to repair and replace damaged sidewalks do exist. Photo credit: Mike Singleton



5A) The cross slope and transition area for many driveways are excessive for those in wheel chairs or those with other walking disabilities.

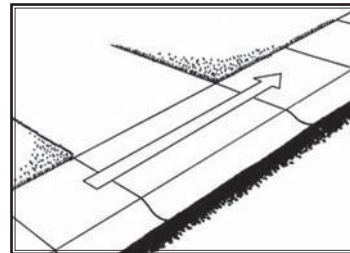
Illustration credit: Gail Payne



5A) A walkway separated from the curb with a parkway strip is the preferred solution. Illustration credit: Gail Payne

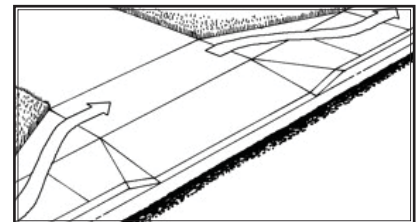


4A) Even though this project provided a wide walkway to start with, some equipment has been placed outside of the furnishing zone and in the throughway zone. Photo credit: Andy Hamilton



5A) A mountable curb can resolve existing situations. Illustration credit: Gail Payne

5A) A modified right of way can also solve the issue. Illustration credit: Gail Payne



6A) Re-grade slope of walkway to meet ADA / Title 24 standards where technically possible. Some exceptions exist such as when conformance would damage the natural or cultural environment. Illustration credit: Gail Payne



7A) Repair, slice or patch lifts on walk surfaces and/or reset ground level utility boxes to be flush. Photo credit: Mike Singleton

## 3.5 Alternative Transportation Goals

### Walking for Commuting

Alternative transportation and public transit are an important component of creating a walkable environment that encourages walking as a form of transportation, particularly for commuting to and from public transportation. North County Transit District (NCTD) provides the public transit service for the City of Oceanside which operates 12 bus routes within the city. NCTD operates the Sprinter Light Rail System which has seven stations in Oceanside. In addition, Amtrak, Coaster, and Metrolink also provide service to Oceanside at the Oceanside Transit Center station. The Oceanside Transit Center has the highest demand of all transit facilities in Oceanside, averaging over 6,000 boardings and alightings per day.

The city's alternative transportation goal reinforces walking as a primary means of transportation that supports transit and non-motorized transportation options. This section will highlight the existing Oceanside transit opportunities available and their walking environment, and look at opportunities to provide a more cohesive, interconnected walking environment to and from transit.

### Transit Stops and Ridership

The transit stops with high levels of pedestrian activity were determined by the daily boardings and alightings on the fixed transit routes that serve Oceanside. Table 10 on the following page, highlights the 20 busiest transit stops in Oceanside (2006 counts) and identifies any issues associated with the stops or accessibility to the stops.

In general, the highest ridership activity (both boardings and alightings) is centered around downtown Oceanside, particularly the Oceanside Transit Center and eastward along Mission Avenue (with stops at Nevada and Horne Streets) and west of Oceanside High School. This area has several hundred riders daily. Other locations with a high number of boardings include the Wal-Mart Shopping Center at College Boulevard and SR76, plus several stops north of SR76 along North River Road and El Camino Real, particularly at the intersection of North River Road and Douglas Drive.

In general, a well-designed transit stop should include a 5 foot by 8 foot concrete pad to enable wheelchair boardings plus seating and shelter. The majority of the high-volume bus stops include the recommended transit stop amenities. However, there were some stops that had accessibility issues such as inadequate or missing sidewalk segments leading to the transit stop or the stop had inadequate concrete resting areas or little to no amenities. Often the stops with minimum amenities corresponded with areas of low transit ridership.

While each of the NCTD Sprinter stations in Oceanside are compliant with existing federal and state regulations governing disabled access, there are several stations within the system that should incorporate surrounding land uses better. Better land use integration with the Sprinter stations should be considered with the revitalization of Oceanside Boulevard and other development projects located near the stations. One improvement would be to provide additional directional signage at the stations directing passengers to bus loading zones and adjacent streets that are not visible due to parking or commercial businesses. In addition, providing a mixed land use, medium to high density environment will support increased transit ridership.

*The 12 bus routes, the Sprinter Light Rail system, Amtrak, Coaster, and Metrolink, make Oceanside an ideal place to advocate walking as a form of transportation.*

*The highest ridership activity is centered around downtown Oceanside, particularly the Oceanside Transit Center and eastward along Mission Avenue.*

**Table 10: Highest Volume Transit Stops in Oceanside (cont. on next page)**

<b>Stop Location</b>	<b>Total Daily Boardings</b>	<b>Total Daily Alightings</b>	<b>Total Daily Passengers</b>	<b>Access Issues Identified</b>
Oceanside Transit Center	3,301	3,022	6,323	Lack of available seating during peak periods, confusing pavement markings
SR76 & College Blvd. (Wal-Mart)	750	655	1,405	Congestion, high traffic volumes
Mission Ave. & N. Nevada St.	288	273	561	Several commercial driveways
N. El Camino Real & Los Arbolitos Blvd.	212	282	494	None Found
North River Rd. & Douglas Dr.	235	234	469	None Found
Mission Ave. & Canyon Dr.	229	170	399	None Found
Mira Costa College	203	168	371	None Found
Mission Ave. & El Camino Real	237	133	370	Transit "island" requires riders to wait in street ROW
Oceanside High School	112	249	361	None Found
Oceanside Blvd. & Coast Highway	179	177	356	None Found
North River Rd. & Calle Montecito	164	148	312	Sidewalk gaps along north side of North River Rd.
S. El Camino Real & Mesa Dr.	141	164	305	Sidewalk gaps along east side of El Camino Real
Mission Ave. & Carey Rd.	90	154	244	None Found
Mission Ave. & Brooks St.	146	90	236	None Found
Mission Ave. & Airport Rd.	116	114	230	Sidewalk gaps along south side of Mission Ave.

A successful public transportation system is reliant upon a walkable, pedestrian friendly environment. The issues and solutions identified surrounding alternative transportation are often the same issues and solutions identified with safety, accessibility, connectivity, and walkability. By identifying and providing solutions to achieve these goals, walking as a form of transportation by itself or in conjunction with public transportation is greatly enhanced for the pedestrian. Issues related to public transportation that can be resolved are identified in the list of priority projects in Section 6.0 of this report.

*Table 10: Highest Volume Transit Stops in Oceanside (cont.)*

<b>Stop Location</b>	<b>Total Daily Boardings</b>	<b>Total Daily Alightings</b>	<b>Total Daily Passengers</b>	<b>Access Issues Identified</b>
North River Rd & Avenida Descanso	99	110	209	Sidewalk gaps along south side of North River Rd.
S. El Camino Real & Vista Way	112	92	204	Congestion, high traffic volumes, slope
Waring Rd. & Thunder Dr.	98	96	194	None Found
Mission Ave. & San Diego St.	83	109	192	None Found
Vandegrift Blvd. between E Parker St. & Castellano Way	113	76	189	None Found

*Walkable communities, and the elements that make an area walkable, often lead to more satisfaction in neighborhood quality.*

### 3.6 Neighborhood Quality Goals

Though not a primary issue and solution topic, neighborhood quality is often the result of a variety of environmental and social elements that have been brought together to create a quality living and working environment. If a public environment has been provided that is safe, accessible, connected and walkable, a quality neighborhood is almost assured.

Research has demonstrated a link between the physical environment and the degree of social interaction in a community (and social interactions correlate with better health status). Streets and neighborhoods that promote pedestrian activity provide opportunities for the development of social networks. The physical environment of neighborhoods is also known to correlate with the incidence and/or fear of crime and violence. Certain building designs, the presence of trees and green space, good street lighting and community gathering places are all known to provide residents with a greater sense of security and to serve as an actual deterrent to crime and violence. People like places that are more than just walkable, as pedestrians they also enjoy places that are more “stayable,” “lingerable,” “standable,” and “sittable”.

### 3.7 Funding Goals and Issues

A final goal of this PMP is to assure cost-effective investment of private and public money for infrastructure needed to support a walkable community. Other sections of the plan (Chapters 5 and 6) address the goals of cost-effective investments and prioritization processes.

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### 4.0 Route Classifications

Different areas require differing levels of pedestrian improvements based upon adjacent roadways, levels of use, topography and land uses. This chapter defines some of the walkway classifications and the corresponding levels of treatment that each type warrants.

*All walkway facilities in Oceanside can be classified into one of seven types.*

### 4.1 Types Defined

All walking facilities found within Oceanside fit into one of the following categories of walking facilities (see Table 11 and Figure 14 a through 14g).

Table 11: Route Types Defined

ROUTE TYPE:	1. District Sidewalks	2. Corridor Sidewalks	3. Connector Sidewalks	4. Neighborhood Sidewalks	5. Ancillary Pedestrian Facilities	6. Path	7. Trail (Included for Reference Only, not a Focus of this Plan)
<b>Purpose</b>	Sidewalks Along Roads that Support Heavy Pedestrian Levels in Mixed-use Concentrated Urban Areas	Sidewalks Along Roads that Support Moderate Density Business & Shopping Districts with Moderate Pedestrian Levels	Sidewalks Along Roads that Support Institutional, Industrial or Business Complexes with Limited Lateral Access & Low Pedestrian Levels	Sidewalks Along Roads that Support Low to Moderate Density Housing with Low to Moderate Pedestrian Levels	Facilities Away or Crossing Over Streets such as Plazas, Paseos, Promenades, Courtyards or Pedestrian Bridges & Stairways	Walkways and Paved Paths that are not Adjacent to Roads that Support Recreational and Transportation Purposes	Unpaved Walk Not Adjacent to Roads Used for Recreational Purposes
<b>Typical Adjacent "Street Design Manual" Classifications</b>	All types of adjacent streets are possible	Commercial, Urban Collector, Urban Major & Arterial	Commercial, Industrial, Urban Major, Rural Collector & Arterial	Rural, Low Volume Residential, Residential Local & Sub-collector	Not associated with a street	Not associated with a street	Not associated with a street
<b>Cross Reference to Related "Strategic Framework Plan" Definitions</b>	Existing: Regional Centers, Urban Villages & Neighborhood Villages	Existing: Sub-regional Districts and Transit Corridors	Existing: Sub-regional Districts, Transit Corridors, & Suburban Residential along Major Arterials	All other Residential Areas not Classified under the Strategic Framework Plan	Most common in Regional Centers, Urban or Neighborhood Villages but can be in any area	Can occur in any area, but most often found in Recreation, Tourist or Open Space Areas	Can occur in any area, but most often found in Recreation or Open Space Areas
<b>Typical Adjacent Land Uses</b>	Mixed-use Housing, Commercial, Office & Entertainment with Urban Densities	Multiple Land Uses but may be Separated. Often Strip Commercial or Office Complex.	Open Space, Industrial Uses, Institutional Uses or other Pedestrian Restricted Uses	Single-family and Moderate Density Multi-Family with Limited Supporting Neighborhood Commercial	Adjacent Land Uses Vary	Adjacent Uses Vary, Often Recreational or Open Space or Housing	Open Space, Parks and Natural Areas

*A district route includes sidewalks in the more intensive mixed use and concentrated areas of the city.*

*A corridor sidewalk is associated with major arterials and linear corridors that provide for mixed uses with at least a moderate level of density.*

*A connector sidewalk is often along a lower density corridor with few connections to adjacent land uses.*

*A neighborhood sidewalk is limited to areas of lower density and single use residential areas.*

### **District Sidewalks**

District Sidewalks, labeled as Route Type 1, are sidewalks along roads that support heavy pedestrian levels in mixed-use concentrated urban areas. Usually, the district is an urbanized area with special functions, such as theater districts, office parks, shopping centers, or college campuses. The district may be adjacent to neighborhoods, but can be distinguished from neighborhood streets by looking at adjacent land uses, densities and urban form. It has an identifiable focus that provides orientation and character, and reinforces a sense of community among users by encouraging walking.

### **Corridor Sidewalks**

Corridor sidewalks, labeled as Route Type 2, are defined as sidewalks along roads that support moderate density business and shopping districts with moderate pedestrian levels. They can range from wide sidewalks along boulevards to small sidewalks along a heavily auto oriented roadway. They may connect moderate to high density residential areas, but only if they are located along major arterials.

### **Connector Sidewalks**

Connector sidewalks, labeled as Route Type 3, tend to have low pedestrian levels and are along roads with moderate to high average vehicular traffic. Connector sidewalks tend to be long and, in some cases, do not have accessible land uses directly adjacent to the sidewalk. This can include sidewalks along major arterials that run parallel to open space and canyon lands. Often, they are along land uses that require buffering from the street noise, resulting in noise walls that further isolate the pedestrian from the adjacent land uses.

These sidewalks have limited pedestrian use levels typically due to their remoteness and lack of nearby destinations. Often they lead to nowhere, with the sidewalk stopping a distance away from other uses. For pedestrians, neighborhood streets are less difficult to cross and result in less pedestrian collisions than higher traffic streets. This is partially due to lower speed limits typically where topography restricts the width of the road or where a development ends its improvements. Even though they have limited use, they are often along high speed streets. Without the existence of these walkways, the pedestrian may be forced to walk in a high speed and high volume street.

### **Neighborhood Sidewalks**

Neighborhood sidewalks, labeled as Route Type 4, are sidewalks along roads that support low to moderate density housing with low to moderate pedestrian levels. Neighborhood streets and their associated walkways are generally lower volume streets, with low to moderate widths, single lanes in each direction and posted speed limits of 25 miles per hour. They are not as difficult to cross as a pedestrian and pedestrian collisions occur less frequently because the driver has ample time to see, react and brake. However, excessive speeding does occur on these streets, and often physical design cannot address carelessness of drivers.

### **Ancillary Pedestrian Facilities**

Route Type 5, Ancillary Pedestrian Facilities, are facilities away from or crossing over streets such as plazas, paseos, promenades, courtyards or pedestrian bridges and stairways. Many of these ancillary facilities attract local residents and workers, generating moderate to high pedestrian use.

### **Paths**

Route Type 6, Paths, are paved facilities with exclusive right-of-ways that act as corridors and have little or no vehicular cross flows. Many of these paths are exclusive to pedestrians and bicycles and are not associated with streets. Paths as defined by the Pedestrian Master Plan, are often associated with recreational uses. Many of these paths can be found in parks, near open space preserves and away from streets in residential areas. They are defined in this plan as being paved, away from a street edge and not shared with vehicles (except for emergency or maintenance vehicles). They are often shared with runners, skaters, cyclists and other recreational users.

### **Trails**

Unpaved walkways or roads used for recreational use or open space maintenance are classified as Trails, Route Type 7. Trails are separated from roads and support activities such as hiking, biking and walking primarily through parks and open space. They differ from paths in that they are not paved with concrete or asphalt. Only authorized vehicles are permitted to access these trails, which in many cases are not ADA-compliant.

*A variety of special use facilities that do not fit the above definitions can be classified as ancillary. These are often away from street edges.*

*A path is a linear hard surface that is not connected to the edge of a street.*

*A trail is unpaved and is not a focus of this plan.*

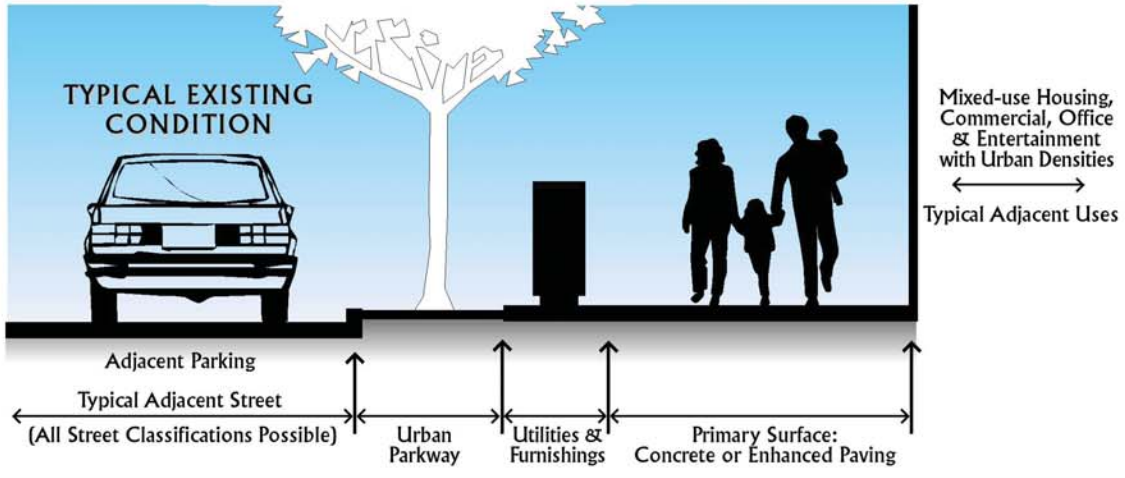
Figure 14a: Route Type 1

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 1: District Sidewalks



Sidewalks Along Roads that Support Heavy Pedestrian Levels in Mixed-use Concentrated Urban Areas



Sidewalk with furnishing and frontage zones



Sidewalk with street trees and enhanced paving



Sidewalk with outdoor cafes



Sidewalk with wide clear paths in a business district

### EXAMPLE LOCATIONS

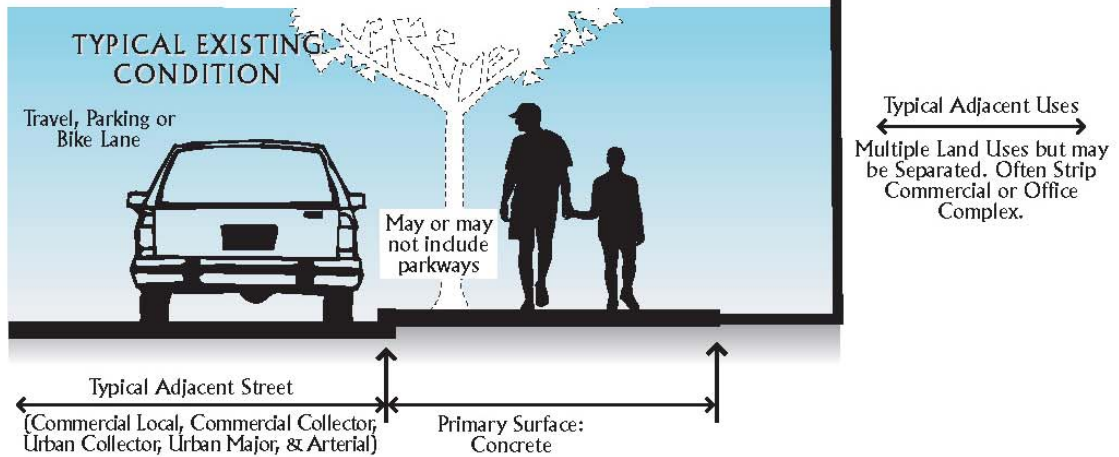
Figure 14b: Route Type 2

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 2: Corridor Sidewalks



Sidewalks Along Roads that Support Moderate Density Business and Shopping Districts with Moderate Pedestrian Levels



Sidewalk at curb on Mission Avenue near high school and strip commercial complex



Sidewalks with street trees supporting adjacent businesses along Coast Highway



Smaller scale sidewalk with street trees



Typical commercial district with supporting sidewalks

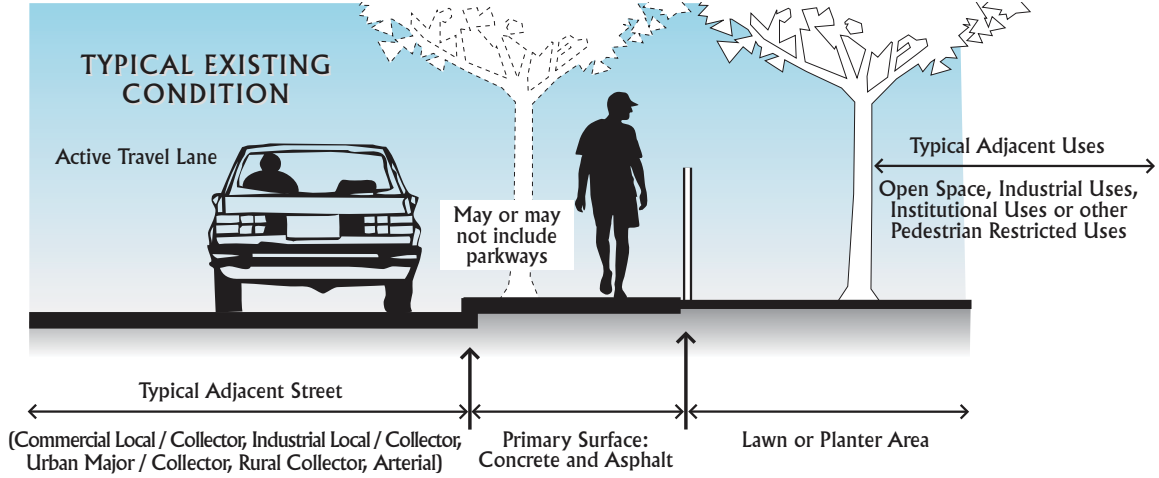
### EXAMPLE LOCATIONS

Figure 14c: Route Type 3

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 3: Connector Sidewalks

Sidewalks Along Roads that Support Institutional, Industrial or Business Complexes with Limited Lateral Access and Low Pedestrian Levels



Street with sidewalk connection over Interstate 5



Sidewalk connection under Interstate 5



Connector sidewalk through residential area



Though in a residential area, there are no connections to adjacent land uses

### EXAMPLE LOCATIONS

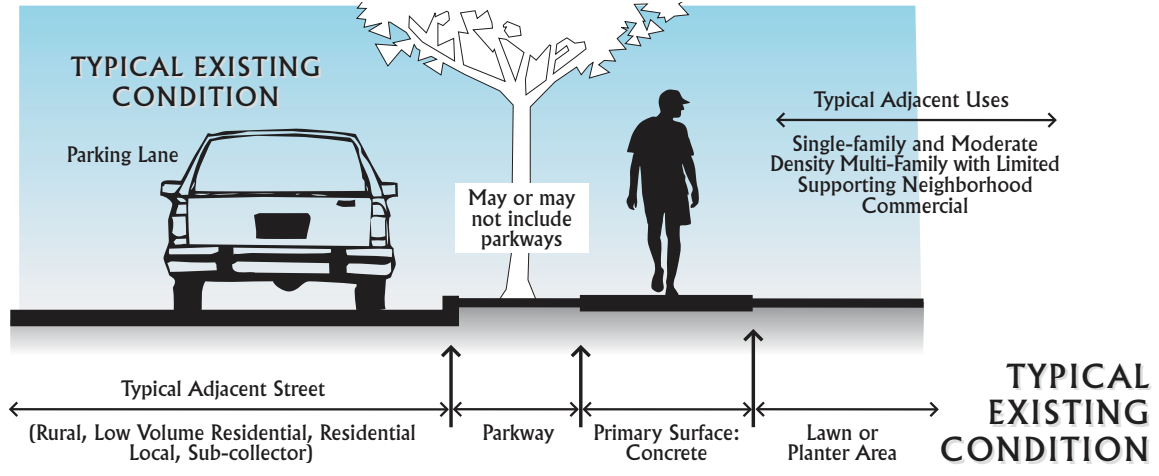
Figure 14d: Route Type 4

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 4: Neighborhood Sidewalk



Sidewalks Along Roads that Support Low to Moderate Density Housing with Low to Moderate Pedestrian Levels



Sidewalk and parkway near downtown



Sidewalk with wide driveways



Sidewalk with parkway



Sidewalk without parkway in older neighborhood

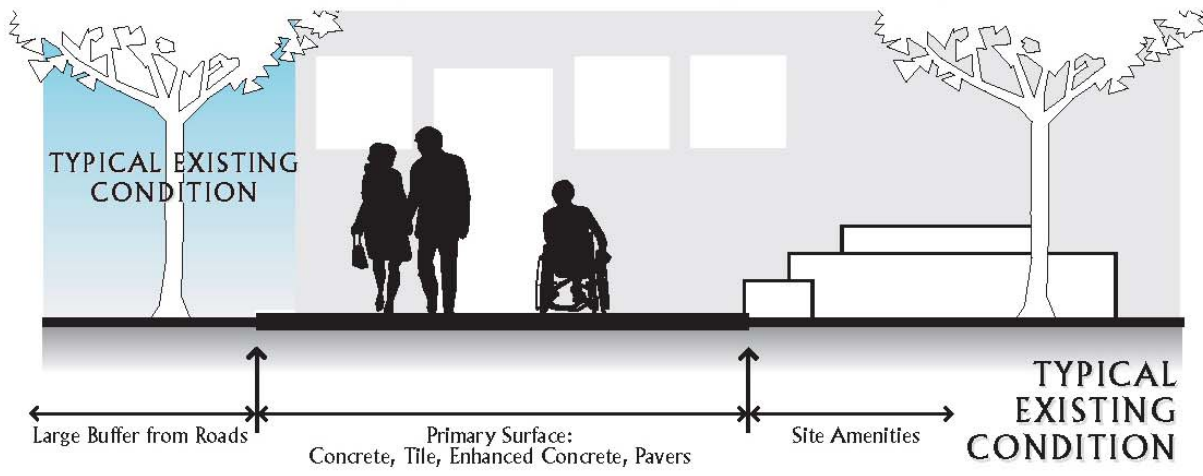
### EXAMPLE LOCATIONS

Figure 14e: Route Type 5

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 5: Ancillary Pedestrian Facilities

Facilities Away From or Crossing Over Streets such as Plazas, Paseos, Promenades, Courtyards or Pedestrian Bridges and Stairways



Oceanside Pier



Pedestrian undercrossing at Pierview Way



Oceanside Civic Plaza



Oceanside Transit Station & Plaza

### EXAMPLE LOCATIONS

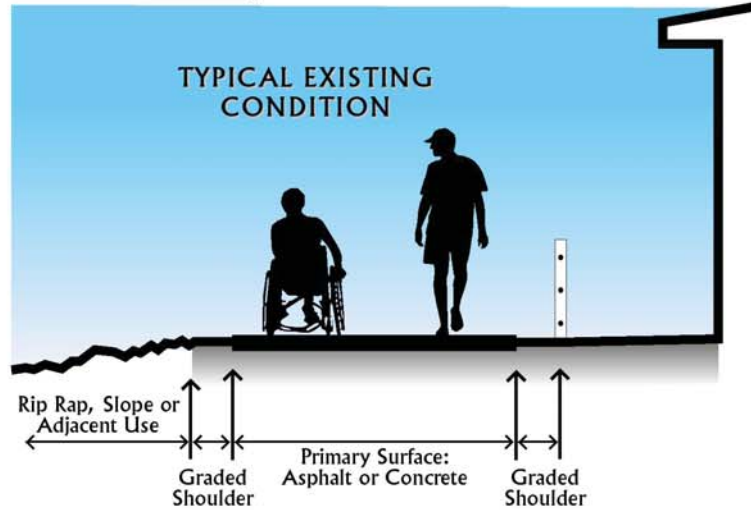
Figure 14f: Route Type 6

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 6: Multi-use Pathways



Walkways and Paved Paths not Adjacent to Roads that Support Recreational and Transportation Uses



Multi-use path along Myers Street



Coastal path along beach



San Luis Rey River Trail by I-5



San Luis Rey River Trail by Douglas Drive

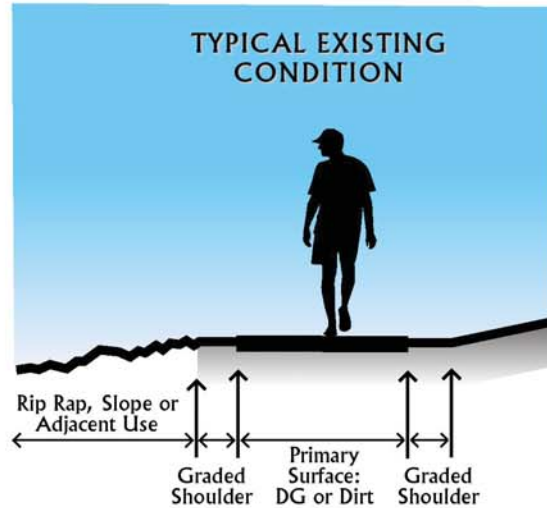
### EXAMPLE LOCATIONS

Figure 14g: Route Type 7

# OCEANSIDE PEDESTRIAN MASTER PLAN

## Route Type 7: Walking or Hiking Trail

Unpaved Walk Not Adjacent to Roads, Used for Recreational Purposes



Dirt road/trail



Narrow trail



North side of the San Luis Rey River Trail



North side of the San Luis Rey River Trail by Douglas Drive

### EXAMPLE LOCATIONS

## 4.2 Route Types Found in Oceanside

Figure 15 shows a summary of route types found throughout the city based on GIS analysis of available data for adjacent land use, street classification, ADT and speed. Connectors were also determined based on known adjacent conditions. Corridor and District streets utilized similar data to determine their extent. However, many factors can affect the classification of route types. This study was not able to conduct city-wide field work to verify the actual on-site conditions of all walkways. Therefore, the map should only be used to indicate the relative extent of these different route types.

## 4.3 Treatment Levels

There should be flexibility in the specific conditions of any pedestrian facility; different route types deserve different treatments.

Table 12 describes four treatment levels ranging from intensive (and expensive) treatments, to basic and inexpensive treatments for pedestrian facilities. Each of the treatment levels indicates the types of special circumstances that, if present, may warrant increasing the treatment up to the next level.

Table 12 also summarizes all of the pedestrian facilities, techniques, and enhancements that could be used in any particular area. Table 12 and the described treatment levels have been created to help guide the appropriate use of treatments and public funding.

A major premise of the “Basic Level” is that it is the minimum level that should be provided in all circumstances. In the case of certain neighborhoods and along certain connector streets, this “Basic Level” is adequate to provide the minimum level of safety, connectivity, access, and walkability.

In other areas, however, the “Basic Level” may not be enough to assure safety and walkability. In certain areas, the presence of major roadways and other detractors from pedestrian activity require a much higher level and expense associated with pedestrian treatments. In these situations, an “Enhanced Level” is recommended.

In yet other areas, the urban densities and design requirements and the presence of certain safety issues require a “Premium Level” to meet safety, connectivity, accessibility, and walkability minimums. Pedestrian amenities and proper design of facilities is required throughout the city; however, the intensity of these amenities and design treatments would be at the highest level under the “Premium Level” of treatment.

Please refer to the previous chapter for these issues and potential solutions provided by Table 12. Though this guidance has been provided, it should remain the responsibility of Development Services Departments which includes planning, engineering and building divisions to determine which of these treatments are appropriate for specific areas or issues.

*Treatment levels range from Basic to Enhanced to Premium levels and are based on the area's mixture of land uses, types of destinations, and roadway classifications.*

Figure 15: Route Types Map

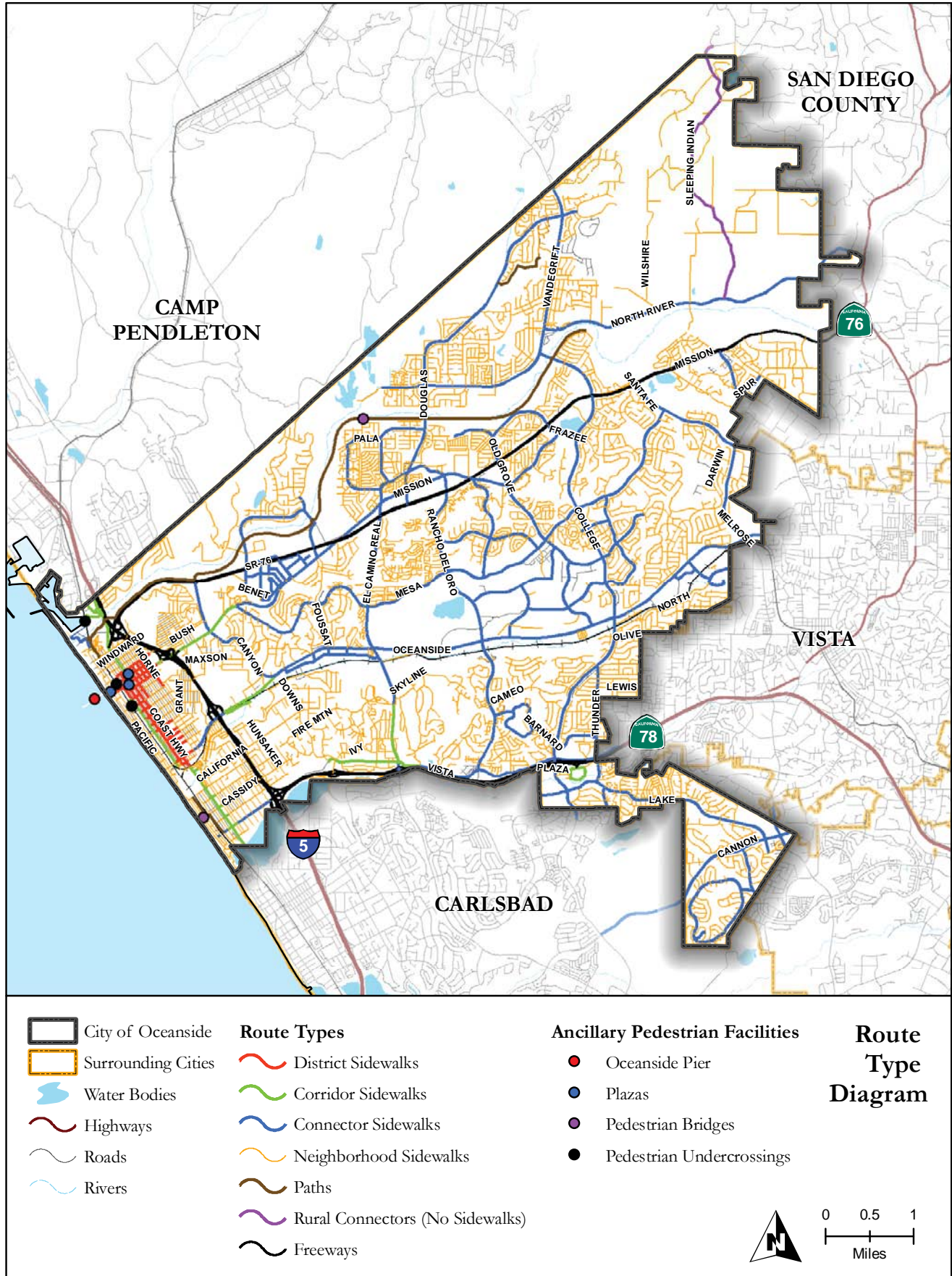


Table 12: Treatment Levels and Potential Improvements

TREATMENT LEVEL:	Treatment Level 1 "Premium" Walkway Improvements	Treatment Level 2 "Enhanced" Walkway Improvements	Treatment Level 3 "Basic" Walkway Improvements	Treatment Level 4 "Special Use" Walkway Improvements
Route Types Receiving These Treatment Levels (Unless Special Circumstances Exist*)	District Route Type / Special Pedestrian Zone	Corridor Route Type	Connector and Neighborhood Route Type	Path & Ancillary Route Types
*Special Circumstances that Warrant a Higher Treatment Level than Normal. Requirements in Each Column would Increase to the Column on its Left	Already Uses Highest Treatment Level	If within 1/4 mile of Transit/ School/ Ped. High Use/ Major Arterial	If within 1/4 mile of Transit/ School/ Maj. Commercial Facilities/ Maj. Arterials	Case-by-Case Basis
<b>Provide Accessible Facilities Such As:</b>				
1A) Curb ramps	!	!	!	?
2A) Audible/visual crosswalk signals	!	!	?	?
3A) Walkways & ramps free of damage or trip hazards	!	!	!	4
4A) Pedestrian paths free of obstructions and barriers	!	!	!	4
5A) Sidewalks with limited driveways and minimal cross-slope	!	4	4	4
6A) Re-grade slope of walkway to meet ADA / Title 24 standards	?	?	?	?
7A) Repair, slice or patch lifts on walk surfaces or reset utility boxes to be flush	?	?	?	?
<b>Provide Safety Features Such As:</b>				
1S) Median refuges (a safe place to stand in the street)	!	✓	-	-
2S) Pedestrian popouts (curb / sidewalk extensions into street)	✓	✓	-	-
3S) High visibility crosswalk striping	!	✓	-	?
4S) Raised crosswalks or special paving materials to denote crosswalks	✓	✓	-	?
5S) Advance stop bars at least 15 feet from crosswalk	✓	✓	-	?
6S) Radar Speed Monitor & Display	?	?	?	?
7S) Reduced curb radii	✓	✓	✓	-
8S) Early pedestrian start at crossing signal (Lead Pedestrian Interval)	✓	?	-	?
9S) No Turn on Red at Intersection	?	?	?	?
10S) Mid-block crosswalks with ped. flashers but no traffic control	-	-	✓	-
11S) Automatic pedestrian detection & signal control	✓	-	-	?
12S) Mid-block crossing with signs, median or curb ext. & flashing lights in road	?	?	-	?
13S) Mid-block crosswalks with ped. actuated traffic control device	✓	?	-	-
14S) 1-Lane Mid-block with high contrast crossings, signs & center lane marker	?	?	✓	?
15S) Parkway planting for buffer between sidewalk and cars	!	!	✓	?
16S) On-street parking for buffer between sidewalk and cars	!	✓	✓	-
17S) Adequate levels of pedestrian lighting	!	!	✓	✓
18S) Various traffic calming measures	✓	✓	✓	-
19S) Enforcement, education or encouragement solutions	?	?	?	?
20S) Missing sidewalks added or provide adeq. walk width clear of obstructions	?	?	?	?
<b>Improve Walkability by Providing:</b>				
1W) Above minimum walkway widths (> 5')	!	✓	?	?
2W) Trees that provide shade on walkways	!	!	✓	✓
3W) Street furnishings for comfort and enjoyment	!	✓	?	✓
4W) Countdown display crosswalk signals	✓	?	?	-
5W) Traffic control for crossings such as traffic signals or "All way stops"	!	✓	✓	✓
6W) Pedestrian scrambles (cross all directions of street)	?	-	-	?
<b>Ensure Connectivity by Adding:</b>				
1C) Missing sidewalk segments in areas where sidewalks mostly exist	!	!	✓	✓
2c) Missing sidewalks in areas where no sidewalks exist at all	!	✓	?	✓
3C) Connection pathways between streets	!	✓	✓	✓
4C) Narrow street widths or adding features to narrow for pedestrians	!	✓	✓	✓
5C) Destinations within walking distance of origins	!	✓	✓	✓
6C) Pedestrian bridges that avoid excessive ramp lengths	?	-	-	?
7C) Pedestrian crossing opportunities for all sides (legs) of an intersection	!	✓	✓	-
8C) Verify that pedestrian distances between land uses are reasonable & direct	?	?	?	?

LEGEND (!"= required, "✓" = suggested, "?=" suggested if conditions or standards met & "-" = not applicable)

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**5.0 Pedestrian Model**

Not all potential pedestrian improvements are as critical as others. With limited funding, an effort is needed in order to prioritize the investment of public money for the benefit of improvements in the public right-of-way. This chapter discusses the methodology and results of the pedestrian modeling effort.

*Limited funding requires prioritizing investments.*

**5.1 Model Overview**

The Pedestrian Priority Model (PPM) was developed to determine the most likely areas within the City of Oceanside where pedestrians are likely to be, either currently or if improvements were made. The model was created to prioritize areas and projects in order to affect the largest number of pedestrians possible. The PPM identifies existing and potential pedestrian activity areas citywide. The model utilizes existing data available city-wide as part of an extensive GIS database.

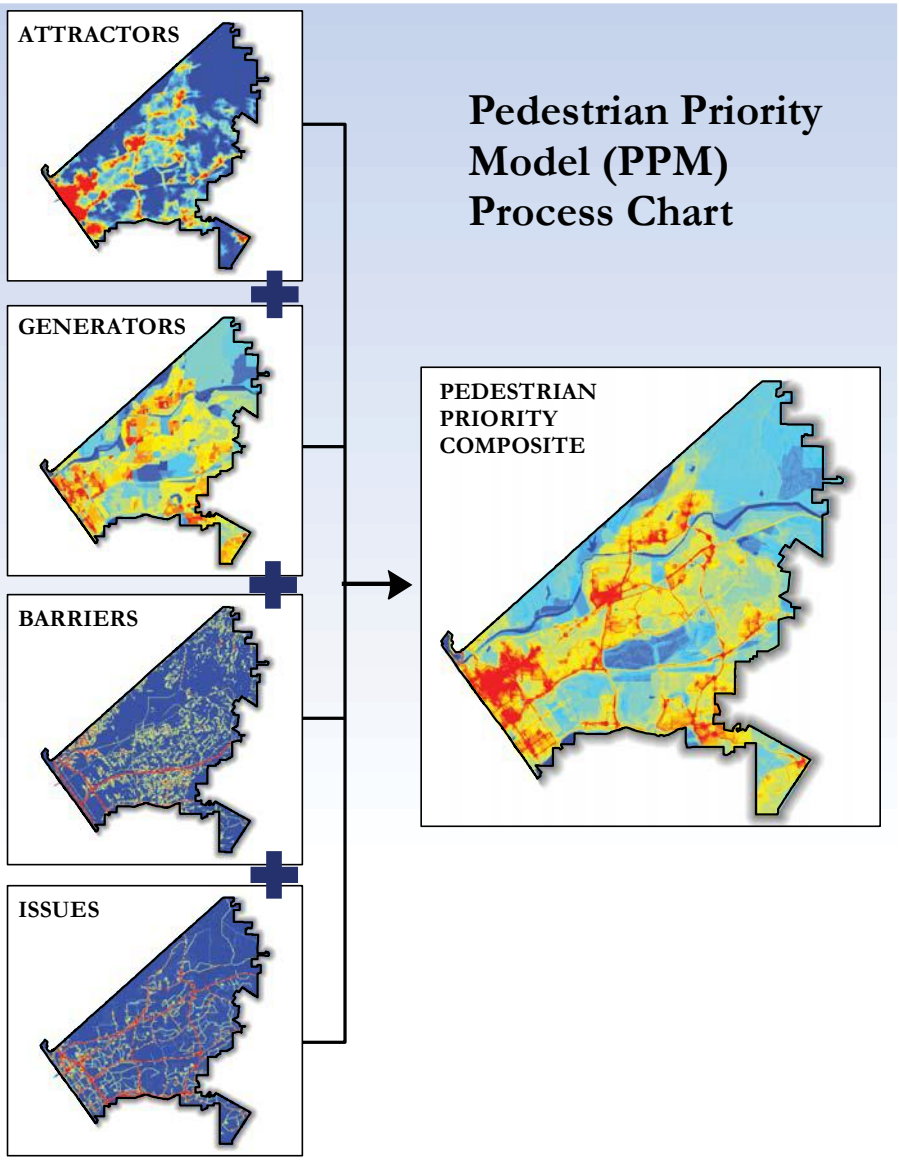
**5.2 Pedestrian Priority Model Description**

The model has four basic models which include:

- Attractor Model
- Generator Model
- Barrier Model
- Issues Model

When these four interim models are combined, they create the Pedestrian Priority Model (See Figure 16, Pedestrian Priority Model (PPM) Process Chart). The city is divided into a grid of cells that represents 11,500 square feet (107 x 107 feet cell size). This cell size was chosen to match existing digital elevation models already in the database and to capture the best detail possible in relation to the overall scale of the datasets and geographic size of the City of Oceanside.

*Figure 16: Pedestrian Priority Model Process Chart*



*A point system was developed to classify geographic areas and to recognize the importance of walking distance around generators and attractors. A simple mathematical weighting system was used to prioritize certain factors above other less important factors.*

The model identifies the characteristics of each particular area in geographic space and assigns a numeric value for each of these characteristics. The score per area is then added to create a ranking for that particular area in geographic space.

**Pedestrian Attractors**

The PPM identifies activity areas by utilizing pedestrian-related geographic features that area likely to attract pedestrians. See Table 13 for the features used in the Attractor Model. The following lists the variables that went into the Attractor Model.

- a. The seven features that were used are:
  - 1. Schools
  - 2. Parks and recreation facilities including beaches
  - 3. Neighborhood and community retail
  - 4. Neighborhood and community serving destinations (post offices, libraries, etc)
  - 5. Transit stations and stops
  - 6. Major attractions (the Oceanside Pier, Strand and Harbor)
  - 7. Future Projects
- b. Points were assigned to several categories in each feature type, recognizing certain features were more likely to attract pedestrians than other features.
- c. Once identified, network buffers were applied to each location using the GIS street database to simulate the actual street network and to get an accurate distinction of walking patterns. Each network buffer increases in distance from the features center point.
- d. Weighted distance values were assigned to each buffer. For example, a 1/8-mile network buffer is assigned a higher value than a 1/2-mile network buffer, since more people are likely to walk 1/8 of a mile than 1/2 of a mile.

**Table 13: Attractor Factors and Scoring**

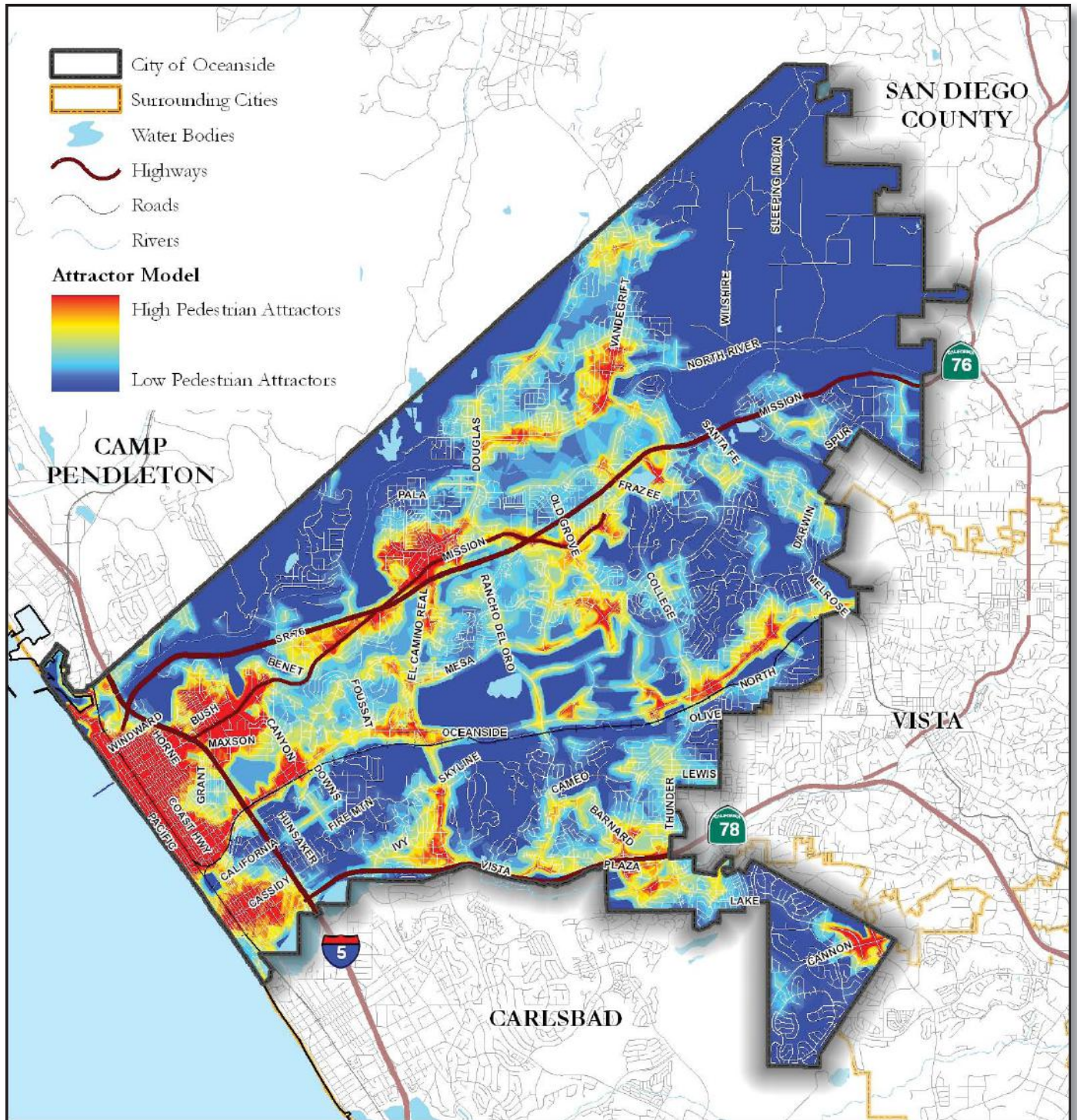
Pedestrian Attractors	Points	Weighted Multiplier	Final Score
Oceanside Pier, Strand and Harbor	5	1	5
Major Transit Stops (>250 boardings and alightings per day)	4		4
Beach Access	4		4
Transit Stops (<250 boardings and alightings per day)	3		3
Elementary Schools (Including Private)	3		3
Future Projects	3		3
Neighborhood Civic Facilities (Libraries, Post Office & Religious Facilities)	2		2
Middle Schools	2		2
Neighborhood and Community Retail	2		2
High Schools	1		1
Parks and Recreation (excludes non-useable open space)	1		1

Weighting Values Based on Distance to Attractor			
1/8 Mile	1.5	1	1.5
1/4 Mile	1		1
1/3 Mile	0.75		0.75
1/2 Mile	0.5		0.5

- e. The values assigned to each feature type were multiplied by the weighted distance values for each network buffer. For example, if major transit stops were given a value of 4, elementary schools a value of three, then a major transit stop with a 1/2-mile network buffer would have the same multiple weighted value as an elementary school with a 1/8-mile network buffer.
- f. Each of the individual buffered feature types with their multiplied weighted values were overlaid on the city-wide cell grid.
- g. Within each cell, the features points were multiplied by the weighted values and then added to the other feature point scores with a resulting total attractor value assigned to the cell.
- h. The areas that have high concentrations of cells with high values were identified. These high concentration areas identify existing and potential high pedestrian activity areas with known barriers throughout the city. The results of the Attractor Model are shown in Figure 17.

Figure 17: Attractor Map



### Pedestrian Generators

The Pedestrian Priority Model also utilizes demographic data as indicators of the potential volume of pedestrians based on how many people live or work within the pedestrian activity areas identified in the Attractor Model. This particular model is called the Generator Model. Existing and projected total population and employment were used as well as other

**Table 14: Generator Factors and Scoring**

Pedestrian Generators	Points	Weighted Multiplier	Final Score
<b>Census Mobility: People who walk to work per acre</b>			
> .2	2	2	4
< .2	1		2
<b>Population Density (People per acre)</b>			
> 25	3	2	6
5 - 25	2		4
1 - 5	1		2
<b>Employment Density (Employees per acre)</b>			
> 15	3	2	6
5 - 15	2		4
1 - 5	1		2
<b>2020 Population Density (People per acre)</b>			
> 25	3	2	6
5 - 25	2		4
1 - 5	1		2
<b>2020 Employment Density (Employees per acre)</b>			
> 15	3	2	6
5 - 15	2		4
1 - 5	1		2
<b>Age Density: Senior Citizens per acre (65 years old &amp; over)</b>			
> 2	3	2	6
1 - 2	2		4
< 1	1		2
<b>Household Income (Affects Transportation Options)*</b>			
< \$34,500	3	1	3
\$34,500 - \$63,400	2		2
> \$63,400	1		1
<b>Age Density: Children per acre (under 16 years old)</b>			
> 2	3	1	3
1 - 2	2		2
< 1	1		1
<b>Disability Density: People with disabilities per acre</b>			
> 5	3	1	3
1 - 5	2		2
< 1	1		1
<b>Smart Growth Areas (SANDAG)</b>			
Adopted Smart Growth Area	3	1	3
Mixed Transit Corridor	2		2
Community Centers	1		1

\*Based on 2005 SD Housing Comm. & US Dept. of Housing & Urban Development (2/11/05)

demographic data such as age, income and disabilities. Pedestrian activity areas that contain a greater number of people living or working within them were more likely to have more people walking. The model uses SANDAG defined pseudo Census blocks called Major Geographic Reference Areas (MGRA) citywide and U.S. Census Bureau Census Block Groups. SANDAG Smart Growth Areas were also used to determine areas of potential development that could have high pedestrian activity due to their mixed land use criteria.

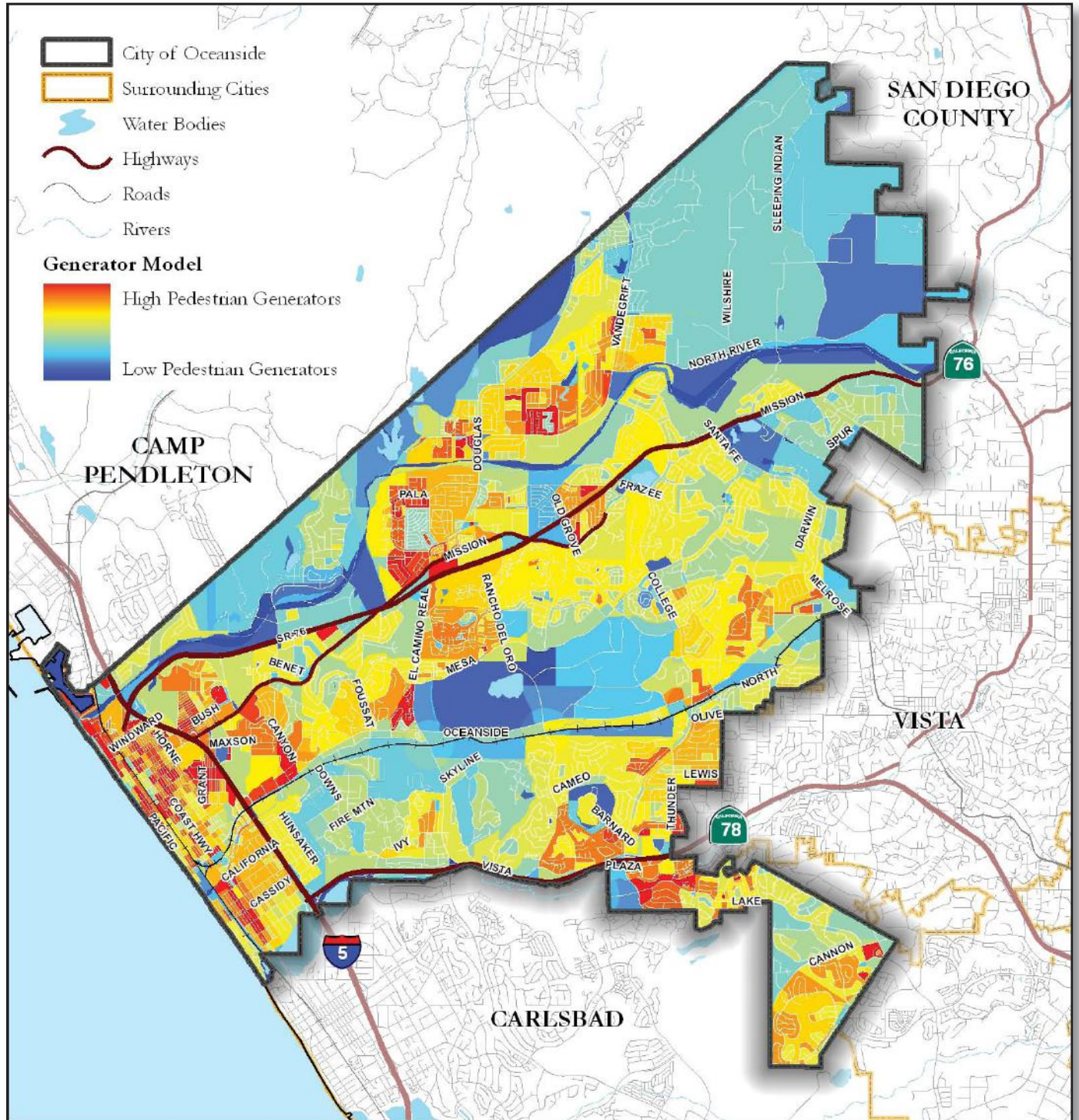
The following explains the data that went into the Generator Model.

- a. The existing and future MGRA total population is divided by the MGRA area to determine existing and future population density.
- b. The existing and future MGRA total employment is divided by the MGRA area to determine existing and future employment density.
- c. The total population less than 16 years old and 65 years and older is divided by the Census Block Group Area to determine the density of these two age classes.
- d. The employment and population MGRA densities as well as age densities were categorized into density ranges and assigned points so that MGRAs with higher density ranges received higher initial points.
- e. Median Household Income, Census Mobility, Age Densities and Disability Density were based on the Census Block Group and data was received from the Long Form taken in the year 2000.

f. The points from the age densities, income and disabled density were overlaid to make a citywide cell grid.

g. Table 14 shows the features used in the Generator Model, and Figure 18 displays the Generator Model results of the mapping exercise.

Figure 18: Generator Map



*Examples of barriers include physical limitations of topography, roadway width, and rail road crossings.*

### Pedestrian Barriers

Pedestrian Barriers are features that are likely to discourage or detract people from walking. These barriers are physical limitations of topography, lane width and railroad crossings that prevent pedestrians from getting around from their origin to their intended destination.

Table 15 shows the features used in the Barrier Model, and Figure 19 displays the map of the Barrier Model.

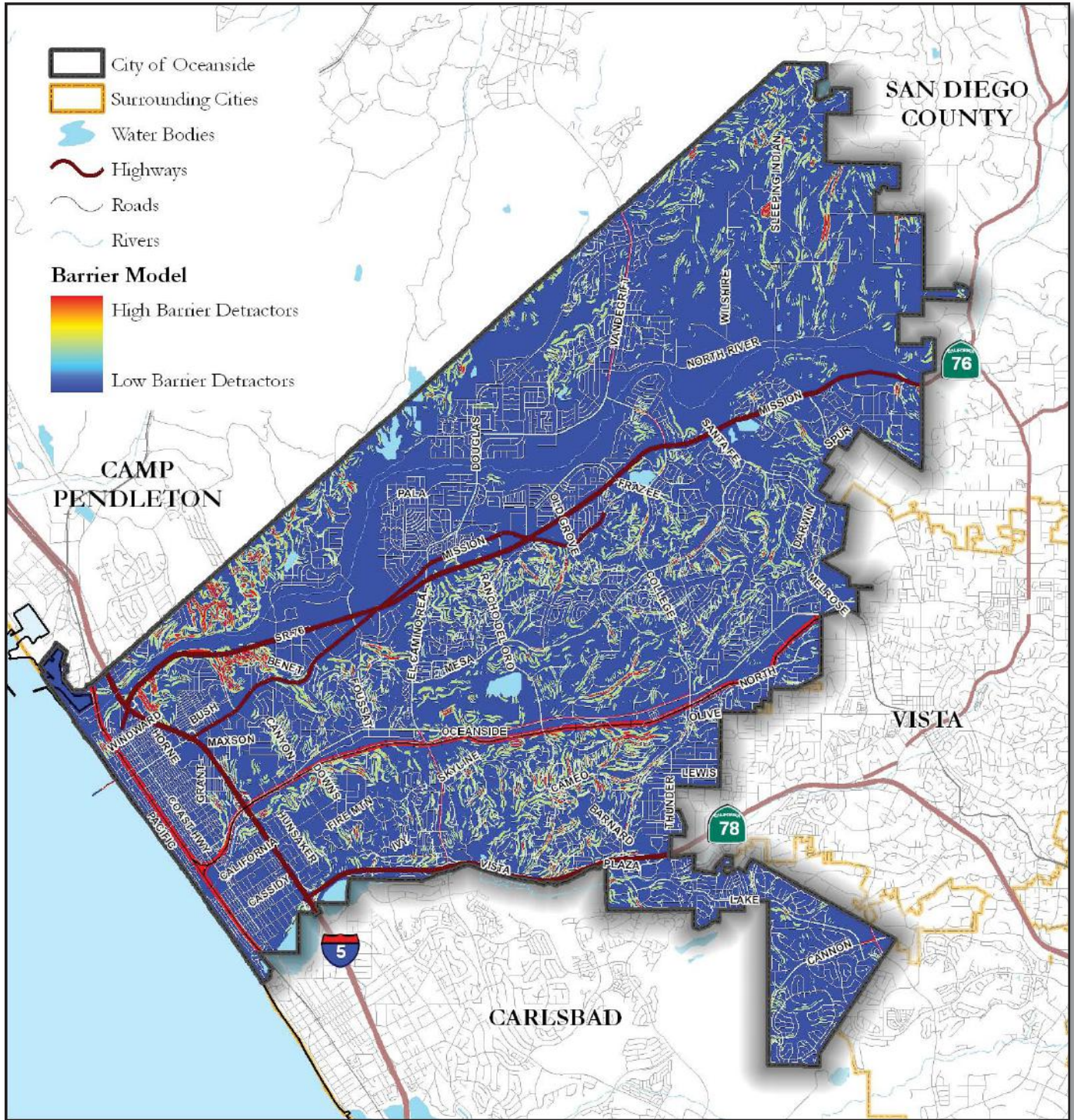
*Table 15: Barrier Factors and Scoring*

Pedestrian Detractors	Points	Weighted Multiplier	Final Score
<b>Pedestrian Barriers</b>			
<b>Railroads &amp; Light Rail as Barriers to Pedestrian Travel</b>			
	2	1	2
<b>Lane Width</b>			
8+ lanes	3	1	3
6 lanes	2		2
4 lanes	1		1
<b>Slope &amp; Canyons as Barriers to Pedestrian Travel</b>			
Landform Feature with Slope > 25%	2	1	2
Landform, Walkway or Street Slope 10-25%	1		1
Walkway Slopes < 10%	0		0



*The railroad in Oceanside is considered a major barrier for pedestrians.*

Figure 19: Barrier Model Map



*Detractor issues discourage people from walking, usually due to perceived or actual safety concerns related to vehicular intensity.*

### Pedestrian Detractor Issues

Detractor Issues coincide with the Barriers in that they discourage or detract people from walking. Detractor issues are more related to the vehicular intensity and perceived safety of the walking environment. Streets with high volumes of traffic and high speeds tend to detract people from walking due to the amount of traffic adjacent to their route. Known areas of high pedestrian collisions are also a deterrence as people may reroute their trip to avoid certain streets and intersections where safety is a concern. This subset of the Pedestrian Priority Model identifies the following features:

- Collisions per year
- Average Daily Trips (volume of vehicles on a particular street segment)
- Speed

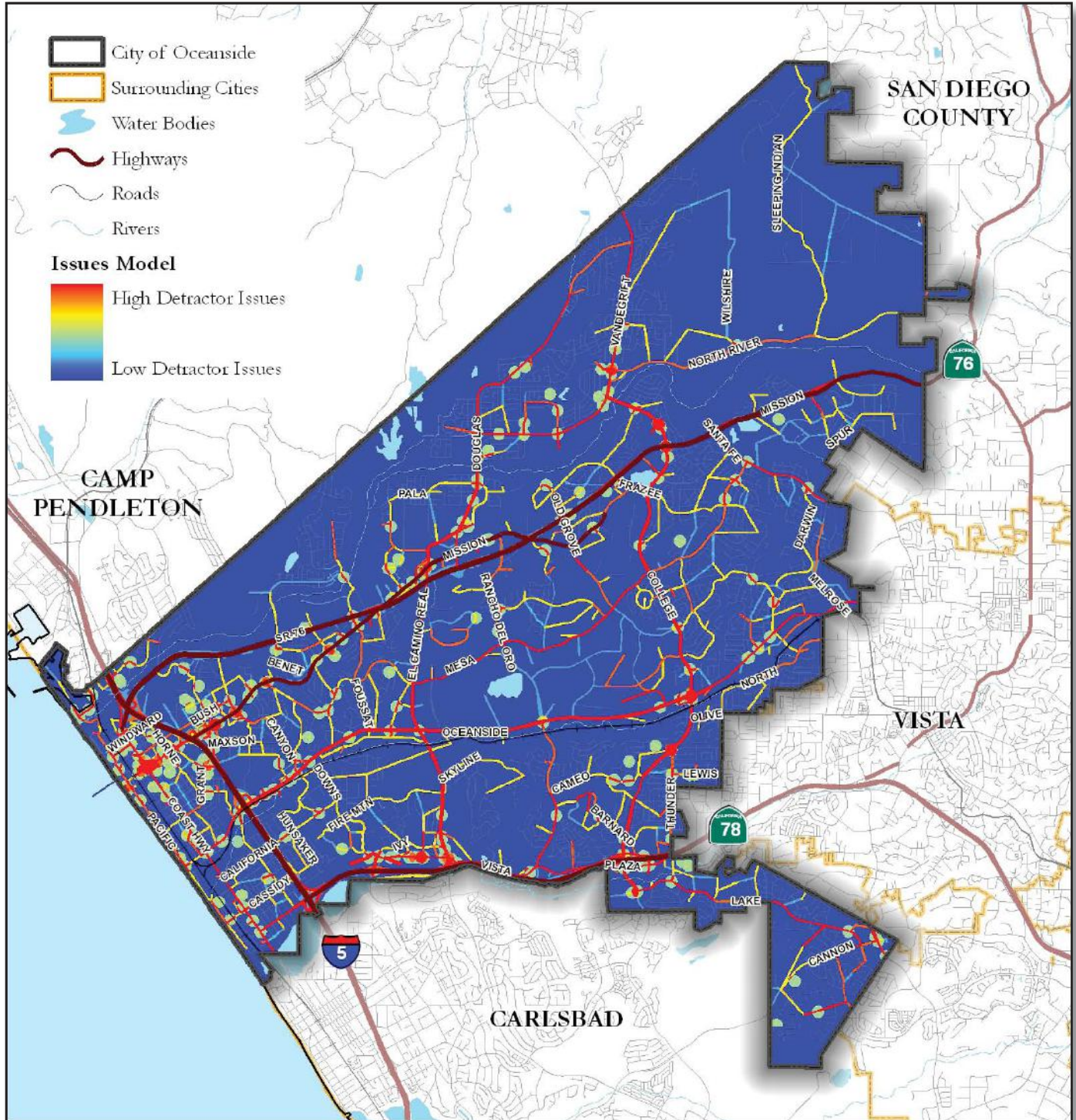
These factors combined with the Detractor Barriers Model create the subset of the model that looks at areas that discourage higher potentials of walking activity. Table 16 shows the features used in the Issues Model, and Figure 20 shows the map of the Issues Model.

**Table 16: Detractor Factors and Scoring**

Pedestrian Detractors	Points	Weighted Multiplier	Final Score
<b>Pedestrian Issues</b>			
<b>Collisions Per Year *</b>			
>4	3	4	<b>12</b>
3-4	2		<b>8</b>
1-2	1		<b>4</b>
No collisions	0		<b>0</b>
<b>Average Daily Trips as it Affects Crossing Wait Time, Safety &amp; Visibility</b>			
> 25,000	3	2	<b>6</b>
20,000 - 25,000	2.5		<b>5</b>
10,000 - 20,000	2		<b>4</b>
5,000 - 10,000	1.5		<b>3</b>
1,000 - 5,000	1		<b>2</b>
< 1,000	0		<b>0</b>
<b>Speed as it Affects the Ability to Cross Safely</b>			
25+	2	1	<b>2</b>
< 25 mph	1		<b>1</b>

\* A 1/16 mile buffer was applied to each collision location.

Figure 20: Detractor Model Map



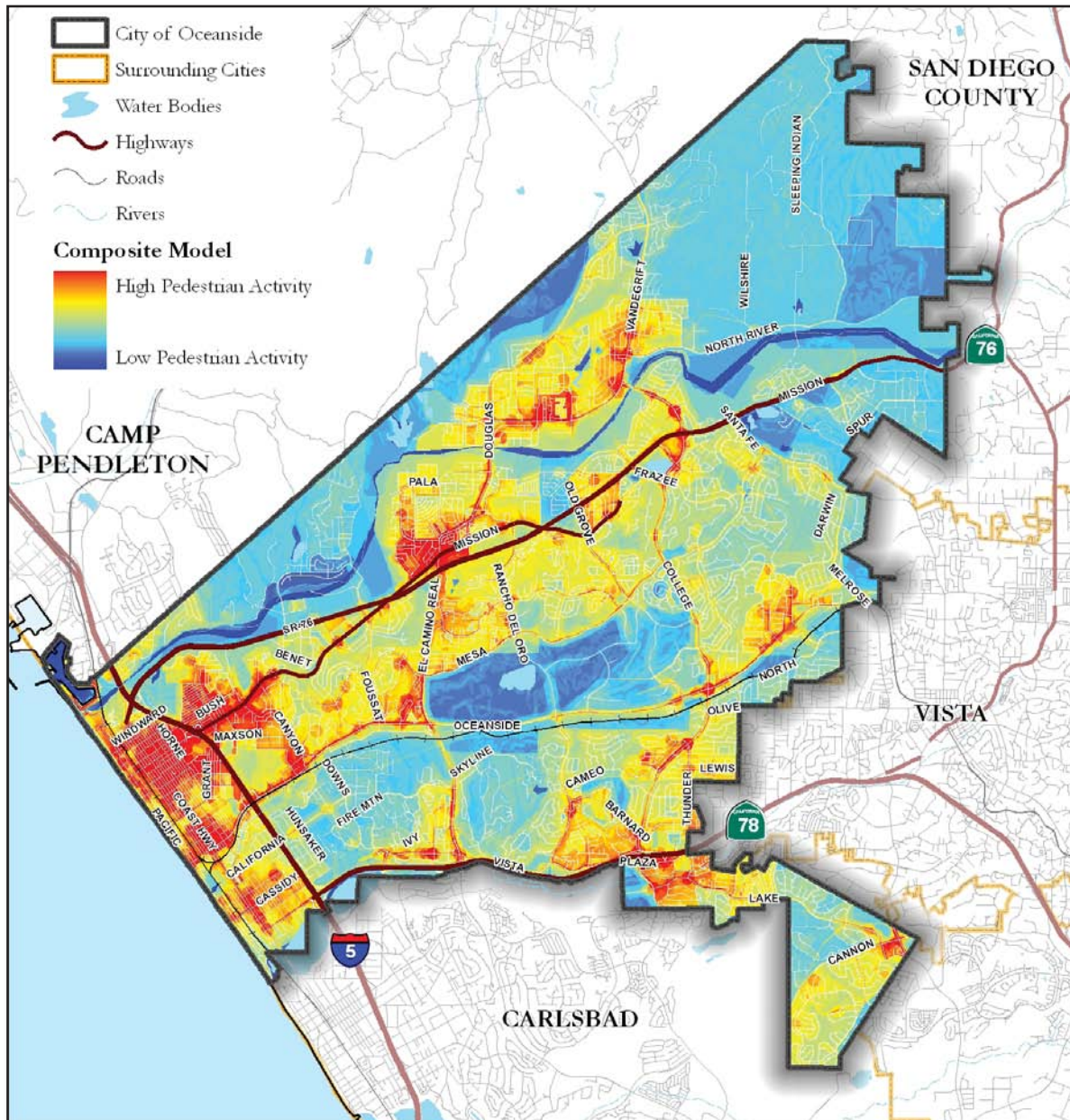
The Pedestrian Priority Model combines the Generators, Attractors and Detractors to identify areas that have high generators, attractors and barrier points.

### 5.3 Composite Model

The Pedestrian Priority Model combines the Generators, Attractors, Barriers and Detractor Issues to identify areas that have high generators, attractors and detractors. Figure 21 depicts the results of compositing the four previous mapping efforts. The following are the steps in developing the Composite Model to identify areas of high pedestrian activity.

- a. The Attractor, Generator, Barrier and Detractor Issues grid cell models were overlaid on top of each other to produce the Pedestrian Priority Model.
- b. The combined grid cells that contain generators, attractors and detractors were added to provide a total composite value for each combined cell.
- c. The composite value identifies areas with a higher pedestrian activity point total.
- d. In some cases, areas that have a high pedestrian activity score are areas that may already have pedestrian facilities but further improvements can be made.

Figure 21: Composite Model Map





## 6.0 Pedestrian Facility Priority Process

A substantial amount of funding is needed to bring all of the city's pedestrian facilities up to a standard that makes them safe, walkable, accessible, connected and assets to our neighborhoods. The amount far exceeds what is likely to be obtained. To be cost effective, a system of ranking projects for priority funding needs to be fully developed. Matrices were developed by the working group to assist in prioritize the individual pedestrian projects.

The following list of priority projects were collected from existing city plans, public input, working group input, collision data and the Pedestrian Priority Model. Formulating the list consisted of group discussions, knowledge of the project, guidelines and designs of existing plans and extensive field work. The projects were then analyzed and scored based on the following criteria. For new projects, the scoring sheets can be used to gauge the priority of the project relative to those in this chapter.

**Pedestrian Activity Levels-** The Pedestrian Activity Levels acquires the projects' total model score and is then divided by the acreage of that project. This technique normalizes the scores throughout all the projects. This allows projects with larger footprints to have the same scoring parameters as smaller projects.

**Safety Criteria-** Safety was calculated by analyzing the pedestrian related collisions within 100 feet from the project segment. For instance, if the project was at an intersection, then a 100 foot buffer is created and all the pedestrian related collisions that fall within the buffer are collected and analyzed as part of the project. If a fatal collision occurred, it would get a higher score than those with major or minor injuries. The total number of specific injury types is multiplied by the appropriate point resulting in a sub score for that injury criterion. All the sub scores are then added as the final score for the Safety Criteria.

**Accessibility Criteria-** The Accessibility Criteria looks at issues that can be improved for each project. If issues will be addressed based on the criteria of this section, then a score is given. Extensive accessibility measures such as pop-outs and adding paths of travel are given higher scores for their overall improvement to accessibility within the project. Smaller improvements such as removing obstacles and trip hazards are given lower scores for their smaller role in accessibility.

**Connectivity Criteria-** The Connectivity Criteria looks at missing connections relevant to the pedestrian use of the activity center and the connections between different land uses. The higher level of use such as schools and transit centers are given the higher scores. There is more pedestrian activity to these activity centers than any other. Connections between different land uses such as between commercial, residential and recreational areas have lower scores because they have lower pedestrian activity levels.

**Walkability Criteria-** Improvement in walkability, such as shaded areas and amenities like benches and bike racks are scored in this section. Major improvements such as creating a buffer from fast moving vehicles, public spaces, plazas and providing shade trees within the project receive higher scores for their overall sense of comfort to walk within the area. Smaller improvements such as benches, increased lighting and improving dilapidated properties receive lower scores but are still important in the overall walking environment.

**Innovation Criteria-** The Innovation Criteria scores improvements based on the how innovative the techniques and treatments are. If the treatment or technique, such as a pier elevator, is not found in the region, then it gets the highest score since it will be rare to find. Unique techniques and treatments that are common but not found in Oceanside have the second highest score while common treatments found within the city receive the lowest.

Figure 22: Oceanside Accessibility Issues Map

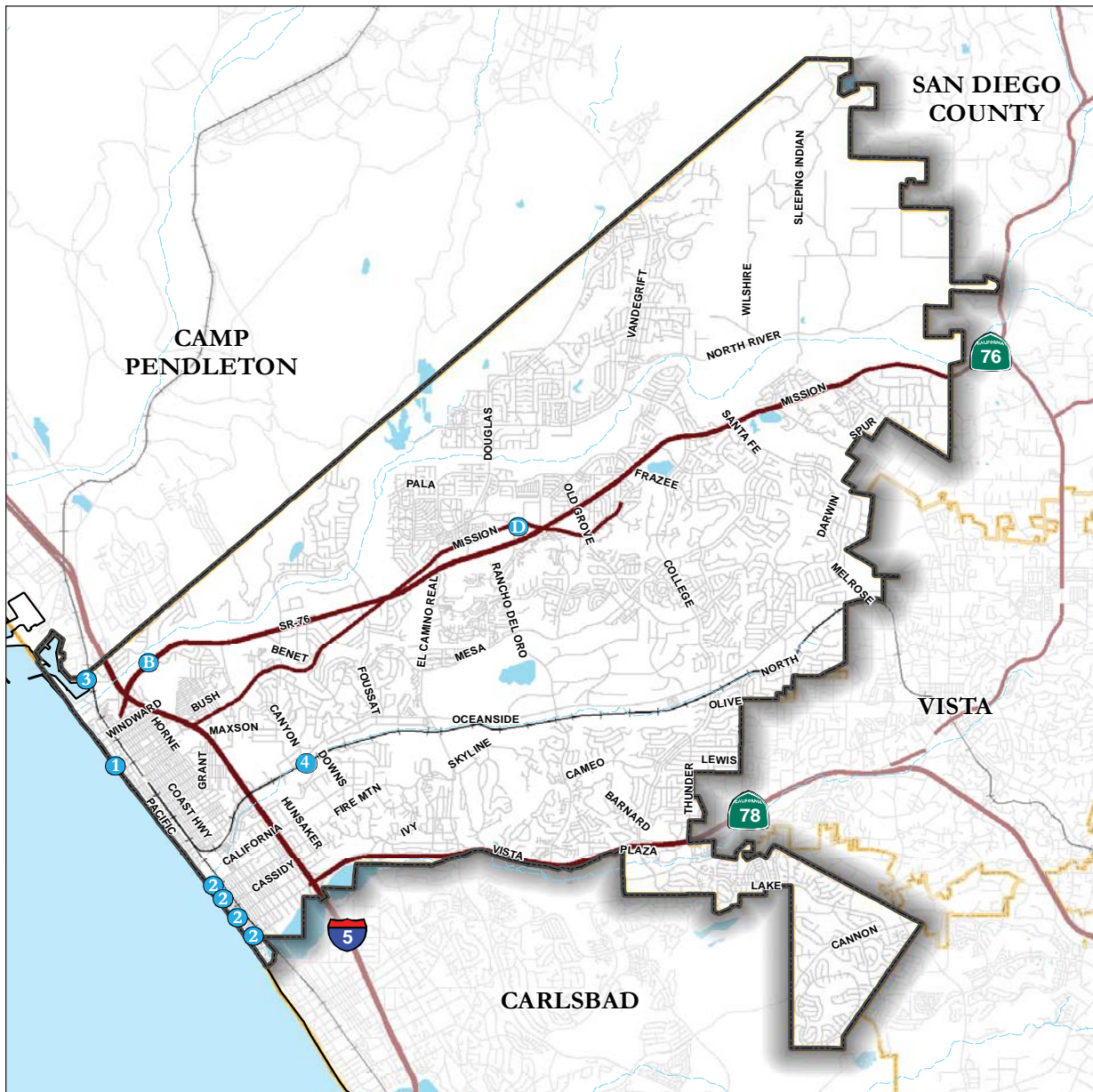
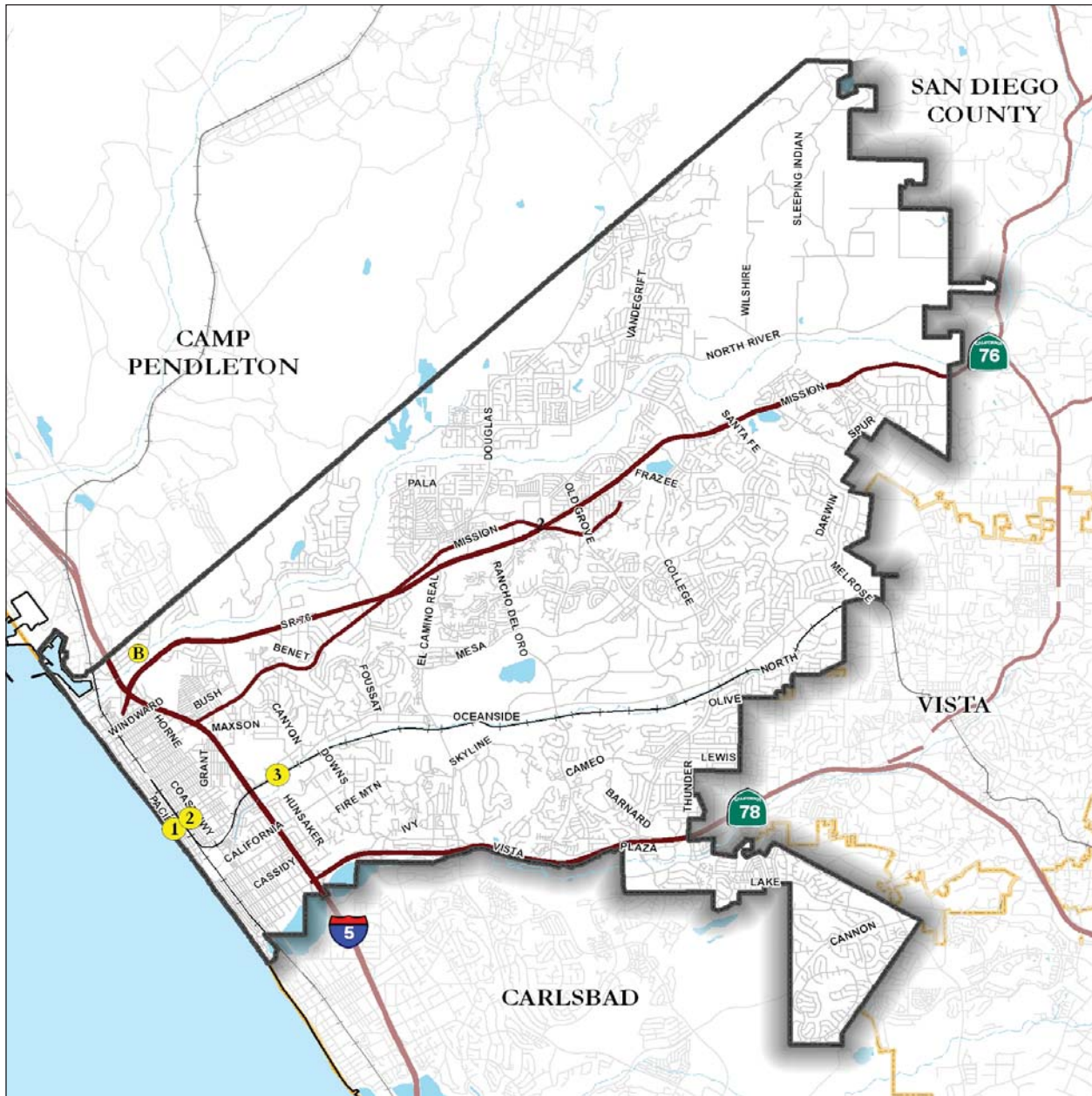


Table 17: Oceanside Accessibility Issues

Issue Number*	Comment
1	Access from the Oceanside Pier at the end of Pierview Way to The Strand is limited.
2	The walkway along Pacific Street between Morse Street and Eaton Street is not an accessible route.
3	Trash receptacles and light standards along Harbor Drive limit accessibility.
4	Street signs, pay phones, bollards, and light posts clutter the sidewalk at the intersection of Oceanside Boulevard and Crouch Street.
B	Need pedestrian crosswalk/access from Loretta St. to Bike Trail.
D	Ivy Ranch. (Note stated Ivy Ranch only)

\*Numeric issues from fieldwork and alphanumeric issues from community workshop

Figure 23: Oceanside Connectivity Issues Map



Issue Number*	Comment
1	There are several obstacles along the west side of Pacific Street including driveways, uneven sidewalks, and landscape planter areas that break up the sidewalks forcing pedestrians to walk in the street.
2	Several sidewalks are missing along Tremont Street creating a disconnected corridor for pedestrians.
3**	The bus stop at the intersection of Oceanside Boulevard and State Stree is missing a sidewalk connection to the Sprinter station along the south side of Oceanside Boulevard.
B	Need pedestrian crosswalk/access from Loretta St. to Bike Trail.

Table 18: Oceanside Connectivity Issues

\*Numeric issues from fieldwork and alphanumeric issues from community workshop

\*\* A city project to install sidewalks on the south side of Oceanside Blvd between I-5 and Crouch St has been approved.

Figure 24: Oceanside Safety Issues Map

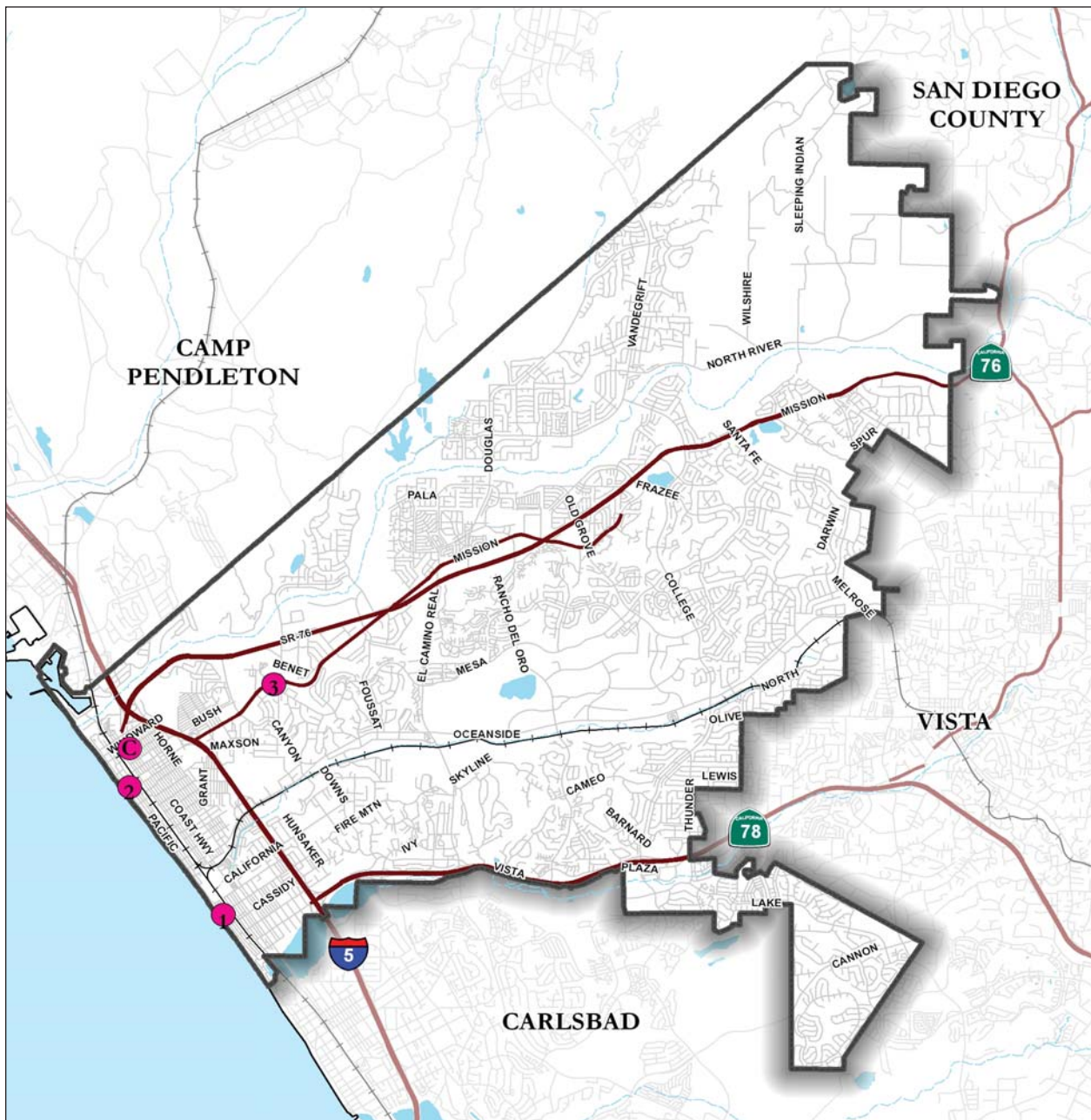
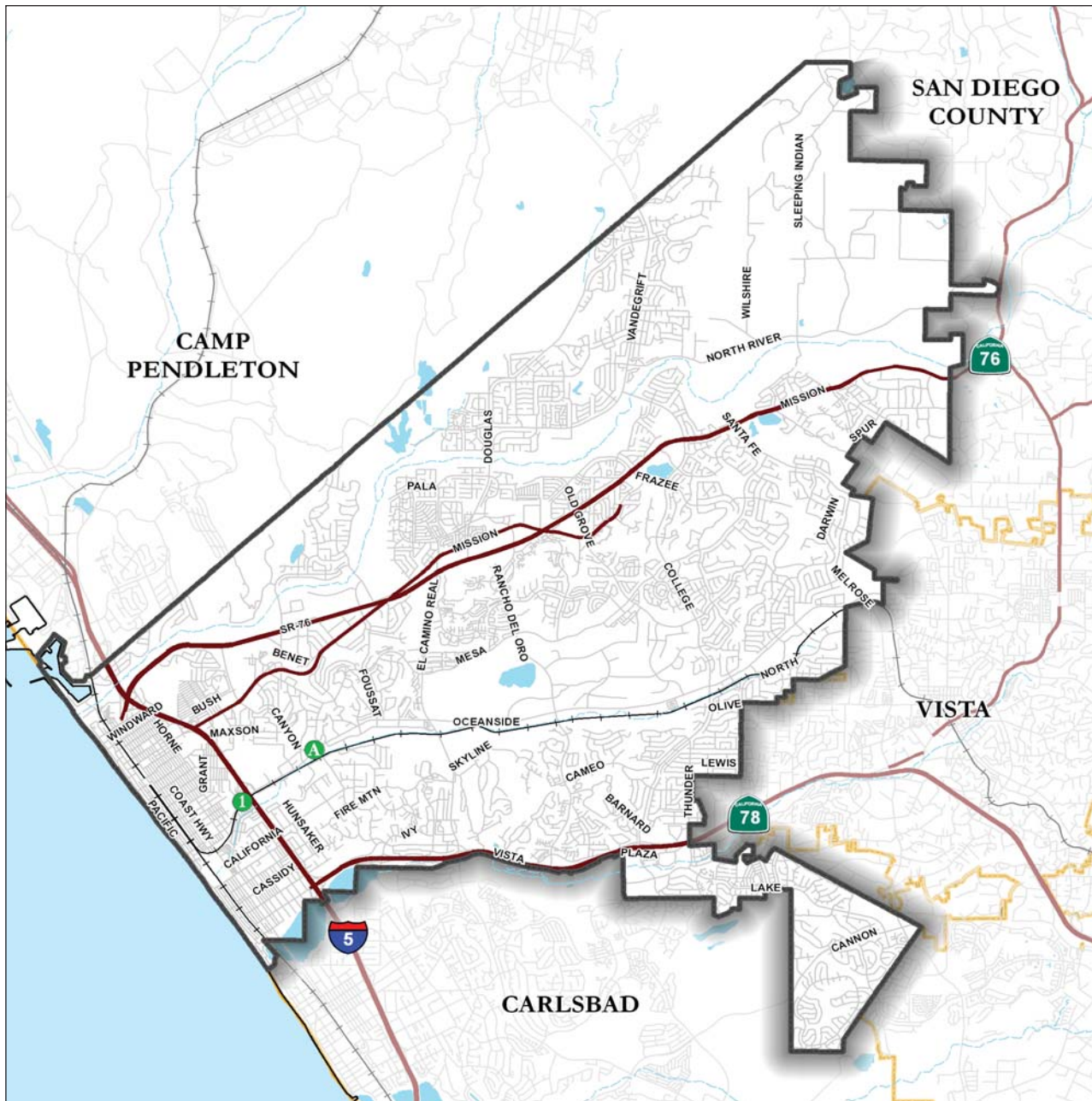


Table 19: Oceanside Safety Issues

Issue Number*	Comment
1	The absence of a sidewalk adjacent to the east side of Pacific Street forces pedestrians to walk in the street.
2	The sidewalks along Pacific Street are narrow. The walk does not safely accommodate the number of pedestrians that typically utilize this corridor.
3	There is not a sidewalk along the south side of Mission to connect to the bus stop at the intersection of Mesa. Pedestrians walking on Mission Avenue are required to walk in the bike lane. Because of the topography and speed of traffic, visibility of pedestrians is limited to drivers.
C	Traffic speeds high. (On Surf Rider Way)

\*Numeric issues from fieldwork and alphanumeric issues from community workshop

Figure 25: Oceanside Walkability Issues Map



Issue Number*	Comment
1	Some areas along Oceanside Boulevard lack street trees, sidewalks, and lighting. These things along with trash debris, the rail system, and high volumes of traffic traveling at high speeds make this an uncomfortable pedestrian atmosphere.
A	Slow down traffic from Oceanside Boulevard between I-5 and Canyon Drive. Also provide a better way to cross Oceanside Boulevard.

Table 20: Oceanside Walkability Issues

\*Numeric issues from fieldwork and alphanumeric issues from community workshop

Figure 26: Oceanside Missing Sidewalks Map

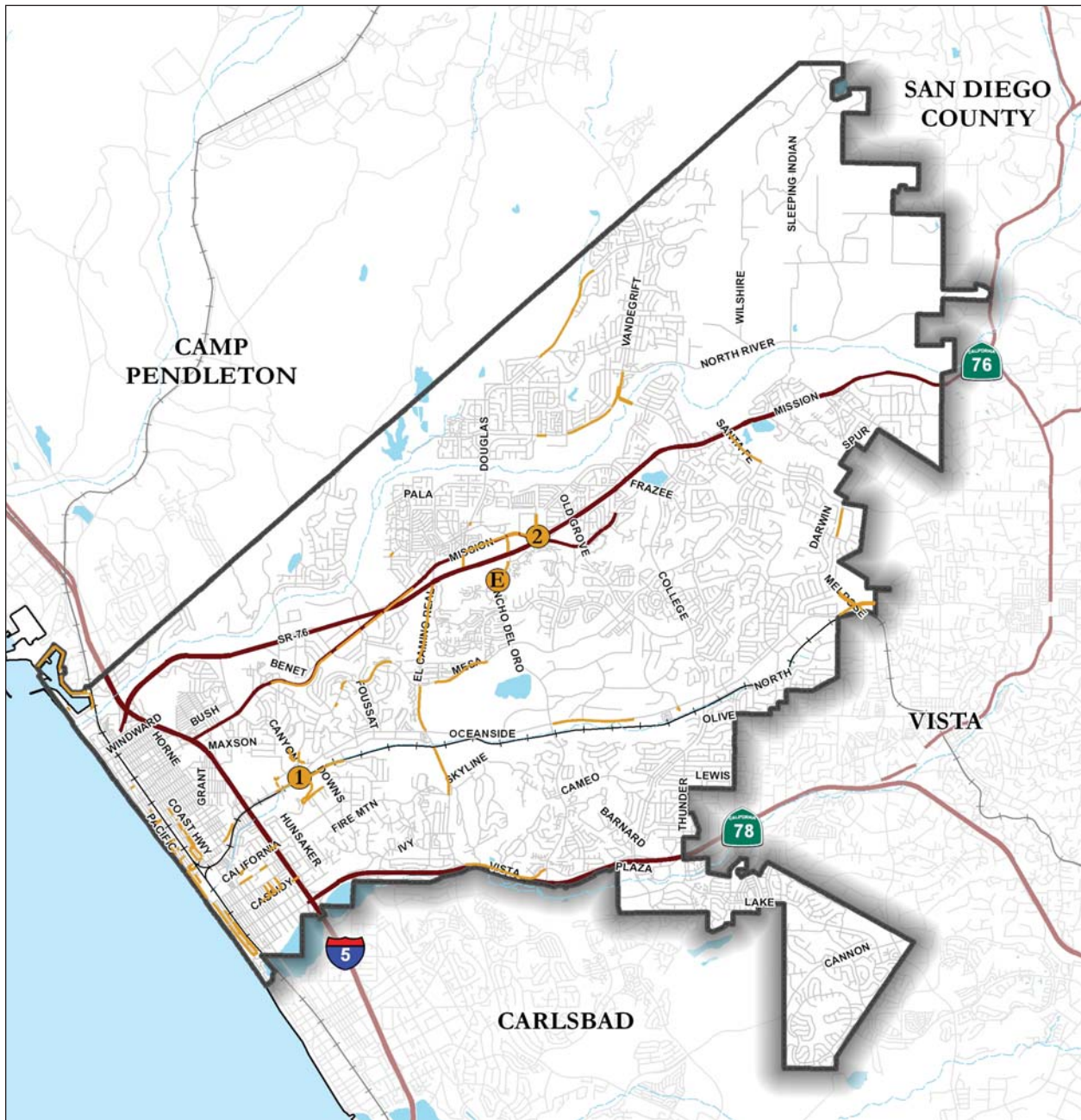


Table 21: Oceanside Missing Sidewalk Issues

Issue Number*	Comment
1	Because of missing sidewalks near the Crouch Street Station, access to the Sprinter is limited. **
2	Missing sidewalks at Academy and Mission make it difficult for pedestrians in an adjacent neighborhood to get to a nearby shopping center.
E	Several students from high school walk and there are missing sidewalks. ( <i>El Camino High School on Rancho Del Oro Drive</i> )

\*Numeric issues from fieldwork and alphanumeric issues from community workshop

\*\* A city project to install sidewalks on the south side of Oceanside Blvd between I-5 and Crouch St has been approved.

Many of the projects are primarily located on the western side of the city due to the higher density mix of commercial, transit, employment, residential and recreational land uses. This mixture of land uses tends to produce higher rates of pedestrian activity. Many downtown and Coast Highway pedestrian improvement projects have already been developed and are included as part of the project list.

All the projects that were part of an existing plan such as the Coast Highway Vision Plan were included in the priority list but costs were not estimated. These projects do not have detailed costs estimates for their proposed improvements so this plan will not address them. For cost estimates on the projects from other plans, please refer to the plan documents themselves.

## **6.1 Citywide Pedestrian Projects**

Several pedestrian issues concerning missing sidewalks, safety, accessibility, walkability, and connectivity were discovered during field work, a community workshop, working group meetings, and online surveys. All these issues were mapped and later prioritized to come up with the top 25 projects. Tables 17-21 and Figures 22-26 list all of these issues.

## **6.2 Top 25 Priority Pedestrian Projects**

Following Table 22 are the top 25 projects after they were ranked utilizing the pedestrian project prioritization checklist. See Table 22 for an overall ranking of all proposed projects.

Table 22: Summary of Scores

Prioritized Project Number	Location	Improvements	Pedestrian Activity Levels	Safety	Accessibility	Connectivity	Walkability	Innovation	Total Score	Total Cost
1	South Coast Highway, South Tremont and Cleveland Streets (Between Mission Ave and Leonard Ave)	Enhance street conditions, add green space, new streets, roundabouts and increased mixed use, add lighting.	10	44	14	11	9	2	90	N/A
2	Mission Avenue (Between Pacific St and Horne St)	Install more lighting, pedestrian warning signs, and enhanced crosswalks when the opportunity presents itself. Install traffic signal at Clementine St when the signal warrants are met.	10	41	14	11	9	2	87	N/A
3	Mission Avenue (Between Horne St and Archer St)	Install enhanced crosswalks when signal warrants are met and add more pedestrian warning signs.	10	22	14	10	6	2	64	\$6,120
4	Coast Highway (Between Morse St and Oceanside Blvd)	Redefine and extend walkway system to south of tracks to increase accessibility and walkability, add green space, and increase mixed use.	10	15	14	11	9	2	61	N/A
5	Crouch Street at Oceanside Boulevard (Oceanside Blvd at Crouch St and Greenbrier Dr)	Add sidewalks and pedestrian facilities at Crouch Street and Oceanside Blvd. Relocate amenities that block sidewalks.	6	16	14	11	6	2	55	\$369,225
6	Mission Avenue (Between Mesa Dr and Fireside St)	Install missing sidewalks, install and enhance crosswalks when signal warrants are met. Move obstacles from the sidewalks.	2	27	12	7	5	1	54	\$261,799
7	I-5/Oceanside Boulevard (Oceanside Blvd between Saratoga St and Nevada St)	Add missing sidewalks, enhance and install crosswalks when signal warrants are met. Add lighting underneath I-5.	4	15	14	13	4	2	52	\$470,408
8	The Strand (Between Pier View Way and Wisconsin Ave)	Add crosswalks and stop sign at Seagaze Dr when signal warrants are met. Add pedestrian warning signs.	10	5	15	10	9	2	51	\$641,047
9	Pacific Street (Between Pier View Way and Wisconsin Ave)	Increase width of sidewalks based on level of use. Move bollards and install sidewalk into the adjacent planting to provide a wider walking path.	10	8	10	11	7	2	48	\$82,863
10	South Cleveland Street (Between Oceanside Blvd and Wisconsin Ave)	Improve street conditions (street trees, repair sidewalks, add curb ramps..etc)	10	4	13	10	6	2	45	N/A
11	Pier View Way Promenade (Streets including and bordered by Mission Ave, Tremont St, Civic Center and Myers St)	Provide bulbout at corners and move parking signs off of the sidewalks. Move restaurant furniture away from pedestrians path of travel.	10	18	10	3	2	2	45	\$405,675
12	Tremont Street and Cleveland Street (Between Washington Ave and Oceanside Blvd)	Connect and install sidewalks and curb ramps.	6	4	14	13	6	2	45	\$408,071
13	South Coast Highway (Between Eaton St and Cassidy St)	Improve and widen sidewalks. Add roundabouts and shade trees.	4	10	14	5	7	2	42	N/A

Table 22: Summary of Scores (cont.)

Prioritized Project Number	Location	Improvements	Pedestrian Activity Levels	Safety	Accessibility	Connectivity	Walkability	Innovation	Total Score	Total Cost
14	Oceanside Pier (Pier View Way and Pacific St)	Provide elevator from the Pier to the Strand. Provide a ADA accessible ramp between Pacific Street and the amphitheater. Clear obstacles from the sidewalks.	10	2	14	6	5	3	40	\$1,372,950
15	San Luis Rey River Mouth (West of I-5, between Windward Wy and Harbor Dr)	Provide "Arts Bridge" with a wide sidewalk promenade. Increase traffic calming with roundabouts, crosswalks, and street trees. Extend walkway grid system.	4	3	14	5	9	2	37	N/A
16	El Camino Real at Oceanside Boulevard (El Camino Real and Industry St)	Add crosswalks on Oceanside Blvd at El Camino Real and add missing sidewalks.	4	14	10	4	2	2	36	\$28,283
17	Freeman, Ditmar, Nevada, Clementine and Home Streets (Between Oceanside Blvd and Seagaze Dr)	Make pedestrian connections across railroad tracks and traffic calming on connector streets. Wider sidewalks. Add missing sidewalks.	4	11	8	3	6	2	34	N/A
18	Pacific Street (Between Wisconsin Ave and Morse St)	Add sidewalks when opportunities arise, remove landscaping within pedestrian path of travel, and revise driveways.	6	8	9	6	2	2	33	\$96,593
19	Academy Road/Mission Avenue (Mission Ave at Academy Rd)	Provide sidewalks and curb ramps on north side of Mission Ave from Academy Rd eastbound under SR76 to entrance of shopping center.	2	1	14	5	6	2	30	\$104,463
20	Canyon Drive/Mission Avenue (Mission Ave at Canyon Dr)	Clear sidewalks of utility boxes. Move "Canyon Dr" sign that hangs over the sidewalk.	10	6	3	4	2	2	27	\$21,600
21	Melrose Drive at Oceanside Boulevard (Melrose Dr and Oceanside Blvd)	Add crosswalks and sidewalks on Oceanside Blvd at Melrose Drive when signal warrants are met.	2	1	9	6	2	2	22	\$236,925
22	San Luis Rey Drive/I-5 Crossing (San Luis Rey Drive at Interstate 5)	Add lighting in the underpass and install paving between staircase and San Luis Rey Drive.	4	2	9	4	2	1	22	\$58,050
23	Pacific Street (Between Morse St and Eaton St)	Address ADA issues on east side of road with ADA accessible ramps. Install sidewalks on west side of Pacific St.	4	1	11	1	2	2	21	\$280,800
24	El Corazon Trail Access (El Corazon Trails at El Camino Real, Oceanside Blvd, and Mesa Dr)	Add missing sidewalks along El Camino Real and Mesa Drive to provide connection. Add trail entry points for future trail access.	2	3	5	4	3	1	18	\$222,102
25	North Side of the San Luis Rey River Trail (North side of San Luis Rey River between College Blvd and Douglas Dr)	Improve walkability with amenities and regrade surface.	2	1	3	1	5	1	13	\$494,532
<b>Grand Total</b>										<b>\$5,515,336</b>

**Prioritized Project Number : 1**

Project Name: **South Coast Highway, South Tremont and Cleveland Streets (Mission to Leonard)** Source: Coast Highway Vision Plan  
 Primary Location: Between Mission Ave and Leonard Ave  
 Improvements Proposed: Enhance street conditions, add green space, new streets, roundabouts and increased mixed use, add lighting.

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		10
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	109.2	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	46,729	Medium (101-200)	4	
Normalized Score (model raw score / acres)	428	Low (<100)	2	

SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		44
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			5	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	2		3	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	19		2	
No collisions noted but the public has expressed safety concerns in the area:				1

ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		14
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1	

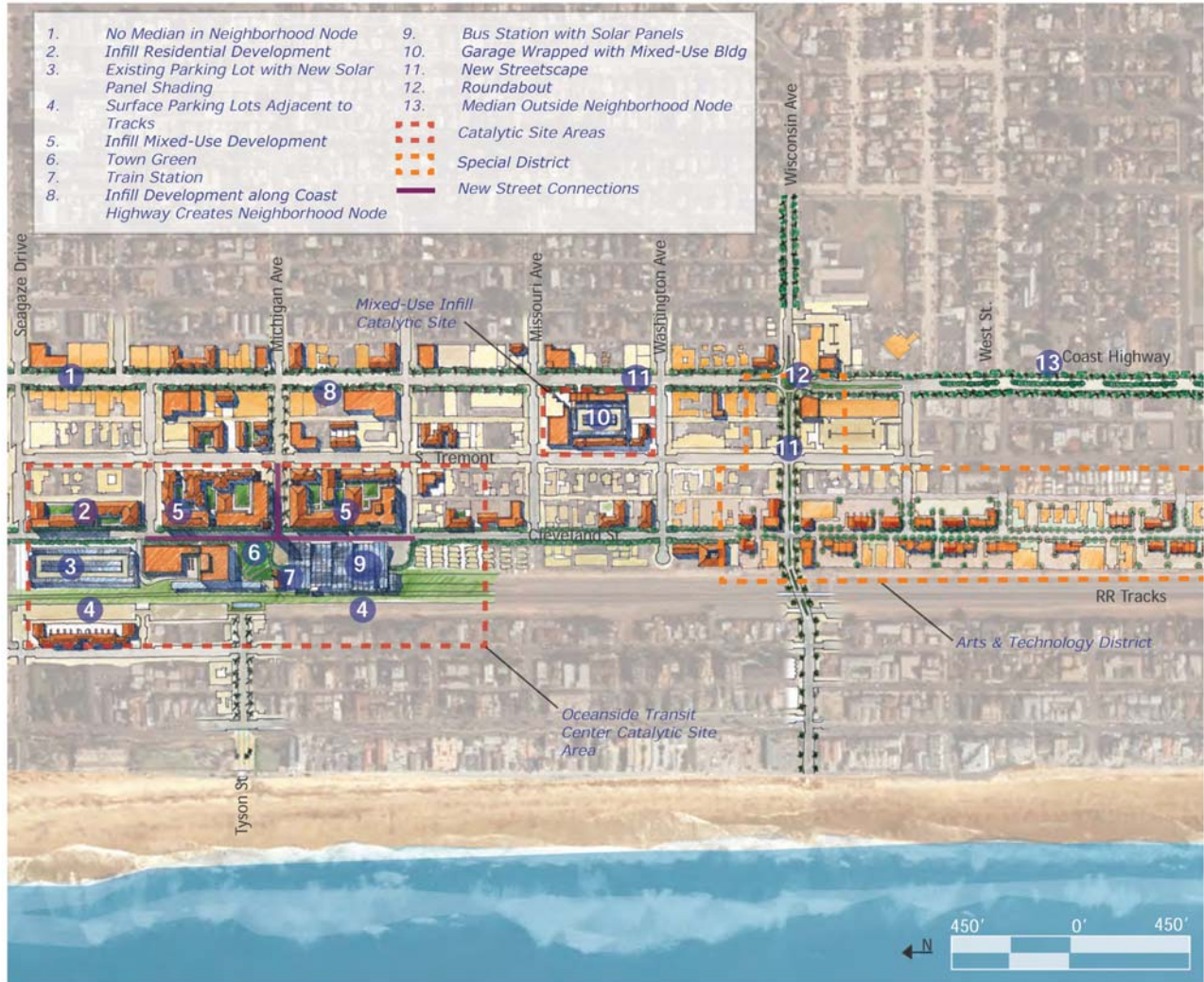
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		11
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			3	
Missing routes to schools will be added or substantially improved from current conditions:			3	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3	
Connections will be added or substantially improved between major housing origins and major public facilities:			2	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1	
Connections will be added or substantially improved between major housing origins and employment areas:			1	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1	

WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		9
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2	
Bright, hot or highly reflective walking areas will receive shade from trees:			2	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1	

INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1	
<b>TOTAL SCORE:</b>				<b>90</b>

**Project:** South Coast Highway, South Tremont and Cleveland Streets  
(Mission to Leonard)

**Prioritized Project Number :** 1



“The existing train station is re-configured to improve circulation by removing one-way streets, turning existing parking lot circulation areas into public right-of-ways, introducing new streets, and opening bus access roads to all traffic. A new public green space at the station is surrounded by mixed-use buildings and housing over retail as well as with some parking garages hidden behind “liner” retail.

An important component of the Vision Plan is to repair the street grid and reconnect Cleveland Street at the transit center. Currently the street stops at the transit center. The street grid links the Downtown Redevelopment Area to the Arts, Technology & Environment District, while providing an alternative to the Coast Highway for local traffic. The creation of this alternative route is an important part in establishing a pedestrian-oriented plan for Coast Highway and the surrounding areas.

A roundabout at Wisconsin Avenue slows traffic and marks the southern entrance to the node. The Plan includes incremental infill development along Coast Highway to create a more pedestrian-oriented development pattern, with small setbacks, storefronts, and wide, greened sidewalks with new street trees. New infill development along Coast Highway would link to development along Michigan Avenue and Cleveland Street - and connect to the main downtown areas. The node is connected to the nearby Sprinter Station area via the Arts, Technology & Environment District on Cleveland Avenue.” - *Oceanside Coast Highway Vision and Strategic Plan*



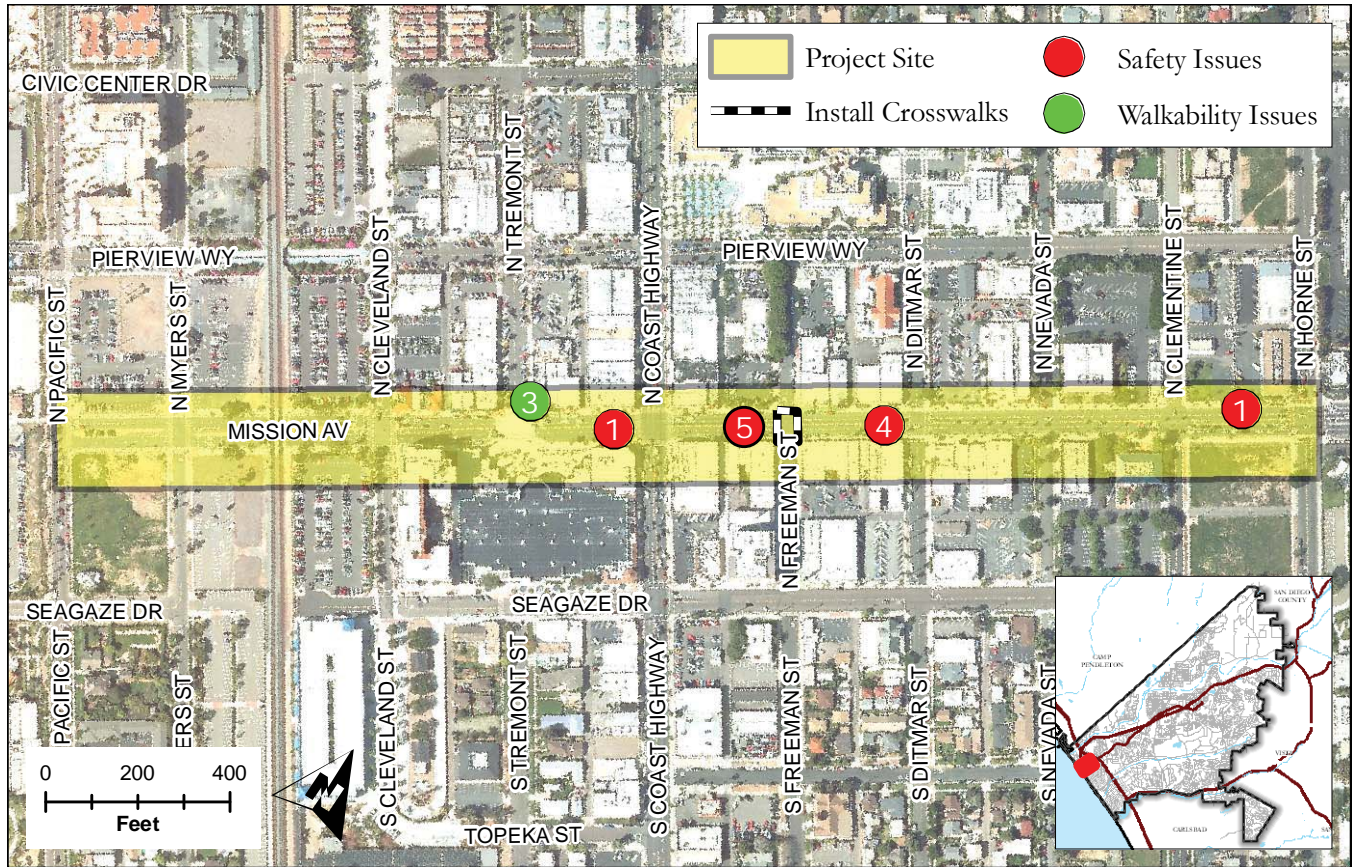
**Prioritized Project Number : 2**

Project Name:	<b>Mission Avenue (Pacific to Home)</b>	Source: Field work / Public input
Primary Location:	Mission Avenue between Pacific Street to Horne Street	
Improvements Proposed:	Install more lighting, pedestrian warning signs, and enhanced crosswalks when the opportunity presents itself. Install traffic signal at Clementine St when the signal warrants are met.	

<b>PEDESTRIAN ACTIVITY LEVELS</b>		Ranked Score for this Criteria (high scores are better)=	<b>10</b>
<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>12.7</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>15,531</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>1,220</b>	Low (<100)	<b>2</b>
<b>SAFETY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=	<b>41</b>
<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	19		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>
<b>ACCESSIBILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=	<b>14</b>
<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>
<b>CONNECTIVITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=	<b>11</b>
<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>
<b>WALKABILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=	<b>9</b>
<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>
<b>INNOVATION CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=	<b>2</b>
<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>
<b>TOTAL SCORE:</b>			<b>87</b>

**Project:** Mission Avenue (Pacific to Horne)

**Prioritized Project Number :** 2



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- 1 Lack of pedestrian crossing signs
- 3 Sidewalk is too narrow (see issue W6)
- 4 Missing street lights (see issue S12 and S13)
- 5 Missing crosswalks

**Cost:** \*\$-

**Contingency (35%):** \*\$-

**Total Cost:** \*\$-

**\*This project has just entered the design process and improvements may vary dramatically. Therefore, no costs have been included.**



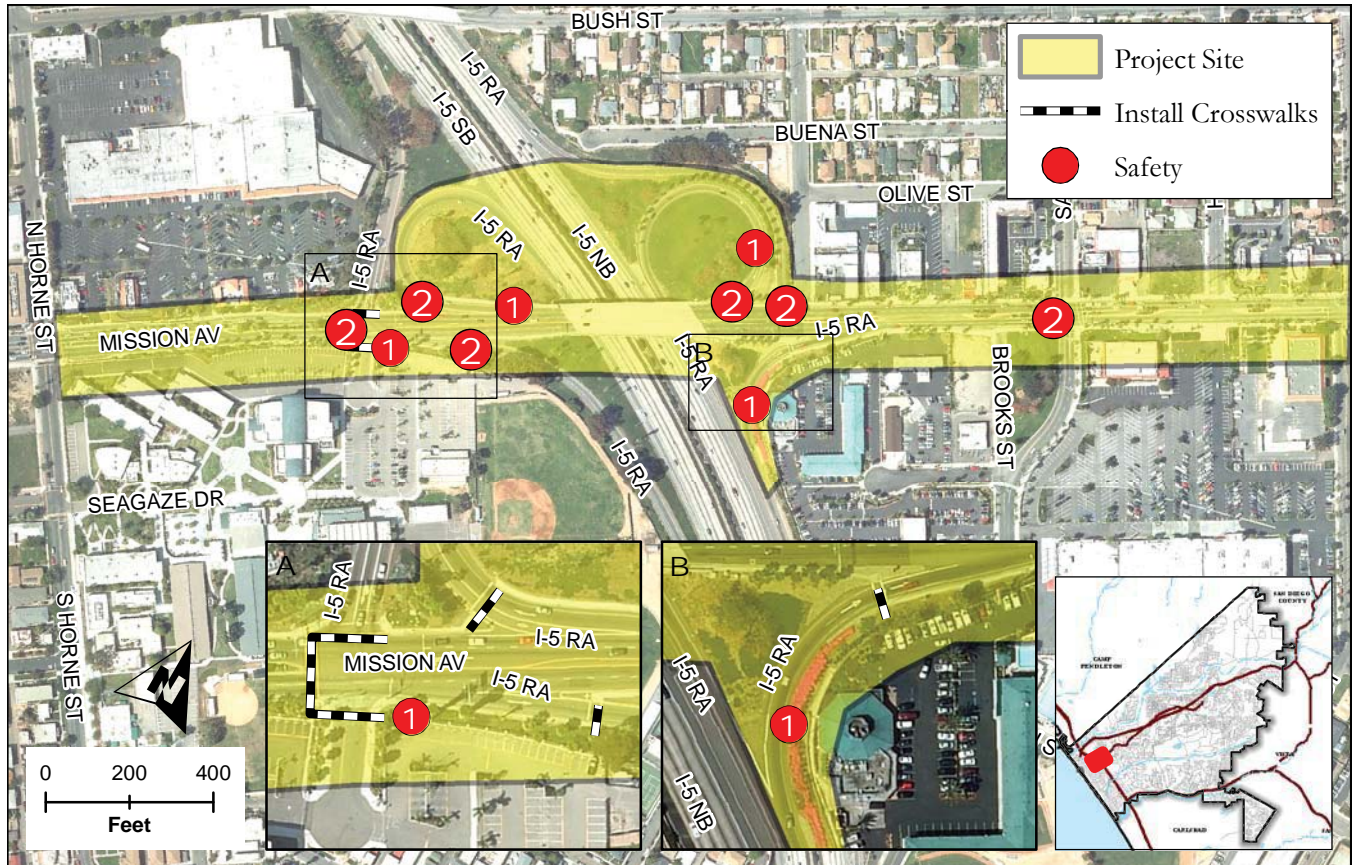
**Prioritized Project Number : 3**

Project Name:	Mission Avenue (Horne to Archer)	Source:	Field work/Public input
Primary Location:	Mission Avenue between Horne Street and Archer Street		
Improvements Proposed:	Install enhanced crosswalks when signal warrants are met and add more pedestrian warning signs.		

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		10
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	262.2	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	81,946	Medium (101-200)	4	
Normalized Score (model raw score / acres)	313	Low (<100)	2	
SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		22
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008:			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=	2		5	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	6		2	
No collisions noted but the public has expressed safety concerns in the area:			1	
ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		14
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1	
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		10
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			3	
Missing routes to schools will be added or substantially improved from current conditions:			3	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3	
Connections will be added or substantially improved between major housing origins and major public facilities:			2	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1	
Connections will be added or substantially improved between major housing origins and employment areas:			1	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1	
WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		6
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2	
Bright, hot or highly reflective walking areas will receive shade from trees:			2	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1	
INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1	
<b>TOTAL SCORE:</b>				<b>64</b>

**Project:** Mission Avenue (Horne to Archer)

**Prioritized Project Number :** 3



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Lack of pedestrian crossing signs
- ② Missing crosswalks

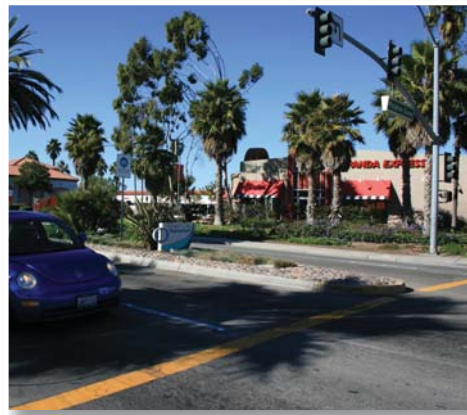
**Cost:** \$4,533

**Contingency (35%):** \$1,587

**Total Cost:** \$6,120

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install pedestrian crossing or warning signs	4	EA	\$750	\$3,000
Install and re-stripe crosswalks (see solution 4S)	511	LF	\$3	\$1,533

\*The geometrics of this interchange will be changed with the I-5 widening project. The result will be an interchange similar to that of Oceanside Blvd and I-5. This will be maintained by Caltrans.



**Prioritized Project Number : 4**

Project Name: **Coast Highway (Morse to Oceanside)** Source: Coast Highway Vision Plan  
 Primary Location: Between Morse Street and Oceanside Blvd  
 Improvements Proposed: Redefine and extend walkway system to south of tracks to increase accessibility and walkability, add green space, and increase mixed use.

<b>PEDESTRIAN ACTIVITY LEVELS</b>		Ranked Score for this Criteria (high scores are better)=		<b>10</b>
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	<b>10</b>	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>64.4</b>	High (>201-300)	<b>6</b>	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>23,126</b>	Medium (101-200)	<b>4</b>	
Normalized Score (model raw score / acres)	<b>359</b>	Low (<100)	<b>2</b>	
<b>SAFETY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>15</b>
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	6		<b>2</b>	
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>	
<b>ACCESSIBILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>14</b>
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>	
<b>CONNECTIVITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>11</b>
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>	
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>	
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>	
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>	
<b>WALKABILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>9</b>
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>	
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>	
<b>INNOVATION CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>2</b>
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>	
<b>TOTAL SCORE:</b>			<b>61</b>	

## Project: Coast Highway (Morse to Oceanside)

Prioritized Project Number : 4



“The Sprinter Station area is currently surrounded by low density development that is not conducive to a transit-oriented center concept (e.g. mobile home and RV parks, and commercial areas with large parking lots). The Plan calls for transit-oriented mixed uses that accommodates the arts, technology, and environmental sciences (north of the Sprinter tracks) and contributes to the synergy of the Arts, Technology & Environment District along Cleveland Street. An eco-friendly resort and retail development (south of the Sprinter tracks) is located along Loma Alta Creek. A transit plaza at the station is surrounded by a mixed-use retail and residential courtyard building and a podium-type parking garage. The plaza encourages visibility of the station from the Highway. Unbundled, transit-appropriate, and shared parking requirements encourage development at the station area.

The street grid network is extended south of the tracks to increase accessibility, walkability, and development potential in this area. The new grid makes a gesture toward the station plaza by connecting the plaza to a new green space with residential front-ages around it.

The Loma Alta Creek is re-configured west of Coast Highway consistent with the city’s plan for an expanded lagoon at that location and made user-friendly with landscaped banks, a viewing platform, and pedestrian and bike trails that link across the railroad tracks towards the beach. A new street runs along the creek, thereby making this unique open space amenity more accessible to the community.

A roundabout at Coast Highway and Oceanside Boulevard slows traffic and marks Oceanside Boulevard as a main east-west corridor. New shade trees are added to the palm trees that currently exist along the Highway and palm trees are added to Oceanside Boulevard. A landscaped median is added outside the TOD node, to signify the Avenue segment of the Coast Highway. The more pedestrian-oriented segment of the node does not include a median, in order to accommodate a narrower right-of-way that is more pedestrian-friendly”. - *Oceanside Coast Highway Vision and Strategic Plan*

**Prioritized Project Number : 5**

Project Name:	Crouch Street at Oceanside Boulevard	Source:	Transit field work
Primary Location:	Oceanside Boulevard at Crouch Street and Greenbrier Drive		
Improvements Proposed:	Add sidewalks and pedestrian facilities at Crouch Street and Oceanside Blvd. Relocate amenities that block sidewalks.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **6**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model (using 1/4 mile offset buffer):	<b>70.7</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>20,534</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>290</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **16**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	2		<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	5		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **14**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **11**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **6**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

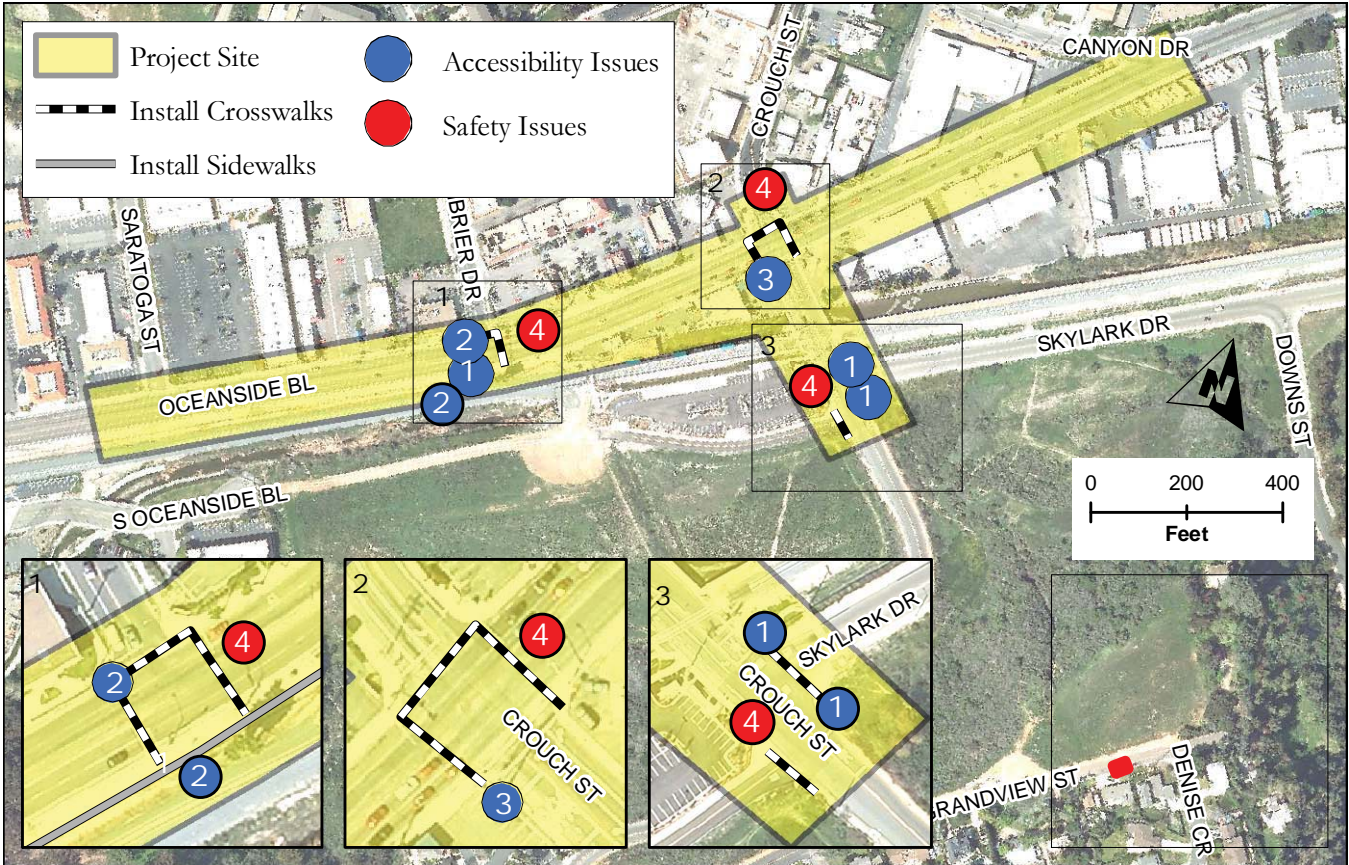
**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 55**

**Project:** Crouch Street at Oceanside Boulevard

**Prioritized Project Number:** 5



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Missing curb ramps (see issue A1)
- ② Lack of pedestrian activated signal (see issue A3)
- ③ Signs obstruct the sidewalk (see issue A4)
- ④ Missing crosswalks

**Cost:** \$273,500

**Contingency (35%):** \$95,725

**Total Cost:** \$369,225

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install curb ramp (see solution 1A)	3	EA	\$2,750	\$8,250
Add pedestrian activated signal (see solution 2A)	2	EA	\$125,000	\$250,000
Move signs away from walk (see solution 4A)	3	EA	\$250	\$750
Install crosswalks (see solution 3S)	580	LF	\$25	\$14,500



**Prioritized Project Number : 6**

Project Name:	Mission Avenue (Mesa to Fireside)	Source:	Field work / Public input
Primary Location:	Mission Avenue between Mesa Drive and Fireside Street		
Improvements Proposed:	Install missing sidewalks, install and enhance crosswalks when signal warrants are met. Move obstacles from the sidewalks.		
<b>PEDESTRIAN ACTIVITY LEVELS</b>		<b>Ranked Score for this Criteria (high scores are better)= 2</b>	
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	679.8	High (>201-300)	6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	60,209	Medium (101-200)	4
Normalized Score (model raw score / acres)	89	Low (<100)	2
<b>SAFETY CRITERIA</b>		<b>Ranked Score for this Criteria (high scores are better)= 27</b>	
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=	1		5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	11		2
No collisions noted but the public has expressed safety concerns in the area:			1
<b>ACCESSIBILITY CRITERIA</b>		<b>Ranked Score for this Criteria (high scores are better)= 12</b>	
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1
<b>CONNECTIVITY CRITERIA</b>		<b>Ranked Score for this Criteria (high scores are better)= 7</b>	
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			3
Missing routes to schools will be added or substantially improved from current conditions:			3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3
Connections will be added or substantially improved between major housing origins and major public facilities:			2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1
Connections will be added or substantially improved between major housing origins and employment areas:			1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1
<b>WALKABILITY CRITERIA</b>		<b>Ranked Score for this Criteria (high scores are better)= 5</b>	
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2
Bright, hot or highly reflective walking areas will receive shade from trees:			2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1
<b>INNOVATION CRITERIA</b>		<b>Ranked Score for this Criteria (high scores are better)= 1</b>	
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1
<b>TOTAL SCORE:</b>			<b>54</b>

**Project:** Mission Avenue (Mesa to Fireside)

**Prioritized Project Number :** 6



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- 1 Utility boxes limit access (see issue A4)
- 2 Missing crosswalks
- 3 Missing sidewalks (see issue A5)

**Cost:** \$193,925

**Contingency (35%):** \$67,874

**Total Cost:** \$261,799

Proposed Solutions: (Solution Reference No. can be found in Chapter 3)	Quantity	Unit	Unit Cost	Cost
Relocate utility boxes away from sidewalk (see solution 4A)	1	EA	\$5,000	\$5,000
Install and stripe crosswalks	837	LF	\$25	\$20,925
Install sidewalks (5' wide) (see issue 4A and 20S)	28,000	SF	\$6	\$168,000



**Prioritized Project Number : 7**

Project Name:	<b>I-5/Oceanside Boulevard</b>	Source: Field work / Public input
Primary Location:	Oceanside Boulevard between Saratoga Street and Nevada Street	
Improvements Proposed:	Add missing sidewalks, enhance and install crosswalks when signal warrants are met. Add lighting underneath I-5.	

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **4**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>385</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>61,587</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>174</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **15**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	6		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **14**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **13**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **4**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

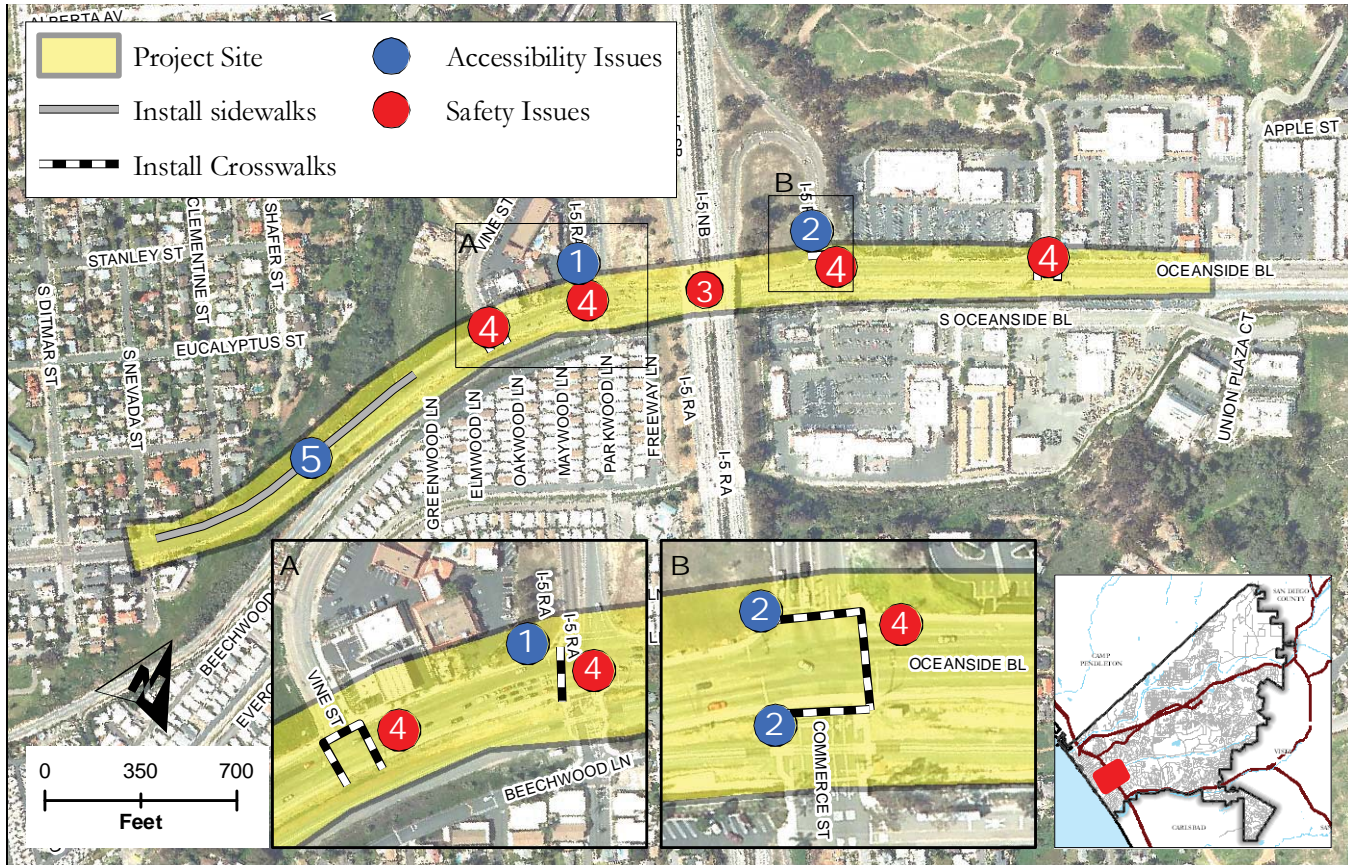
**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 52**

**Project: I-5 / Oceanside Boulevard**

**Prioritized Project Number : 7**



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$348,450

- ① Missing pedestrian curb ramp (see issue A2)
- ② Missing pedestrian actuated signals (see issue A3)
- ③ Missing pedestrian lighting at I-5 crossing (see issue S12 and S13)
- ④ Missing crosswalk
- ⑤ Missing sidewalk (see issue A5)

**Contingency (35%):** \$121,958

**Total Cost:** \$470,408

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install curb ramp (see solution 1A)	1	EA	\$2,750	\$2,750
Install pedestrian actuated signals (see solution 2A)	2	EA	\$125,000	\$250,000
Add pedestrian lighting under I-5 (see solution 17S)	1	LS	\$40,000	\$40,000
Install crosswalks (see solution 3S)	860	LF	\$25	\$21,500
Install sidewalks (5' wide) (see solution 4A and 20s)	5,700	SF	\$6	\$34,200



**Prioritized Project Number : 8**

Project Name:	<b>The Strand</b>	Source:	Field work/public input
Primary Location:	Between Wisconsin Avenue to Pier View Way		
Improvements Proposed:	Add crosswalks and stop sign at Seagaze Dr when signal warrants are met. Add pedestrian warning signs.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **10**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>211.8</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>64,302</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>304</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **5**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	1		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **15**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **10**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **9**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

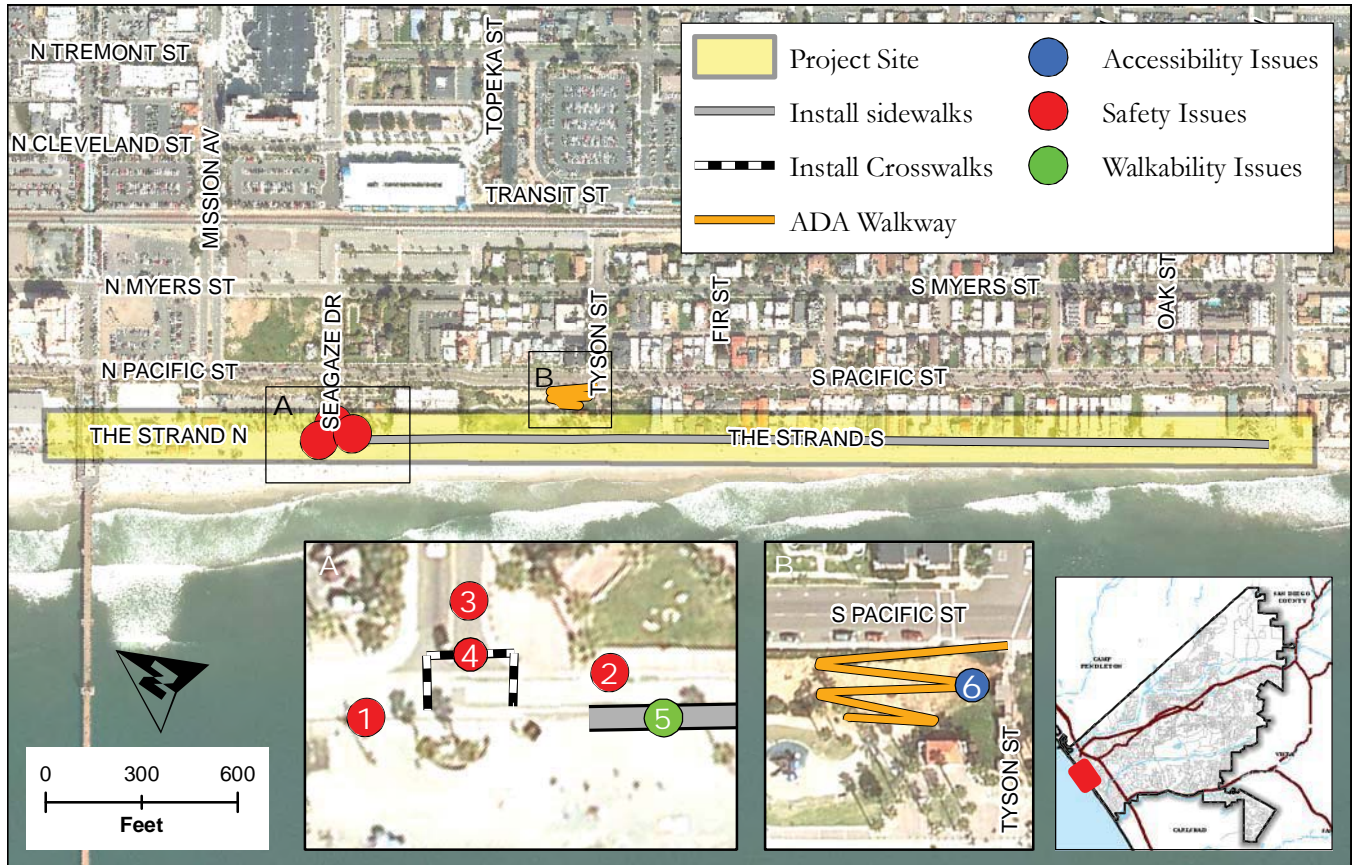
**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 51**

**Project: The Strand**

**Prioritized Project Number : 8**



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

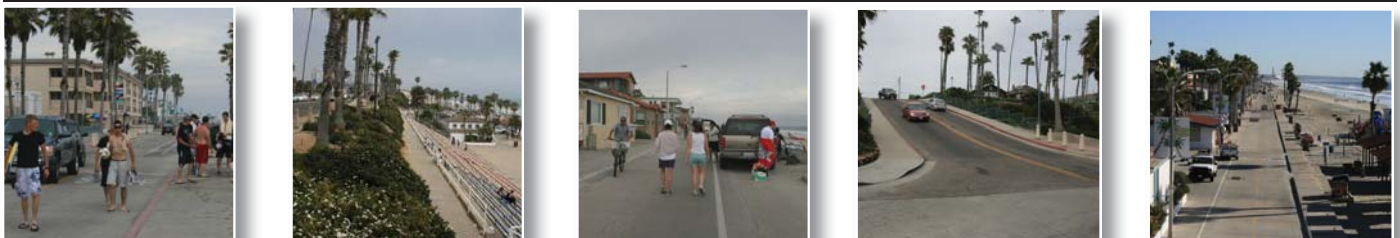
**Cost:** \$474,850

- 1 Lack of directional signage
- 2 Conflicts between pedestrians and cars at intersection (see issue S8)
- 3 Stop signs needed ( see issue S8)
- 4 Missing crosswalk
- 5 Missing adequate separation between vehicles and pedestrians, vehicles park along the strand forcing walkers into the street (see issue W6)
- 6 Missing ADA connection from Pacific Street to The Strand (see issue A2)

**Contingency (35%): \$166,197**

**Total Cost: \$641,047**

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Add directional signage for drivers travelling south on The Strand	1	EA	\$750	\$750
Add yield to pedestrian signage	4	EA	\$750	\$3,000
Add stop signs (ground mounted)	1	EA	\$500	\$500
Install crosswalks (see solution 3S)	84	LF	\$25	\$2,100
Install sidewalk (6'-8' wide) with curb and gutter (see solution 1W and 20S)	2,875	LF	\$76	\$218,500
Install ADA ramp from Pacific Street to The Strand at Tyson (see solution 6A)	1	LS	\$250,000	\$250,000



**Prioritized Project Number : 9**

Project Name:	<b>Pacific Street (Wisconsin to Pier View)</b>	Source:	Field work/public input
Primary Location:	Pacific Street from Wisconsin Avenue to Pier View Way		
Improvements Proposed:	Increase width of sidewalks based on level of use. Move bollards and install sidewalk into the adjacent planting to provide a wider walking path.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **10**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>225.4</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>78,566</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>349</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **8**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	4		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **10**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **11**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **7**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease derelict properties/ street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 48**

**Project:** Pacific Street (Wisconsin to Pier View)

**Prioritized Project Number :** 9



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$61,380

- ① Treatment #1, Sidewalk isn't a sufficient width to accommodate the number of pedestrians that utilize the corridor along South Pacific Street, should be 10' (see issue W6)
- ② Treatment #2, Sidewalk isn't a sufficient width to accommodate the number of pedestrians that utilize the corridor along South Pacific Street, should be 8' (see issue W6)
- ③ Treatment #3, Sidewalk isn't a sufficient width to accommodate the number of pedestrians that utilize the corridor along South Pacific Street, should be 7' (see issue W6)

**Contingency (35%):** \$21,483

**Total Cost:** \$82,863

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Increase sidewalk width from 5' to 10' (see solution 1W)	3,450	SF	\$6	\$20,700
Increase sidewalk width from 5' to 8' (see solution 1W)	2,580	SF	\$6	\$15,480
Increase sidewalk width from 5' to 7' when opportunities present themselves (see solution 1W)	4,200	SF	\$6	\$25,200



**Prioritized Project Number : 10**

Project Name:	South Cleveland Street (Oceanside to Wisconsin)	Source:	Coast Highway Vision Plan
Primary Location:	South Cleveland Street between Oceanside Blvd and Wisconsin Ave)		
Improvements Proposed:	Improve street conditions (street trees, repair sidewalks, add curb ramps.etc)		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **10**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>11.3</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>5,820</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>517</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **4**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	2		<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **13**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **10**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **6**

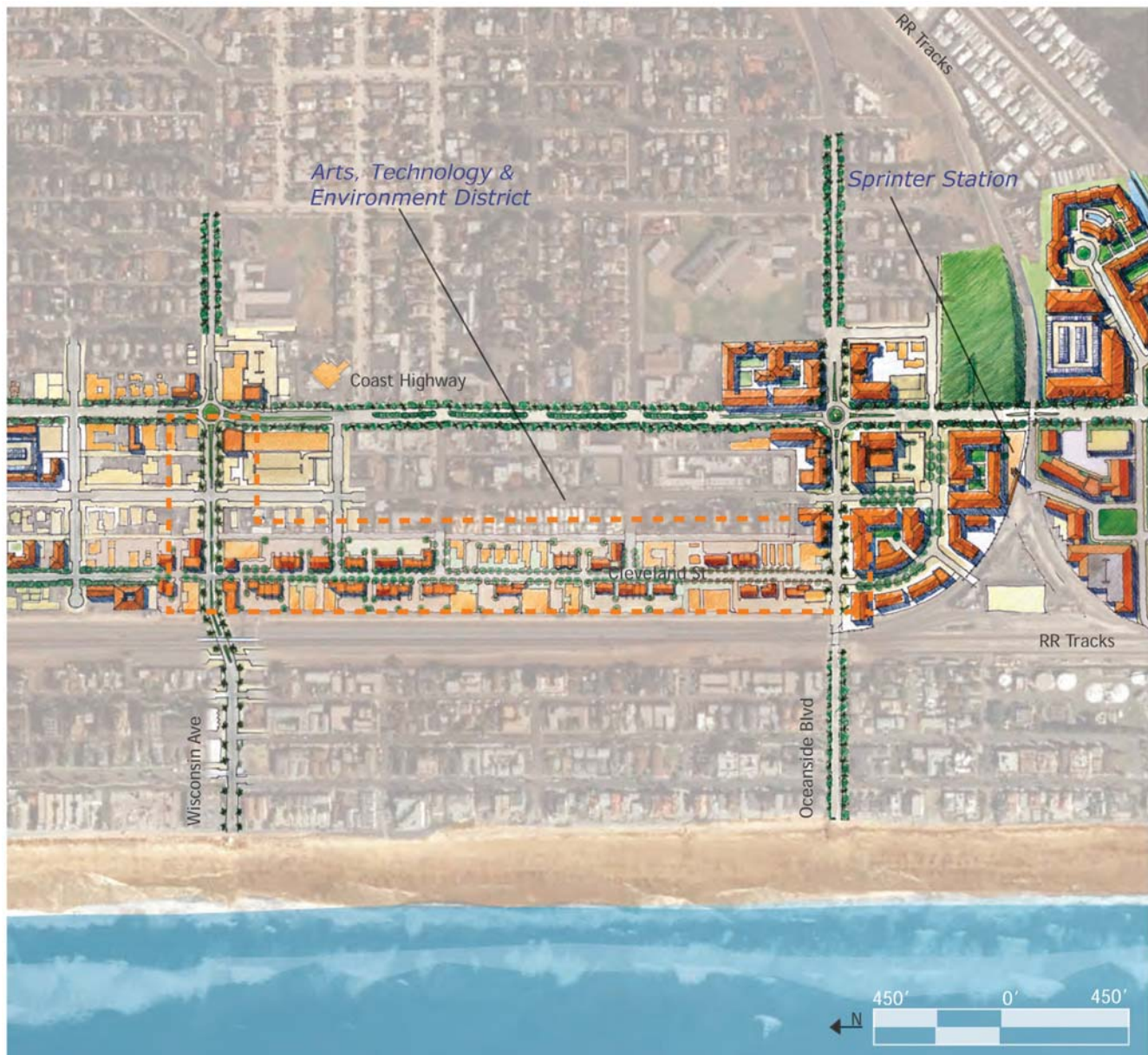
<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>
<b>TOTAL SCORE:</b>			<b>45</b>

Project: South Cleveland Street (Oceanside to Wisconsin)

Prioritized Project Number : 10



“The proposed location of the Arts, Technology & Environment District on Cleveland Street capitalizes upon available building stock and Oceanside’s unique manufacturing heritage (e.g. in surfboard shaping). The presence of under-utilized manufacturing facilities in this area makes it an ideal location for new creative industries seeking business space. The Plan calls for new infill on vacant lots along with the renovation of warehouses. The new and renovated structures house art- and technology-related uses, from software design and surfboard shaping, to “green” oriented professional offices, artists housing, galleries, and studios. Art supply stores and cafes would complete the ensemble.

Reducing parking requirements and creating a shared-parking district to take advantage of the District’s proximity to the train station and pedestrian-friendly district environment.” - *Oceanside Coast Highway Vision and Strategic Plan*

**Prioritized Project Number : 11**

Project Name:	<b>Pier View Way Promenade</b>	Source: Downtown Walkability Plan
Primary Location:	Streets including and bordered by Mission Avenue, Tremont Street, Civic Center and Myers Street	
Improvements Proposed:	Provide bulbout at corners and move parking signs off of the sidewalks. Move restaurant furniture away from pedestrians path of travel.	

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **10**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>28</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>12,514</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>447</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **18**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=		9	<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **10**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **3**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

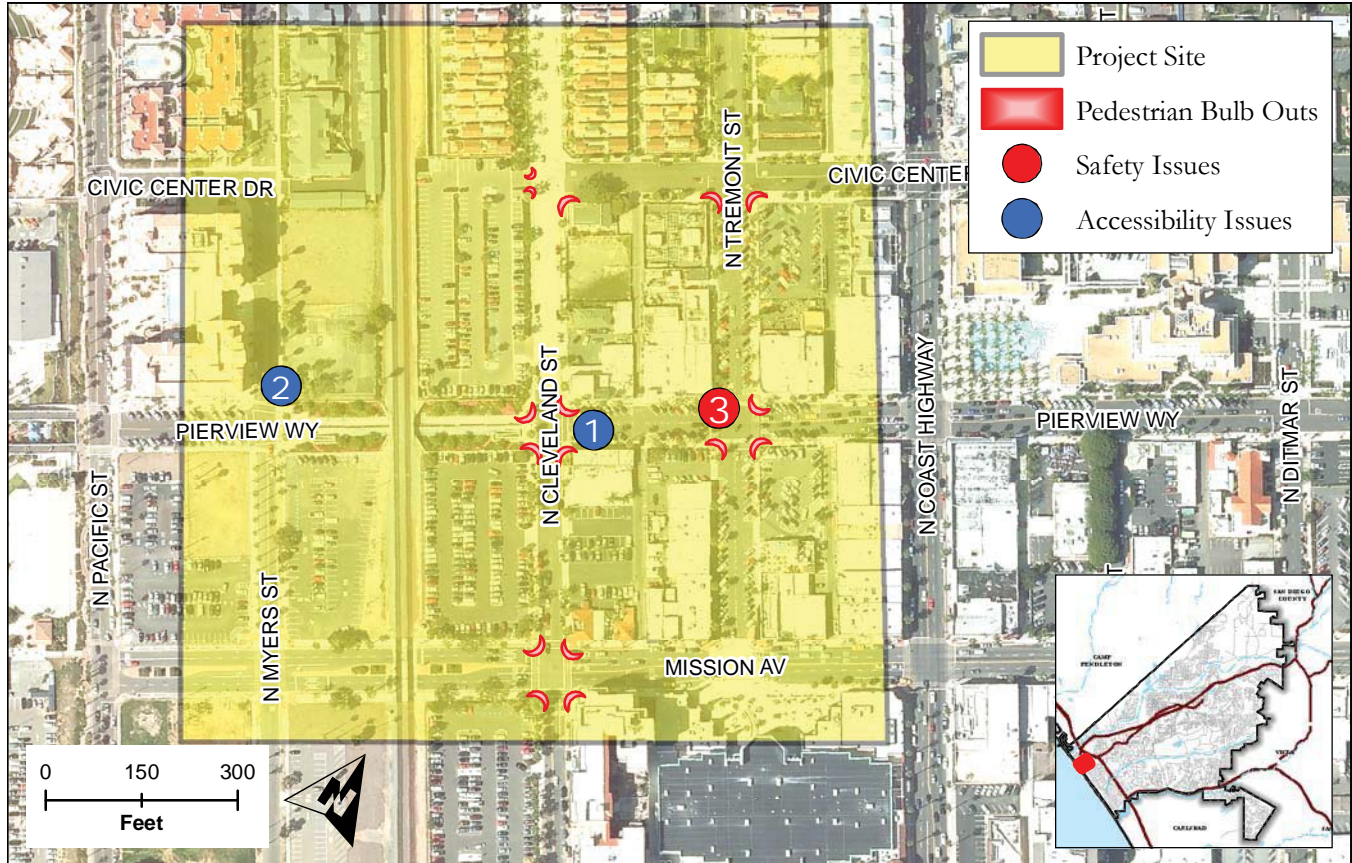
**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 45**

**Project:** Pier View Way Promenade

**Prioritized Project Number:** 11



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Restaurant seating obstructing the sidewalk (see issue A4)
- ② Limited walkable surfaces (see issue A4)
- ③ Pedestrian visibility of vehicles is limited (see issue S1 and S4)

**Cost:** \$300,500

**Contingency (35%):** \$105,175

**Total Cost:** \$405,675

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Move restaurant seating and signs off of sidewalk (see solution 4A)	-	-	-	-
Infill planters with walkable surfaces (see issue A4)	1	LS	\$500	\$500
Install bulb-outs (see solution 2S)	12	EA	\$25,000	\$300,000



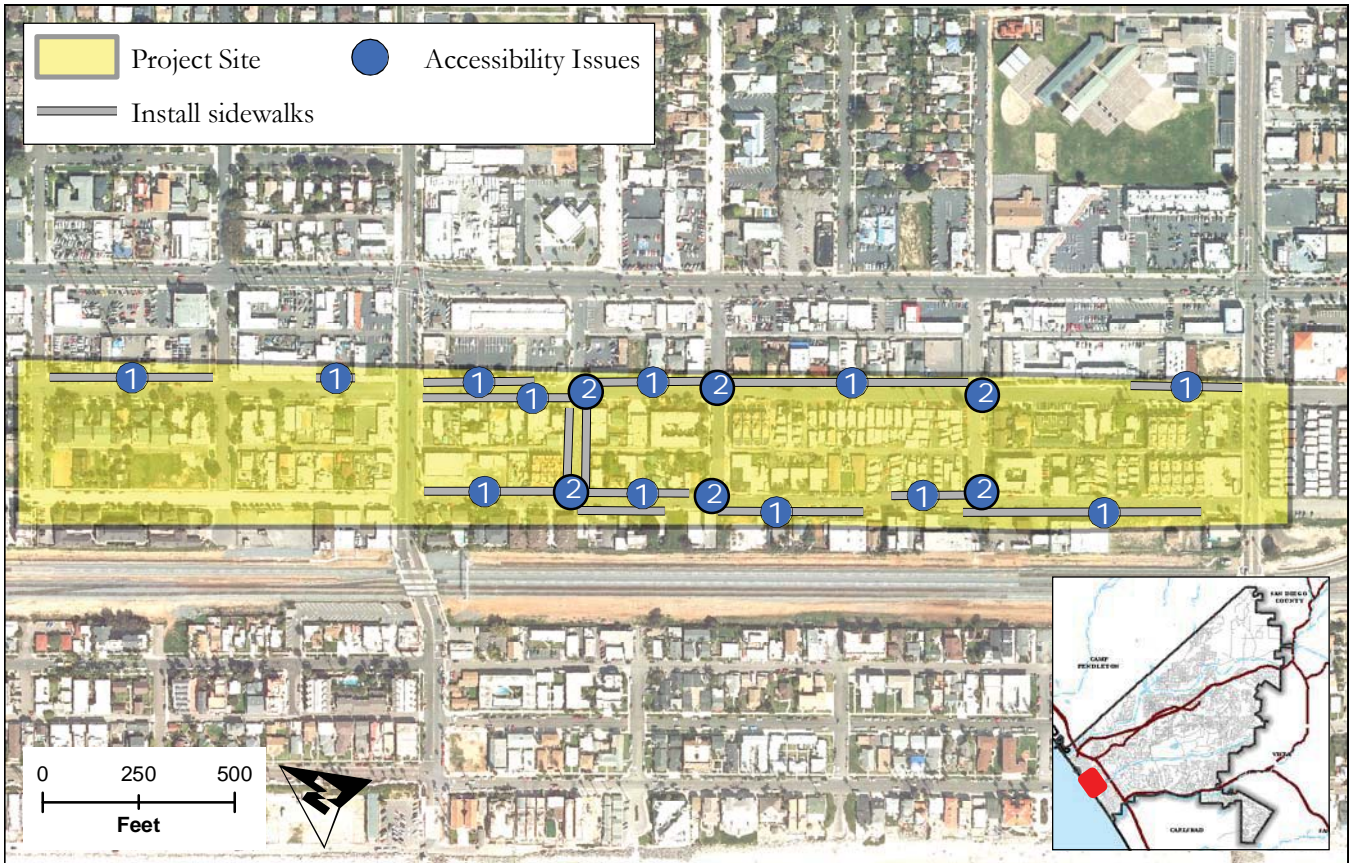
**Prioritized Project Number : 12**

Project Name: **Tremont and Cleveland Streets** Source: Field work/public input  
 Primary Location: South Tremont Street and Cleveland Street between Washington Avenue and Oceanside Boulevard  
 Improvements Proposed: Connect and install sidewalks and curb ramps.

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		6
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	280	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	82,416	Medium (101-200)	4	
Normalized Score (model raw score / acres)	294	Low (<100)	2	
SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		4
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			5	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	2		2	
No collisions noted but the public has expressed safety concerns in the area:			1	
ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		14
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1	
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		13
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			3	
Missing routes to schools will be added or substantially improved from current conditions:			3	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3	
Connections will be added or substantially improved between major housing origins and major public facilities:			2	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1	
Connections will be added or substantially improved between major housing origins and employment areas:			1	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1	
WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		6
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2	
Bright, hot or highly reflective walking areas will receive shade from trees:			2	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1	
INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1	
<b>TOTAL SCORE:</b>				<b>45</b>

**Project:** Tremont and Cleveland Streets

**Prioritized Project Number :** 12



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$302,275

- ① Missing sidewalk (see issue A5)
- ② Missing pedestrian ramps (see issue A2)

**Contingency (35%):** \$105,796

**Total Cost:** \$408,071

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install sidewalks (5' wide) (see solution 4A)	24,705	SF	\$6	\$148,500
Install curb and gutter (see solution 4A)	4,941	LF	\$25	\$123,525
Install pedestrian ramp (see solution 1A)	11	EA	\$2,750	\$30,250



**Prioritized Project Number : 13**

Project Name:	South Coast Highway (Eaton to Cassidy)	Source:	Coast Highway Vision Plan
Primary Location:	Coast Highway Between Cassidy St and Eaton St		
Improvements Proposed:	Improve and widen sidewalks. Add roundabouts and shade trees.		

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		4
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	100	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	14,680	Medium (101-200)	4	
Normalized Score (model raw score / acres)	147	Low (<100)	2	
SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		10
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			5	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	5		2	
No collisions noted but the public has expressed safety concerns in the area:			1	
ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		14
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1	
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		5
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			3	
Missing routes to schools will be added or substantially improved from current conditions:			3	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3	
Connections will be added or substantially improved between major housing origins and major public facilities:			2	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1	
Connections will be added or substantially improved between major housing origins and employment areas:			1	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1	
WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		7
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2	
Bright, hot or highly reflective walking areas will receive shade from trees:			2	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1	
INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1	
<b>TOTAL SCORE:</b>				<b>42</b>

**Project:** Coast Highway (Eaton to Cassidy)

**Prioritized Project Number :** 13



“The South ‘O’ Village is designed as two blocks of pedestrian-oriented retail and commercial mixed-use buildings compatible in mass and character with existing structures along Coast Highway and with adjacent residential development. Buildings in the Village incorporate large front display windows and frame the street on the ground floor. Sidewalks and building frontages are activated with pedestrian-oriented uses, such as cafes with outdoor dining.

Upper floors accommodate commercial uses and are differentiated from the ground floor through texture, color, material, and architectural elements. Denser development in the Village takes place at the corners of Cassidy Street and Vista Way and roundabouts as well as artful signage at these streets intersections mark the north and south entrances to the Village. Taller buildings at corners give pedestrians a sense of street enclosure and a feeling of arrival upon entering the Village. Public views to the water are framed by the new corner buildings and east-west arcades along the first floor. New shade trees in the Village and new landscaping on Cassidy and Vista frame the area and identify it as a district. Freeman Street is also integrated into the Village with new landscaping and accommodates a bike path, which links to the bicycle lanes and paths recently established by the city’s new Master Bicycle Plan, as well as to bicycle lanes on Coast Highway, Cassidy, and Vista.

South ‘O’ Village addresses its parking needs through a shared parking concept. Visitors can park once in the parking lots and street spaces and then walk to multiple destinations. Parking is tucked behind retail fronts so as to minimally impact the public realm. Two mid-block pedestrian paseos between Freeman Street and Coast Highway increase circulation and provide pedestrian access to the shopping areas in adaptively-reused buildings. New shops face the paseo’s courtyard, and pedestrian-oriented lighting and landscaping give the area character.” - *Oceanside Coast Highway Vision and Strategic Plan*

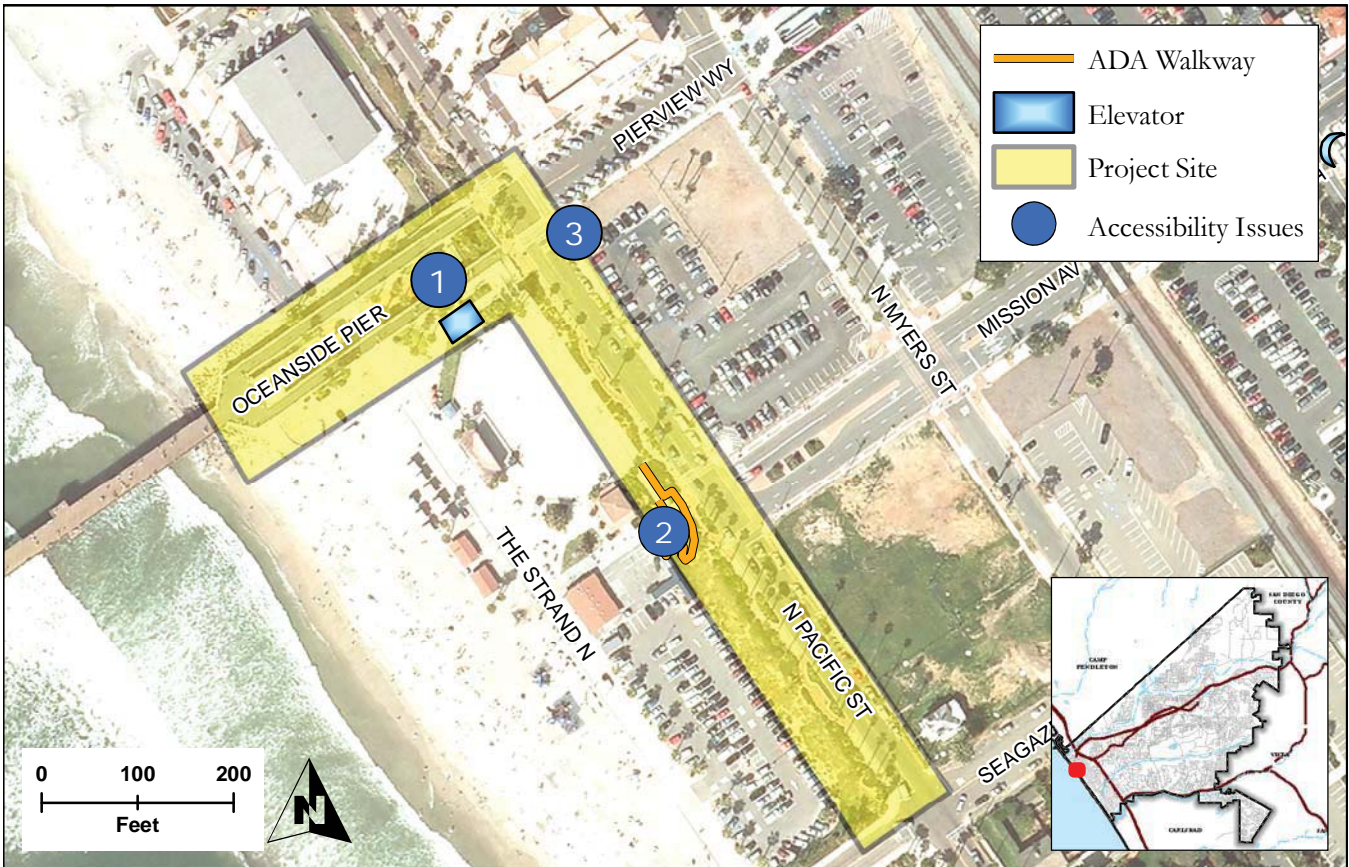


**Prioritized Project Number : 14**

Project Name:	Oceanside Pier		Source:	Field work
Primary Location:	Pier View Way and Pacific Street			
Improvements Proposed:	Provide elevator from the Pier to the Strand. Provide a ADA accessible ramp between Pacific Street and the amphitheater. Clear obstacles from the			
<b>PEDESTRIAN ACTIVITY LEVELS</b>			<b>Ranked Score for this Criteria (high scores are better)= 10</b>	
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:				(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	39.4	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	13,636	Medium (101-200)	4	
Normalized Score (model raw score / acres)	346	Low (<100)	2	
<b>SAFETY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 2</b>	
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=				5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=				3
Collisions between vehicles (or bikes) and pedestrians with minor injuries= 1				2
No collisions noted but the public has expressed safety concerns in the area:				1
<b>ACCESSIBILITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 14</b>	
What issues of accessibility will be improved by this project?				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:				5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):				4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):				3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:				3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:				2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:				2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:				1
<b>CONNECTIVITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 6</b>	
How will connections be added / improved or barriers removed between major destinations & origins?				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:				3
Missing routes to schools will be added or substantially improved from current conditions:				3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:				3
Connections will be added or substantially improved between major housing origins and major public facilities:				2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:				1
Connections will be added or substantially improved between major housing origins and employment areas:				1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:				1
<b>WALKABILITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 5</b>	
How will this project improve walkability and decrease the harshness of the walking environment?				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:				2
Bright, hot or highly reflective walking areas will receive shade from trees:				2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:				2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:				1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:				1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:				1
<b>INNOVATION CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 3</b>	
Will this project allow the city to implement new techniques and treatments?				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:				3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:				2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:				1
<b>TOTAL SCORE:</b>				<b>40</b>

**Project:** Oceanside Pier

**Prioritized Project Number :** 14



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

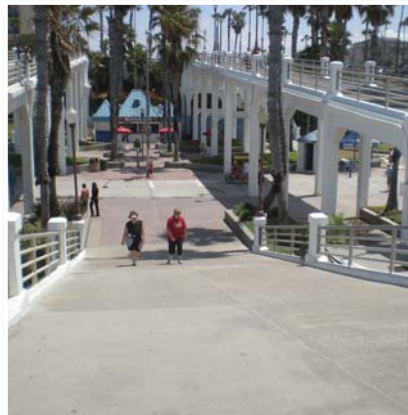
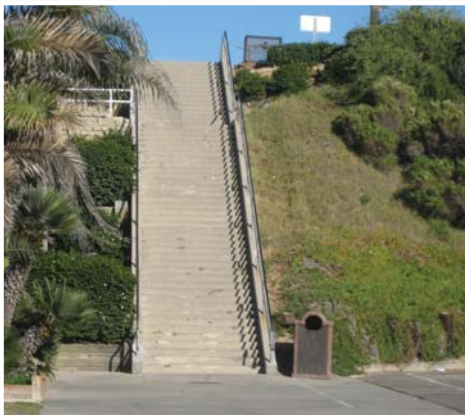
**Cost:** \$1,017,000

- ① Lack of ADA access onto The Pier (see issue A2)
- ② Lack of ADA access between The Pier, amphitheater, and The Strand (see issue A2)
- ③ Signs and newspaper racks obstruct the sidewalk (See Issue A4)

**Contingency (35%):** \$355,950

**Total Cost:** \$1,372,950

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install elevator	1	EA	\$1,000,000	\$1,000,000
Install ADA ramp from Pacific Street, to amphitheater, and The Strand at Mission Ave. (See Solution 6A)	1	LS	\$15,000	\$15,000
Remove or place obstacles away from the sidewalk (See Solution 4A)	8	EA	\$250	\$2,000



**Prioritized Project Number : 15**

Project Name:	San Luis Rey River Mouth (West of I-5, Windward to Harbor)	Source:	Coast Highway Vision Plan
Primary Location:	West of I-5, east of railroad tracks adjacent to San Luis Rey River mouth.		
Improvements Proposed:	Provide "Arts Bridge" with a wide sidewalk promenade. Increase traffic calming with roundabouts, crosswalks, and street trees. Extend walkway grid system.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **4**

Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>99</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>14,525</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>146</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **3**

History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008:			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=			<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **14**

What issues of accessibility will be improved by this project?			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **5**

How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **9**

How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 37**

**Project: San Luis Rey River Mouth (West of I-5, Windward to Harbor)      Prioritized Project Number :      15**

“As the gateway to Oceanside, Las Ramblas North ‘O’ incorporates artful entry signage where Coast Highway meets the Interstate. Coast Highway, is transformed into an “Arts Bridge” as it passes over the river with vertical artistic elements that catch the eye, but do not obstruct the view of the ocean from I-5.

The Plan calms entering traffic and congestion with a new roundabout in the existing right-of-way, where Interstate 5 interfaces with the Coast Highway. Crosswalks at the roundabout are set back from the intersection so that pedestrians can safely cross the street and two travel lanes in each direction assure that traffic flows smoothly.

Development in the node takes place on existing surface parking lots and empty parcels both north and south of the river, and includes a mix of visitor-serving uses, entertainment, retail, restaurants, and hotels. Development is low-impact; it incorporates sustainable building practices and uses green roofs and permeable paved surfaces. New street trees and landscape strips south of the river pull the vegetation and natural amenity of the river into the urban realm.

North of the river, Coast Highway is realigned so that it is pulled back from the Interstate. This allows for pedestrian-oriented development along both sides of the street to accommodate an entertainment/restaurant row district, based on a “Main Street” or “Las Ramblas” design concept. Parking is placed behind buildings so that there is minimal impact to the public realm.”

***- Oceanside Coast Highway Vision and Strategic Plan***

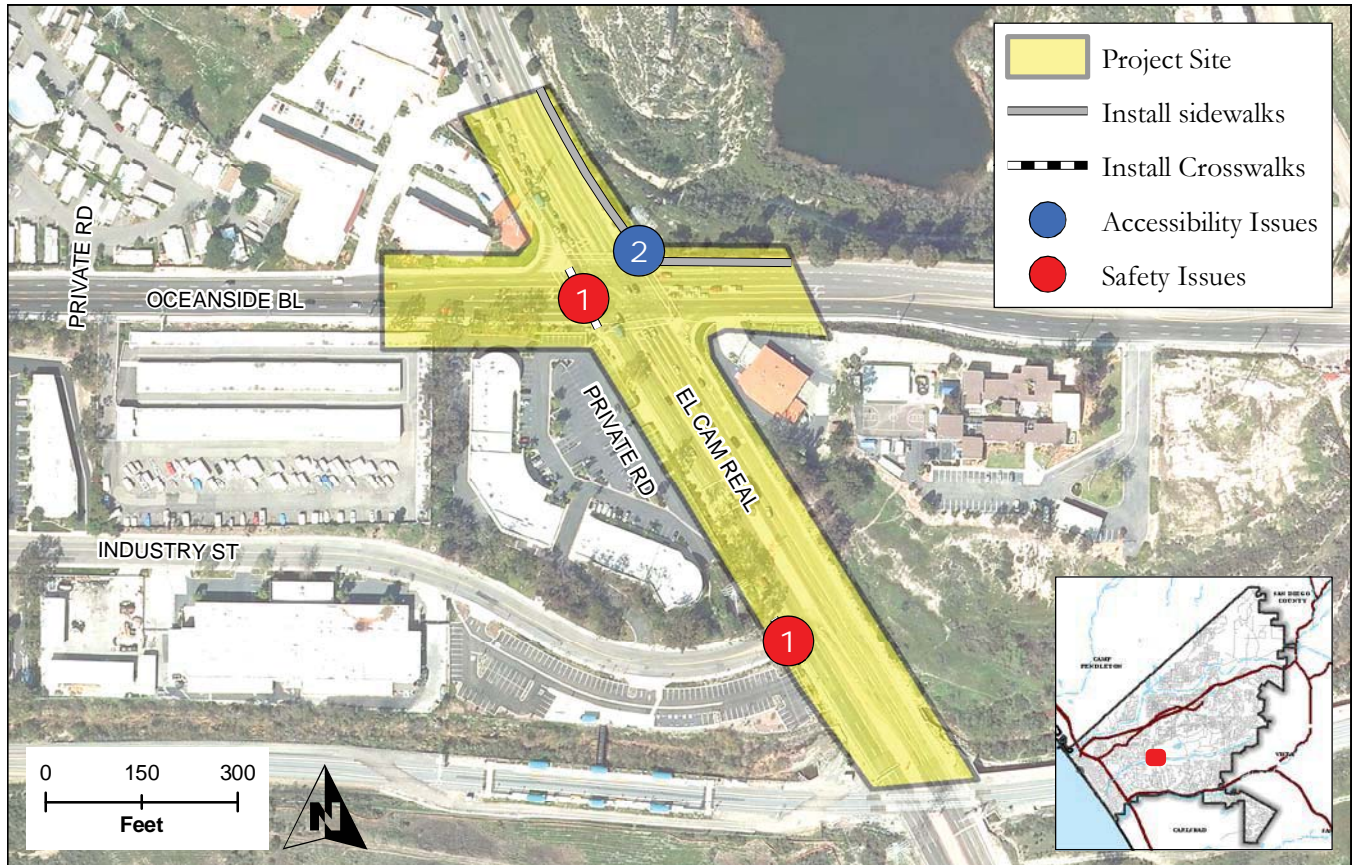
**Prioritized Project Number : 16**

Project Name:	<b>El Camino Real at Oceanside Boulevard</b>	Source:	Field work
Primary Location:	El Camino Real, Oceanside Boulevard and Industry		
Improvements Proposed:	Add crosswalks on Oceanside Blvd at El Camino Real and add missing sidewalks.		

<b>PEDESTRIAN ACTIVITY LEVELS</b>		Ranked Score for this Criteria (high scores are better)=		<b>4</b>
<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>				(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>54.1</b>	High (>201-300)	<b>6</b>	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>8,696</b>	Medium (101-200)	<b>4</b>	
Normalized Score (model raw score / acres)	<b>161</b>	Low (<100)	<b>2</b>	
<b>SAFETY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>14</b>
<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			<b>3</b>	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	7		<b>2</b>	
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>	
<b>ACCESSIBILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>10</b>
<b>What issues of accessibility will be improved by this project?</b>				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>	
<b>CONNECTIVITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>4</b>
<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>	
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>	
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>	
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>	
<b>WALKABILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>2</b>
<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>	
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>	
<b>INNOVATION CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>2</b>
<b>Will this project allow the city to implement new techniques and treatments?</b>				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>	
<b>TOTAL SCORE:</b>				<b>36</b>

**Project:** El Camino Real at Oceanside Boulevard

**Prioritized Project Number :** 16



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Lack of crosswalk
- ② Missing sidewalk (see issue A5)

**Cost:** \$20,950

**Contingency (35%):** \$7,333

**Total Cost:** \$28,283

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install crosswalk (see solution 3S)	190	LF	\$25	\$4,750
Install sidewalks (5' wide) (see solution 4A)	2,700	SF	\$6	\$16,200



**Prioritized Project Number : 17**

Project Name: **Freeman, Ditmar, Nevada, Clementine and Horne Streets (Oceanside to Seagaze)** Source: Coast Highway Vision Plan  
 Primary Location: Freeman, Ditmar, Nevada, Clementine and Horne Streets between Seagaze Dr and Oceanside Blvd  
 Improvements Proposed: Make pedestrian connections across railroad tracks and traffic calming on connector streets. Wider sidewalks. Add missing sidewalks.

<b>PEDESTRIAN ACTIVITY LEVELS</b>		Ranked Score for this Criteria (high scores are better)=		<b>4</b>
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:			(circle one & enter score above)	
Lineal Feet of improvement:		Very High (>301)	<b>10</b>	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>180.9</b>	High (>201-300)	<b>6</b>	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>35,997</b>	Medium (101-200)	<b>4</b>	
Normalized Score (model raw score / acres)	<b>199</b>	Low (<100)	<b>2</b>	
<b>SAFETY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>11</b>
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?			(multiply collisions by points, enter above)	
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1		<b>3</b>	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	4		<b>2</b>	
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>	
<b>ACCESSIBILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>8</b>
What issues of accessibility will be improved by this project?			(circle all that apply, enter above)	
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>	
<b>CONNECTIVITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>3</b>
How will connections be added / improved or barriers removed between major destinations & origins?			(circle all that apply, enter above)	
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>	
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>	
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>	
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>	
<b>WALKABILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>6</b>
How will this project improve walkability and decrease the harshness of the walking environment?			(circle all that apply, enter above)	
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>	
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>	
<b>INNOVATION CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>2</b>
Will this project allow the city to implement new techniques and treatments?			(circle one & enter score above)	
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>	
<b>TOTAL SCORE:</b>				<b>34</b>

**Project:** Freeman, Ditmar, Nevada, Clementine, and Horne Streets (Oceanside to Seagaze)

**Prioritized Project Number :** 17



“The Seaside neighborhood is predominately composed of single family homes, but also includes some multi-family developments. The Plan maintains existing zoning designations and land uses and facilitates smooth transitions between higher-intensity development and smaller single family homes.

The plan anticipates the introduction of various traffic calming measures on north/south residential streets to include traffic circles, pinch points, woonerfs, etc. to discourage cut-through traffic, reduce vehicle travel speeds, and improve the safety of the streets.” - *Oceanside Coast Highway Vision and Strategic Plan*

It includes pedestrian-friendly landscaping and landscaping and setbacks that soften the street wall.

**Prioritized Project Number : 18**

Project Name:	Pacific Street (Wisconsin to Morse)		Source:	Field work/public input
Primary Location:	Pacific Street from Wisconsin Avenue to Morse Street			
Improvements Proposed:	Add sidewalks when opportunities arise, remove landscaping within pedestrian path of travel, and revise driveways.			
<b>PEDESTRIAN ACTIVITY LEVELS</b>			<b>Ranked Score for this Criteria (high scores are better)= 6</b>	
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:				(circle one & enter score above)
Lineal Feet of improvement:			Very High (>301)	10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):		193.6	High (>201-300)	6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):		52,198	Medium (101-200)	4
Normalized Score (model raw score / acres)		270	Low (<100)	2
<b>SAFETY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 8</b>	
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=				5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=				3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=		4		2
No collisions noted but the public has expressed safety concerns in the area:				1
<b>ACCESSIBILITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 9</b>	
What issues of accessibility will be improved by this project?				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:				5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):				4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):				3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:				3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:				2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:				2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:				1
<b>CONNECTIVITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 6</b>	
How will connections be added / improved or barriers removed between major destinations & origins?				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:				3
Missing routes to schools will be added or substantially improved from current conditions:				3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:				3
Connections will be added or substantially improved between major housing origins and major public facilities:				2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:				1
Connections will be added or substantially improved between major housing origins and employment areas:				1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:				1
<b>WALKABILITY CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 2</b>	
How will this project improve walkability and decrease the harshness of the walking environment?				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:				2
Bright, hot or highly reflective walking areas will receive shade from trees:				2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:				2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:				1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:				1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:				1
<b>INNOVATION CRITERIA</b>			<b>Ranked Score for this Criteria (high scores are better)= 2</b>	
Will this project allow the city to implement new techniques and treatments?				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:				3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:				2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:				1
<b>TOTAL SCORE:</b>				<b>33</b>

**Project:** Pacific Street (Wisconsin to Morse)

**Prioritized Project Number :** 18



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Missing sidewalks (see issues A4, A5, and 7A)

**Cost:** \$71,550

**Contingency (35%):** \$25,043

**Total Cost:** \$96,593

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install sidewalks when major renovations occur (5' wide) (see solution 4A and 5A)	11,925	SF	\$6	\$71,550



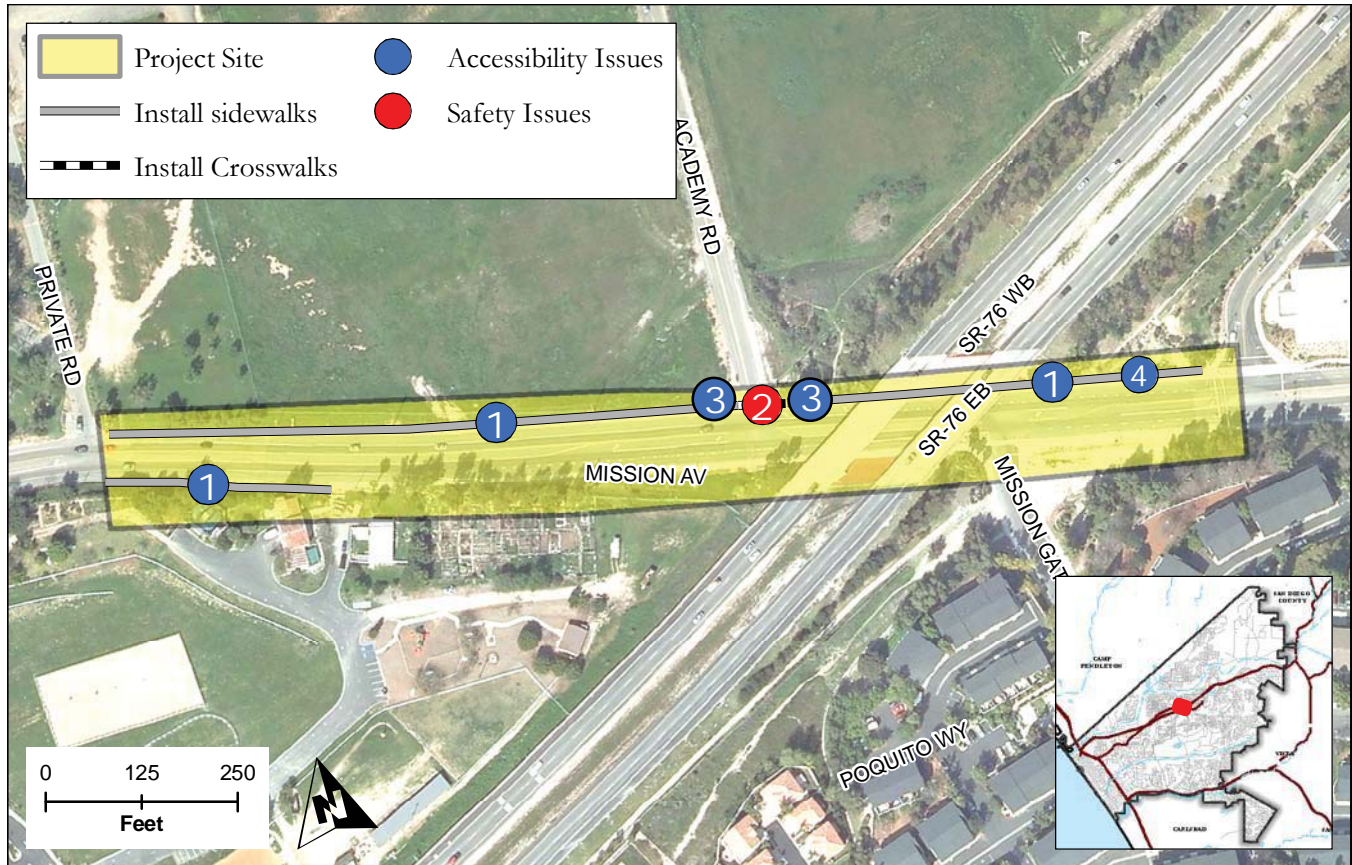
**Prioritized Project Number : 19**

Project Name:	Academy Road / Mission Avenue	Source:	Field work and public input
Primary Location:	Mission Avenue and Academy Road		
Improvements Proposed:	Provide sidewalks and curb ramps on north side of Mission Ave from Academy Rd eastbound under SR76 to entrance of shopping center.		

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		2
<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>				(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	10	
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	79.4	High (>201-300)	6	
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	6,495	Medium (101-200)	4	
Normalized Score (model raw score / acres)	82	Low (<100)	2	
SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		1
<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			5	
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3	
Collisions between vehicles (or bikes) and pedestrians with minor injuries=			2	
No collisions noted but the public has expressed safety concerns in the area:			1	
ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		14
<b>What issues of accessibility will be improved by this project?</b>				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5	
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4	
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3	
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3	
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2	
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2	
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1	
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		5
<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			3	
Missing routes to schools will be added or substantially improved from current conditions:			3	
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3	
Connections will be added or substantially improved between major housing origins and major public facilities:			2	
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1	
Connections will be added or substantially improved between major housing origins and employment areas:			1	
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1	
WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		6
<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2	
Bright, hot or highly reflective walking areas will receive shade from trees:			2	
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2	
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1	
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1	
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1	
INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
<b>Will this project allow the city to implement new techniques and treatments?</b>				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3	
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2	
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1	
<b>TOTAL SCORE:</b>			<b>30</b>	

**Project:** Academy Road / Mission Avenue

**Prioritized Project Number :** 19



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$77,380

- ① Missing sidewalk (see issue A5)
- ② Missing crosswalk
- ③ Missing pedestrian curb ramps (see issue A1)
- ④ Fencing, signs, and utilities are blocking future sidewalk (see issue A4)

**Contingency (35%):** \$27,083

**Total Cost:** \$104,463

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install sidewalk (5' wide) (see solutions 4A and 20S)	11,500	SF	\$6	\$69,000
Install ladder style crosswalk (see solution 3S)	62	LF	\$25	\$1,550
Install pedestrian curb ramps (see solution 1A)	2	EA	\$2,750	\$5,500
Relocate all obstacles within sidewalk (see solution 4A)	1	LS	\$1,330	\$1,330



**Prioritized Project Number : 20**

Project Name:	Canyon Drive/Mission Avenue	Source:	Collision data
Primary Location:	Mission Avenue/Canyon		
Issues Addressed:	High collision rates, high traffic speeds		
Improvements Proposed:	Clear sidewalks of utility boxes. Move "Canyon Dr" sign that hangs over the sidewalk.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= 10

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	72.8	High (>201-300)	6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	28,778	Medium (101-200)	4
Normalized Score (model raw score / acres)	395	Low (<100)	2

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= 6

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=	3		2
No collisions noted but the public has expressed safety concerns in the area:			1

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 3

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			1

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 4

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			3
Missing routes to schools will be added or substantially improved from current conditions:			3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			3
Connections will be added or substantially improved between major housing origins and major public facilities:			2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			1
Connections will be added or substantially improved between major housing origins and employment areas:			1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			1

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 2

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			2
Bright, hot or highly reflective walking areas will receive shade from trees:			2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			1

**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= 2

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			1

**TOTAL SCORE: 27**

**Project:** Canyon Drive / Mission Avenue

**Prioritized Project Number :** 20



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

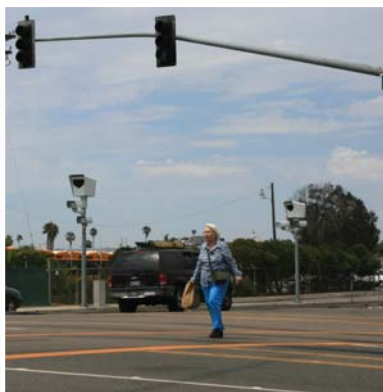
- ① Utility boxes/traffic signal boxes in sidewalk (see issue A4)
- ② Canyon Drive street sign sits over the sidewalk
- ③ Lack of pedestrian crossing signage (see issue S7)

**Cost:** \$16,000

**Contingency (35%):** \$5,600

**Total Cost:** \$21,600

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Relocate utility boxes/traffic signal boxes in the sidewalk (see solution 4A)	3	EA	\$5,000	\$15,000
Move "Canyon Drive" sign away from sidewalk	1	EA	\$250	\$250
Add additional pedestrian crossing signage for right-turn-only vehicles on west bound Mission Avenue onto northbound Canyon Drive	1	EA	\$750	\$750



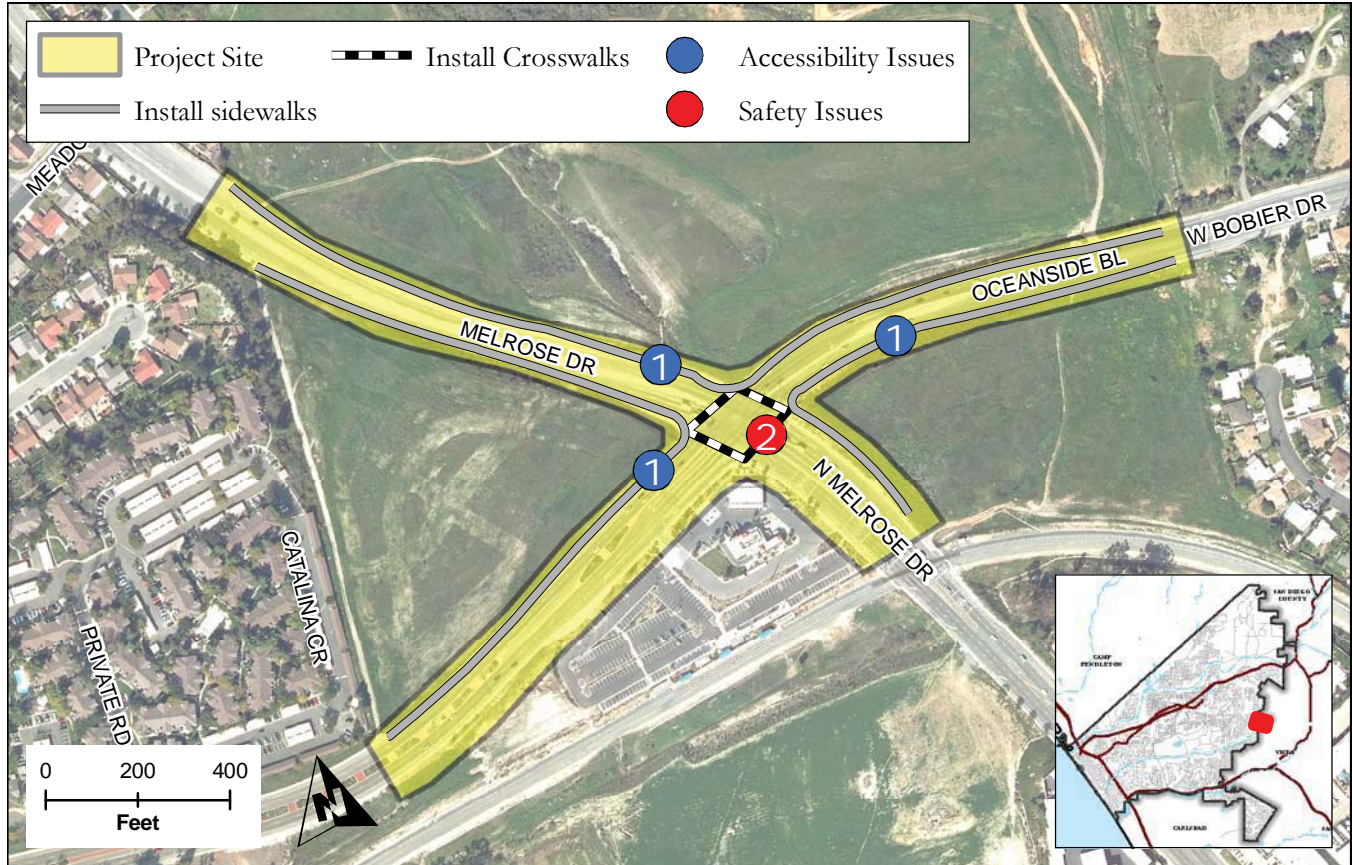
**Prioritized Project Number : 21**

Project Name:	<b>Melrose Drive at Oceanside Boulevard</b>	Source:	Transit field work
Primary Location:	Melrose Drive and Oceanside Boulevard		
Improvements Proposed:	Add crosswalks and sidewalks on Oceanside Blvd at Melrose Drive when signal warrants are met.		

PEDESTRIAN ACTIVITY LEVELS		Ranked Score for this Criteria (high scores are better)=		2
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:				(circle one & enter score above)
Lineal Feet of improvement:		Very High (>501)		10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	53.6	High (>201-300)		6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	3,747	Medium (101-200)		4
Normalized Score (model raw score / acres)	70	Low (<100)		2
SAFETY CRITERIA		Ranked Score for this Criteria (high scores are better)=		1
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008:				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=				5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=				3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=				2
No collisions noted but the public has expressed safety concerns in the area:				1
ACCESSIBILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		9
What issues of accessibility will be improved by this project?				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:				5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):				4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):				3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:				3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:				2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:				2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:				1
CONNECTIVITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		6
How will connections be added / improved or barriers removed between major destinations & origins?				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:				3
Missing routes to schools will be added or substantially improved from current conditions:				3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:				3
Connections will be added or substantially improved between major housing origins and major public facilities:				2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:				1
Connections will be added or substantially improved between major housing origins and employment areas:				1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:				1
WALKABILITY CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
How will this project improve walkability and decrease the harshness of the walking environment?				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:				2
Bright, hot or highly reflective walking areas will receive shade from trees:				2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:				2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:				1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:				1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:				1
INNOVATION CRITERIA		Ranked Score for this Criteria (high scores are better)=		2
Will this project allow the city to implement new techniques and treatments?				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:				3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:				2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:				1
<b>TOTAL SCORE:</b>				<b>22</b>

**Project: Melrose Drive at Oceanside Boulevard**

**Prioritized Project Number : 21**



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

- ① Missing sidewalks (see issue A5)
- ② Missing crosswalks (see issue S7)

**Cost:** \$175,500

**Contingency (35%):** \$61,425

**Total Cost:** \$236,925

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install sidewalks (5' wide) (see solution 4A)	27,000	SF	\$6	\$162,000
Install crosswalks (see solution 3S)	540	LF	\$25	\$13,500



**Prioritized Project Number : 22**

Project Name:	San Luis Rey Drive/I-5 Crossing	Source:	Public input
Primary Location:	San Luis Rey Drive at Interstate 5		
Improvements Proposed:	Add lighting in the underpass and install paving between staircase and San Luis Rey Drive.		

<b>PEDESTRIAN ACTIVITY LEVELS</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>4</b>
<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>				(circle one & enter score above)
Lineal Feet of improvement:			Very High (>301)	10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):		32.8	High (>201-300)	6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):		3,573	Medium (101-200)	4
Normalized Score (model raw score / acres)		109	Low (<100)	2

<b>SAFETY CRITERIA</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>2</b>
<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=				5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=				3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=		1		2
No collisions noted but the public has expressed safety concerns in the area:				1

<b>ACCESSIBILITY CRITERIA</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>9</b>
<b>What issues of accessibility will be improved by this project?</b>				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:				5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):				4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):				3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:				3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:				2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:				2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:				1

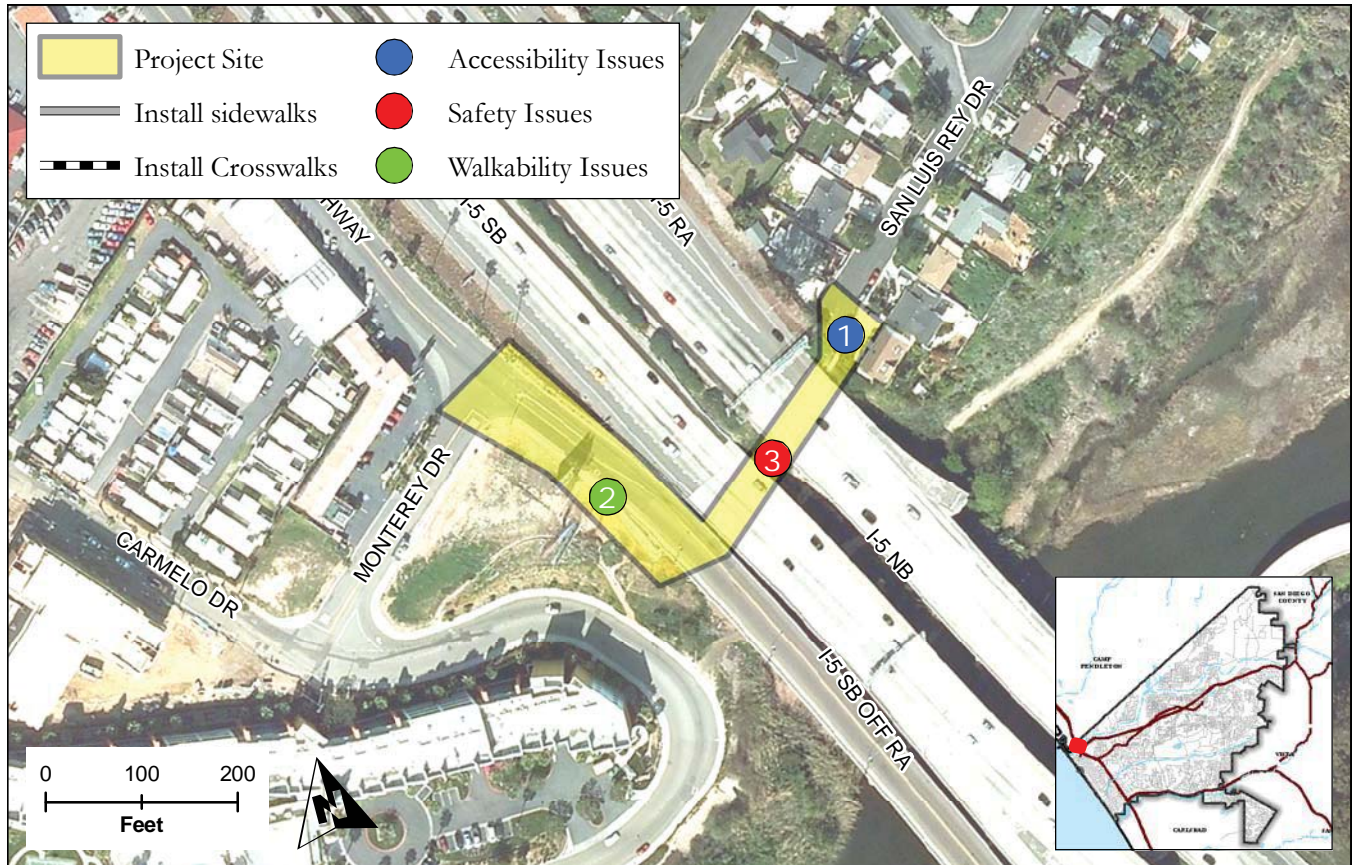
<b>CONNECTIVITY CRITERIA</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>4</b>
<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:				3
Missing routes to schools will be added or substantially improved from current conditions:				3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:				3
Connections will be added or substantially improved between major housing origins and major public facilities:				2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:				1
Connections will be added or substantially improved between major housing origins and employment areas:				1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:				1

<b>WALKABILITY CRITERIA</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>2</b>
<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:				2
Bright, hot or highly reflective walking areas will receive shade from trees:				2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:				2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:				1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:				1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:				1

<b>INNOVATION CRITERIA</b>	<b>Ranked Score for this Criteria (high scores are better)=</b>			<b>1</b>
<b>Will this project allow the city to implement new techniques and treatments?</b>				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:				3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:				2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:				1
<b>TOTAL SCORE:</b>				<b>22</b>

**Project:** San Luis Rey Drive/ I-5 Crossing

**Prioritized Project Number :** 22



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$43,000

- 1 Missing walk to access staircase (see issue A5 and A9)
- 2 Lack of signage for pedestrian under crossing (see issue W5)
- 3 Lack of lighting (see issues W3)

**Contingency (35%):** \$15,050

**Total Cost:** \$58,050

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install concrete access to the staircase (5' wide) (see solution 4A)	250	SF	\$6	\$1,500
Add directional signage to the underpass	2	LS	\$750	\$1,500
Add pedestrian lighting under I-5 (see solution 17S and 19S)	1	LS	\$40,000	\$40,000



**Prioritized Project Number : 23**

Project Name:	<b>Pacific Street (Morse to Eaton)</b>	Source:	Field work/public input
Primary Location:	Pacific Street from Morse Street to Eaton Street		
Improvements Proposed:	Address ADA issues on east side of road with ADA accessible ramps. Install sidewalks on west side of Pacific St.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= **4**

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>			(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)	<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>212.4</b>	High (>201-300)	<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>35,788</b>	Medium (101-200)	<b>4</b>
Normalized Score (model raw score / acres)	<b>169</b>	Low (<100)	<b>2</b>

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= **1**

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?</b>			(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=			<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=			<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=			<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:			<b>1</b>

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **11**

<b>What issues of accessibility will be improved by this project?</b>			(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:			<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):			<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):			<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:			<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:			<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:			<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:			<b>1</b>

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **1**

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>			(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:			<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:			<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:			<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:			<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:			<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:			<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:			<b>1</b>

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>			(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:			<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:			<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:			<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:			<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:			<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:			<b>1</b>

**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= **2**

<b>Will this project allow the city to implement new techniques and treatments?</b>			(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:			<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:			<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:			<b>1</b>

**TOTAL SCORE: 21**

**Project:** Pacific Street (Morse to Eaton)

**Prioritized Project Number :** 23



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$208,000

1 Lack of ADA access to sidewalk above hill (see issue 8A)

2 Missing sidewalk for ADA access

**Contingency (35%):** \$72,800

**Total Cost:** \$280,800

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
*Install missing ADA ramp at Morse and Eaton (see solution 6A)	2	EA	\$50,000	\$100,000
*Install sidewalk (5' wide) when new development occurs (see solution 4A)	18,000	SF	\$6	\$108,000

\*Note: Only one solution is required to address the ADA access issue along South Pacific Street.



**Prioritized Project Number : 24**

Project Name:	<b>El Corazon Trail Access</b>	Source: Public input
Primary Location:	El Corazon Trails at El Camino Real, Oceanside Boulevard, and Mesa Drive	
Improvements Proposed:	Add missing sidewalks along El Camino Real and Mesa Drive to provide connection. Add trail entry points for future trail access.	

<b>PEDESTRIAN ACTIVITY LEVELS</b>		Ranked Score for this Criteria (high scores are better)=		<b>2</b>
Based on the Pedestrian Priority Model, the area has a pedestrian activity & issue score of:				(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301)		<b>10</b>
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	<b>501.9</b>	High (>201-300)		<b>6</b>
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	<b>38,106</b>	Medium (101-200)		<b>4</b>
Normalized Score (model raw score / acres)	<b>76</b>	Low (<100)		<b>2</b>

<b>SAFETY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>3</b>
History of collisions btwn. peds & vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008?				(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=				<b>5</b>
Collisions between vehicles (or bikes) and pedestrians with serious injuries=	1			<b>3</b>
Collisions between vehicles (or bikes) and pedestrians with minor injuries=				<b>2</b>
No collisions noted but the public has expressed safety concerns in the area:				<b>1</b>

<b>ACCESSIBILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>5</b>
What issues of accessibility will be improved by this project?				(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:				<b>5</b>
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):				<b>4</b>
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):				<b>3</b>
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:				<b>3</b>
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:				<b>2</b>
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:				<b>2</b>
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:				<b>1</b>

<b>CONNECTIVITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>4</b>
How will connections be added / improved or barriers removed between major destinations & origins?				(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:				<b>3</b>
Missing routes to schools will be added or substantially improved from current conditions:				<b>3</b>
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:				<b>3</b>
Connections will be added or substantially improved between major housing origins and major public facilities:				<b>2</b>
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:				<b>1</b>
Connections will be added or substantially improved between major housing origins and employment areas:				<b>1</b>
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:				<b>1</b>

<b>WALKABILITY CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>3</b>
How will this project improve walkability and decrease the harshness of the walking environment?				(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:				<b>2</b>
Bright, hot or highly reflective walking areas will receive shade from trees:				<b>2</b>
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:				<b>2</b>
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:				<b>1</b>
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:				<b>1</b>
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:				<b>1</b>

<b>INNOVATION CRITERIA</b>		Ranked Score for this Criteria (high scores are better)=		<b>1</b>
Will this project allow the city to implement new techniques and treatments?				(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:				<b>3</b>
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:				<b>2</b>
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:				<b>1</b>
<b>TOTAL SCORE:</b>				<b>18</b>

**Project:** El Corazon Trail Access

**Prioritized Project Number:** 24



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$164,520

- 1 Missing sidewalk on south side of Mesa Drive (see issue A5)
- 2 Missing sidewalk on east side of El Camino Real (see issue A5)
- 3 Missing trail access

**Contingency (35%):** \$57,582

**Total Cost:** \$222,102

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install sidewalk on south side of Mesa Drive (5' wide) (see solution 4A)	15,240	SF	\$6	\$91,440
Install sidewalk on east side of El Camino Real (5' wide) (see solution 4A)	10,680	SF	\$6	\$64,080
Install kiosks	3	EA	\$3,000	\$9,000



**Prioritized Project Number : 25**

Project Name:	North Side of the San Luis Rey River Trail	Source:	Field work / Public input
Primary Location:	North side of San Luis Rey River between College Avenue and Douglas Drive		
Improvements Proposed:	Improve walkability with amenities and regrade surface.		

**PEDESTRIAN ACTIVITY LEVELS** Ranked Score for this Criteria (high scores are better)= 2

<b>Based on the Pedestrian Priority Model, the area has a pedestrian activity &amp; issue score of:</b>		(circle one & enter score above)
Lineal Feet of improvement:		Very High (>301) 10
Acres around the project site evaluated in the model ( using 1/4 mile offset buffer):	655.8	High (>201-300) 6
Model priority raw score (pedestrian priority score of all pixels in the buffer added together):	25,049	Medium (101-200) 4
Normalized Score (model raw score / acres)	38	Low (<100) 2

**SAFETY CRITERIA** Ranked Score for this Criteria (high scores are better)= 1

<b>History of collisions btwn. peds &amp; vehicles (@ nearest intersection + 150' in each direction) for the period 2000-2008:</b>		(multiply collisions by points, enter above)
Fatalities that relate to area conditions (excludes DUIs for either the driver or pedestrian)=		5
Collisions between vehicles (or bikes) and pedestrians with serious injuries=		3
Collisions between vehicles (or bikes) and pedestrians with minor injuries=		2
No collisions noted but the public has expressed safety concerns in the area:		1

**ACCESSIBILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 3

<b>What issues of accessibility will be improved by this project?</b>		(circle all that apply, enter above)
Intersection elements (markings, medians, signals, phasing, pop-outs) will be made that allow those with impairments to cross safely:		5
Paths of travel will be added along roadways where they are partially missing (those with disabilities are inequitably affected):		4
Paths of travel will be added along roadways where they are completely missing (all users are currently affected equally):		3
Pedestrian facilities that are clearly not in conformance with ADA standards, will be brought up to the current standards:		3
Pedestrian facilities that are in conformance with earlier ADA standards, will be brought up to the current standards:		2
Obstacles that may be considered trip conditions, will be removed & replaced with new or corrected pavements:		2
Obstacles that hinder the path of travel (but still meet minimum ADA criteria) will be removed and/or the width will be increased:		1

**CONNECTIVITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 1

<b>How will connections be added / improved or barriers removed between major destinations &amp; origins?</b>		(circle all that apply, enter above)
Missing routes to transit centers will be added or substantially improved from current conditions:		3
Missing routes to schools will be added or substantially improved from current conditions:		3
The improvements will help to support smart growth, community infill, greenhouse gas reduction and/or affordable housing strategies:		3
Connections will be added or substantially improved between major housing origins and major public facilities:		2
Connections will be added or substantially improved between major housing origins and major retail or neighborhood service functions:		1
Connections will be added or substantially improved between major housing origins and employment areas:		1
Connections will be added or substantially improved between major housing origins, public parking and recreational areas:		1

**WALKABILITY CRITERIA** Ranked Score for this Criteria (high scores are better)= 5

<b>How will this project improve walkability and decrease the harshness of the walking environment?</b>		(circle all that apply, enter above)
Improved edge treatments will separate or buffer fast moving vehicles from the pedestrian walking area:		2
Bright, hot or highly reflective walking areas will receive shade from trees:		2
The creation of public spaces, plazas and promenades will create safe, interactive areas that will increase walkability:		2
The addition of site amenities (benches, bike racks, newspaper racks, drinking fountains, etc) will improve the possible walkability:		1
The improvement of the immediate environment will decrease dilapidated properties/street environments, thereby improving walkability:		1
Increased use, lighting, & obstacle removal will increase visibility and reduce crime or the perception of safety from criminal activity:		1

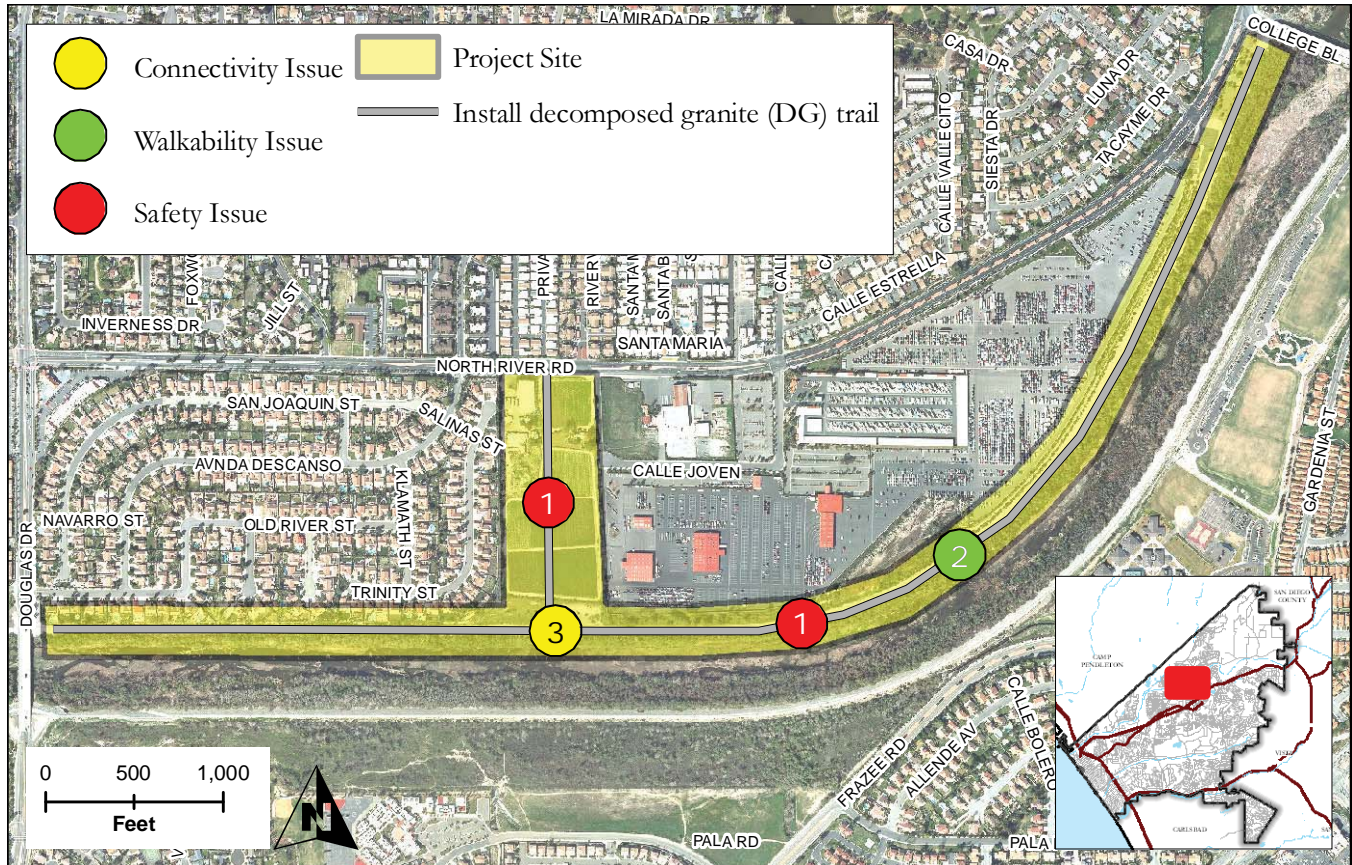
**INNOVATION CRITERIA** Ranked Score for this Criteria (high scores are better)= 1

<b>Will this project allow the city to implement new techniques and treatments?</b>		(circle one & enter score above)
Provides a unique technique or treatment not found in the region, that can be monitored & have application to other regional areas:		3
Allows for unique techniques and treatments that are common in other municipalities but not in Oceanside:		2
Allows for techniques & treatments that exist in Oceanside but need to be spread to other areas of Oceanside:		1

**TOTAL SCORE: 13**

**Project:** North Side of San Luis Rey River Trail

**Prioritized Project Number :** 25



**Existing Issues:** (Issue Reference No. can be found in Chapter 3)

**Cost:** \$366,320

- 1 Trail surface is uneven
- 2 Lack of amenities along trail
- 3 Add Mid-block connection to the North Side of the San Luis Rey River Trail (5' wide minimum)

**Contingency (35%):** \$128,212

**Total Cost:** \$494,532

<b>Proposed Solutions:</b> (Solution Reference No. can be found in Chapter 3)	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Cost</b>
Install decomposed granite path (10' wide)	100,440	SF	\$3.50	\$351,540
Install information kiosks	2	EA	\$3,000	\$6,000
Install benches (4' long, every 1/4 mile)	7	EA	\$1,040	\$7,280
Pet waste disposal station	3	EA	\$500	\$1,500



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## CHAPTER 7

# FUNDING SOURCES

### 7.0 Funding Overview

This chapter describes various sources of funding available to plan and construct pedestrian facilities, or to provide awareness, encouragement, or education programs.

*Funding for pedestrian projects can come from local, regional, state, federal, and private sources.*

### 7.1 Funding Descriptions

Pedestrian projects and programs are funded through multiple sources, and not all sources apply to all projects. Many sources require a local funding match and most are competitive based on project merit and adherence to grant criteria. Table 23 provides an overview of the potential funding sources and requirements.

### 7.2 Historic Funding Sources

Historically, pedestrian facilities, including sidewalks, were built by development companies as subdivisions were created. Homeowners have long been required by state law to maintain the sidewalk in front of their property. With the passage of the Americans with Disabilities Act of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991, new federal resources for pedestrian and accessibility improvements became available. As discussed below, there is a wide range of sources potentially available to improve the pedestrian environment. However, it is necessary to match each project with available sources.

*Pedestrian facilities are typically underfunded and sources of funding are limited. However, a number of competitive grants and programs do exist from a number of agencies.*

Table 23: Possible Funding Sources for Pedestrian Facilities

Source	Administrator	Description	Funding Cycle	Match Required
<b>LOCAL SOURCES</b>				
<b>Business Improvement Districts</b>	City of Oceanside Business Improvement Districts	A BID is established by a vote of affected businesses, who pay a yearly assessment for use in planning, marketing & physical improvements. Often used as a local match for streetscape improvement programs, which can include pedestrian facilities.	Annual Budget	N/A
<b>Capital Improvement Program (CIP)</b>	City of Oceanside	Includes sidewalk replacement, Sidewalk Replacement Cost Sharing Program, temporary repairs, lighting, landscaping, and maintenance of all devices and facilities.	Annual Budget	N/A
<b>Developers - General Requirements</b>	City of Oceanside Development Services Dept. & Planning Division	City transportation standards and building codes require new construction and alterations to include pedestrian facilities, lighting and landscaping. Standards may also require dedication of open space for a trail and trail construction.	N/A	N/A
<b>Developers - Impact Fees (Infill Development)</b>	Development Services Department & Facilities Financing Department	For development on previously developed parcels (infill development), Developer Impact Fees are assessed by the city to offset public costs required to provide infrastructure supporting the new development.	N/A	N/A
<b>Developers - Facility Benefit Assessment Districts</b>	Development Services Department & Planning Division	For newly developing areas ("greenfield development"), Facility Benefit Assessment Districts (FBA) are funded by developers in agreement with the city, providing infrastructure of various types as community growth thresholds are reached.	N/A	N/A
<b>Maintenance Assessment Districts</b>	Park & Rec. Dept. (some MADs are administered by local groups)	Requires a neighborhood ballot to initiate this tax, which usually is levied for landscaping and lighting.	Annual Budget	N/A
<b>Parking Meter Districts</b>	Finance Department, City of Oceanside	Parking Meter Districts can use parking meter revenues for streetscape improvements such as ped. facilities, landscaping & lighting.	Annual Budget	N/A
<b>Redevelopment Tax Increment Financing (TIF)</b>	City of Oceanside Redevelopment Agency	TIFs apply to redevelopment areas where bonds are issued based on expected increased tax revenues. Used for improved infrastructure, including pedestrian facilities.	N/A	N/A
<b>Transportation Sales Tax (TRANSNET) Local Share</b>	SANDAG / City of Oceanside	In 2004, voters approved Prop. A, a 40-year extension of TransNet. The proposition will generate \$14 billion for transportation projects. Several new programs will fund pedestrian facilities, smart growth development & neighborhood traffic safety projects.	Annual or biennial started in '08	None
<b>Transient Occupancy Tax (TOT)</b>	City Treasurer	Created to cover expenses & improvements related to tourism & to encourage more tourists to visit Oceanside. This fund may be appropriate in areas where heavy tourism exists such as along the waterfront, major parks & historic neighborhoods.	Annual Budget	None
<b>REGIONAL SOURCES</b>				
<b>Smart Growth Incentive Program</b>	SANDAG	Regional funds dedicated to smart growth projects, which include pedestrian facilities.	6 year or longer	None
<b>Transportation Development Act (TDA)</b>	SANDAG	TDA funds originate from a statewide sales tax of one quarter cent for transportation projects, which includes two percent for pedestrian and bicycle facilities.	Annual (March)	None
<b>Transportation Sales Tax (TRANSNET) Regional Share</b>	SANDAG	In 2004, voters approved Prop. A, a 40-year extension of TransNet. The proposition will generate \$14 billion for transportation projects. Several new programs will fund pedestrian facilities, smart growth development & neighborhood traffic safety projects.	Annual or biennial started in '08	None

Table 23: Possible Funding Sources for Pedestrian Facilities (cont.)

Source	Administrator	Description	Funding Cycle	Match Required
<b>STATE SOURCES</b>				
<b>Bicycle Transportation Account (BTA)</b>	SANDAG	Provides \$5 million statewide for bicycle facilities, which includes trails that are used by pedestrians.	Annual (Fall)	None
<b>California Conservation Corps (CCC)</b>	California Conservation Corps	The CCC provides emergency assistance & public service conservation work. In San Diego County, the CCC has installed bike lockers for Caltrans.	N/A	N/A
<b>Community-Based Transportation Planning (CBTP) Grants</b>	CALTRANS	CBTP grants fund planning activities for livable community projects such as affordable housing, sustainable developments, land use & transportation integration, transit-oriented developments, jobs/housing balance & expanded transportation choices.	2-3 years	20%
<b>Environmental Justice (EJ) Planning Grants</b>	CALTRANS	EJ planning grants help engage low-income and minority communities in transportation projects early in the planning process to ensure equity and positive social, economic and environmental impacts occur.	Annual (Oct.)	10%
<b>Safe Routes to School (SR2S) Program</b>	Federal Highway Admin. via CALTRANS	SR2S is administered by Caltrans, and funds engineering and education projects that improve safety to/from schools.	Annual	10%
<b>FEDERAL SOURCES</b>				
<b>Community Development Block Grants (CDBG)</b>	Council Districts	Available for low-income neighborhoods to improve land use and transportation infrastructure. Can be used for accessibility improvements citywide.	Annual Budget	None
<b>Congestion Mitigation and Air Quality (CMAQ)</b>	SANDAG	Federal block grant program for projects in Clean Air Act non-attainment areas that will help attain the national ambient air quality standards stated in the 1990 Clean Air Act amendments.	6 year or longer	11.47%
<b>FDA Nutrition Network Mini Grants</b>	San Diego Nutrition Network	From time to time, Nutrition Network offers mini grants focused on neighborhood or street-level walkability assessments.	Varies	None
<b>Land and Water Conservation Fund (LWCF)</b>	California Department of Parks and Recreation	LWCF grants may be used for statewide outdoor recreational planning and for acquiring and developing recreational parks and facilities, especially in urban areas.	Annual (May)	50%
<b>Recreational Trails Program (RTP)</b>	California Department of Parks and Recreation	RTP annually provides monies for recreational trails and trail-related projects.	Annual (Oct.)	20%
<b>Safe Routes to School (SRTS) Program</b>	Federal Highway Administration via CALTRANS	The Safe Routes to School Program provides competitive grants to fund engineering and education projects that improve safety to/from schools for walking and biking. Requirements differ from the state SRTS program.	TBD	None
<b>Surface Transportation Program (STP)</b>	SANDAG	Federal block grant program for a variety of transportation projects including pedestrian walkways and preservation of abandoned railway corridors for pedestrian and bicycle trails.	6 year or longer	11.47%
<b>Transportation Enhancement Activities (TEA)</b>	SANDAG & CALTRANS	TEA funds projects that enhance travel. The 12 eligible TEA categories include 3 benefiting pedestrians: bike & pedestrian facilities, bike & pedestrian educational activities & preservation of abandoned railway corridors for bike & pedestrian use.	6 year or longer	11.47%
<b>PRIVATE SOURCES</b>				
<b>Health Foundations</b>	Various foundations	Focus pedestrian improvements for an obesity prevention strategy. Examples include California Wellness Foundation, Kaiser & California Endowment.	N/A	N/A
<b>Rails to Trails Conservancy</b>	Rails to Trails Conservancy	Provides technical assistance for converting abandoned rail corridors to use as multi-use trails.	N/A	N/A
<b>Donations</b>	Depends on nature of project	Corporate or individual donations, sponsorships, merchandising or special events.	N/A	N/A
<b>In-kind Services</b>	Depends on nature of project	Donated labor & materials for facility construction or maintenance such as tree planting programs or trail construction.	N/A	N/A
<b>PROPERTY OWNERS</b>				
<b>Voluntary Easements</b>	City of Oceanside Streets Division	Voluntary easements from adjacent property owners help make new pedestrian facilities affordable for local governments.	N/A	N/A

## 7.3 Local Funding Sources

### Business Improvement Districts (BID)

Administrator: Individual BID's

A BID is established by a vote of affected businesses, who pay a yearly benefit assessment for use in planning, marketing, and physical improvements. BID funds are often used as a local match for streetscape improvement programs, which can include pedestrian facilities.

### Capital Improvement Program (CIP)

Administrator: City of Oceanside

Each year, the city allocates a portion of the general fund budget to transportation capital projects, including pedestrian-related facilities, street lighting, and traffic calming. This is typically the largest source of local funds for existing communities. While sidewalk repair and replacement may be the responsibility of the adjacent land owner, the city is responsible for the repair of sidewalk damage caused by city-owned trees, vehicle crashes, water main breaks, and natural subsidence. The city also makes temporary repairs such as asphalt patches or grinding of uplifted sidewalk edges that could be a trip hazard.

### Developer – General Requirements

Administrator: City of Oceanside Development Services Department

City transportation standards and building codes require new construction and alterations to include pedestrian facilities, lighting and landscaping. Standards may also require dedication of open space for a trail and trail construction. Off-site pedestrian improvements might also be required if there is a defensible legal nexus between the project and the off-site location, such as crossing improvements near a transit stop.

### Developers – Impact Fees

Administrator: City of Oceanside Development Services Department

For development or redevelopment in certain communities (infill development), Developer Impact Fees are assessed by the city to offset public costs required to provide infrastructure supporting the new development. Pedestrian facilities or traffic calming devices in the adjacent right-of-way may be funded through this mechanism.

### Developers – Facility Benefit Assessment Districts

Administrator: City of Oceanside Development Services Department/Planning Division

For newly developing areas (“greenfield development”), Facility Benefit Assessment Districts (FBA) are funded by developers in agreement with the city, providing infrastructure of various types as community growth thresholds are reached.

**Maintenance Assessment District**

Administrator: City of Oceanside and Parks and Recreation Department

A Maintenance Assessment District (MAD) is a self-imposed assessment on each parcel in a defined area. The MAD is established by a vote of land owners, and requires an initial engineering evaluation to estimate the costs of desired improvements, an appropriate method of taxation (e.g., by linear street frontage or parcel acreage), and the expected revenues following MAD adoption. Typical uses are lighting, landscaping, and maintenance.

**Parking Meter Districts**

Administrator: Individual Parking Meter Districts

Parking Meter Districts retain a portion of parking meter revenues for use within a defined area. Possible improvements include streetscape improvements such as pedestrian facilities, landscaping, lighting, and public art.

**Tax Increment Financing (Redevelopment)**

Administrator: City of Oceanside Redevelopment Agency

By state law, the city may designate Redevelopment Areas in neighborhoods deemed to meet the statutory definition of “blight.” As property tax rates in a redevelopment area increase, the incremental tax receipts may be used to fund pedestrian improvements anywhere in the redevelopment area. Such improvements need not be associated with a development project. To provide more funding upfront, bonds may be sold based on expected incremental tax revenues in future years. An example is the streetscape improvements along University Avenue in North Park, which were funded in part by tax increment bonds.

**TransNet Sales Tax Local Share**

Administrator: City of Oceanside

Each city in the region receives a portion of the regional half-cent sales tax program known as TransNet. These funds can be used for any transportation expense, including pedestrian facilities. In 2004, voters approved a 40-year extension of TransNet.

**Transient Occupancy Tax Funding**

Administrator: City of Oceanside, City Treasurer

The TOT is a 10 percent tax on hotel room occupancy. Basically, these types of taxes were envisioned to cover expenses and improvements related to tourism and to encourage more tourists to visit Oceanside. This fund may be appropriate in areas where heavy tourism exists such as along the waterfront, beaches, major parks, and historic neighborhoods.

## 7.4 Regional Funding Sources

### Smart Growth Incentive Program

Administrator: San Diego Association of Governments

This program uses federal TEA funds (see above) which provide awards to smart growth projects, which include pedestrian facilities. An initial round of projects was awarded funding on a competitive basis in 2005. The next round of funding is not expected until 2012. Stand-alone pedestrian projects are not expected to be eligible.

### Transportation Development Act (TDA)

Administrator: San Diego Association of Governments

TDA funds originate from a statewide sales tax of one quarter cent allocated to transportation projects. Two percent of these funds are dedicated to pedestrian and bicycle facilities.

### TransNet Sales Tax Regional Shares

Administrator: San Diego Association of Governments

In 2004, voters approved Proposition A, the 40-year extension of TransNet half-cent sales tax for transportation projects. Annually, \$1 million is earmarked for bicycle paths and multi-use pedestrian facilities. Beginning in 2008, TransNet also provides \$4.5 million annually for pedestrian, bicycle, and neighborhood safety projects, including traffic calming.

## 7.5 State Funding Sources

### Bicycle Transportation Account (BTA)

Administrator: Caltrans, San Diego Association of Governments

The BTA annually provides \$5 million statewide for bicycle facilities, which includes trails that are used by pedestrians.

### California Conservation Corps (CCC)

Administrator: California Conservation Corps

The CCC provides emergency assistance and public service conservation work potentially available to pedestrian-related projects. In San Diego County, the CCC has installed bike lockers for Caltrans.

### Community-Based Transportation Planning (CBTP) Grants

Administrator: Caltrans

CBTP monies are used to fund planning activities for livable community projects such as affordable housing, sustainable developments, land use and transportation integration, transit-oriented developments, jobs/housing balance and expanded transportation choices.

### **Environmental Justice (EJ) Planning Grants**

Administrator: Caltrans

EJ planning grant monies are used to help engage low-income and minority communities in transportation projects early in the planning process to ensure equity and positive social, economic and environmental impacts occur. Projects are aimed at increasing travel opportunities for low income residents.

### **Safe Routes to School (SR2S) Program**

Administrator: Caltrans

The Safe Routes to School Program provides competitive grants to fund engineering and education projects that improve safety to/from schools.

## **7.6 Federal Funding Sources**

### **Community Development Block Grants (CDBG)**

Administrator: City of Oceanside Council Districts

CDBG funding is allocated by congressional districts, and is available to low-income neighborhoods to improve land use and transportation infrastructure.

### **Congestion Mitigation and Air Quality (CMAQ)**

Administrator: San Diego Association of Governments

CMAQ funds are available under a federal block grant program for projects in Clean Air Act non-attainment areas. CMAQ projects must be demonstrated to help attain the national ambient air quality standards stated in the 1990 Clean Air Act amendments.

### **Federal Department of Agriculture Education Grants**

Administrator: San Diego Nutrition Network

From time to time, the Nutrition Network offers USDA mini-grants or project grants focused on neighborhood or street-level walkability assessments, with emphasis on community education and involvement.

### **Land and Water Conservation Fund (LWCF)**

Administrator: **California Department of Parks and Recreation**

LWCF grants may be used for statewide outdoor recreational planning and for acquiring and developing recreational parks and facilities, especially in urban areas.

### **Recreational Trails Program (RTP)**

Administrator: **California Department of Parks and Recreation**

The RTP annually provides monies for recreational trails and trail-related projects, some of which may be connected to urban streets or pedestrian paths.

### **Safe Routes to School Program (SRTS)**

Administrator: **Federal Highway Administration via Caltrans**

The Safe Routes to School Program provides competitive grants to fund engineering and education projects that improve safety to/from schools for walking and biking.

### **Surface Transportation Program (STP)**

Administrator: **San Diego Association of Governments**

STP is a major federal block grant program for a variety of transportation projects, including pedestrian walkways, usually as part of a road construction project.

### **Transportation Enhancement Activities (TEA)**

Administrator: **San Diego Association of Governments**

The 12 eligible enhancement categories include three that are pedestrian oriented: bicycle and pedestrian facilities, bicycle and pedestrian educational activities and preservation of abandoned railway corridors for bicycle and pedestrian use. This is the funding source for SANDAG's Smart Growth Incentive Program (see above). Stand-alone pedestrian projects are unlikely to be funded through this source.

## **7.7 Private Funding Sources**

### **Health Foundations**

Health-related grant programs support community-based obesity prevention efforts, including planning for better walking conditions. Example sources include the California Wellness Foundation, Kaiser Permanente, and the California Endowment. The city, community groups or non-profits such as WalkSanDiego or local health clinics may apply.

### **Rails to Trails Conservancy**

Provides technical assistance for Rails-to-Trails projects.

### **Donations**

Corporate or individual donations, sponsorships, merchandising or special events.

### **In-kind Services**

Donated labor and materials for facility construction or maintenance such as tree planting programs or trail construction.

## 7.8 Property Owner Funding

### Voluntary Easements

Administrator: City of Oceanside

Voluntary easements from adjacent property owners help make new pedestrian facilities affordable for local governments.

## 7.9 Funding Strategies

A substantial amount of funding is needed to bring all of Oceanside's pedestrian facilities up to a standard that makes them safe, walkable, accessible, connected and assets to neighborhoods. This section discusses how priorities and decisions should be made with available sources of funding. Table 24 describes the priorities that should be assigned different funding sources. The reader should note that both the different project types as well as the type of pedestrian facility that is needed, are factors in determining how these funds should be used. Not all potential funding sources are listed on this table, just those that are considered to be the most likely sources for the types of improvements discussed in the table.

Table 24 describes how the four proposed treatment levels are best matched with funding sources. This table also includes major types of projects that may be needed for near-site improvements or community wide mitigations or contributions for improvements.

Table 24: Potential Funding Sources for Treatment Levels or Project Types

TREATMENT LEVEL:	Treatment Level 1 "Premium" Improvements				Treatment Level 2 "Enhanced" Improvements				Treatment Level 3 "Basic" Improvements				Treatment Level 4 "Special Use" Improvements			
	Active Control Mid-block Xings	Pedestrian Scramble or Early Phase Walks	Median Refuge with Actuator/Sensor / Option	Premium Walk Amenities	Passive Control Mid-block Xing or Median Refuge	Pedestrian Pop-outs	Enhanced Crosswalks / Countdown Lights	Enhanced Walk Amenities	Adequate Width, Barrier Free Maintained Sidewalks	Pedestrian Curb Ramps	Buffers from Street	Accessible Driveways / Remove or Reconfigure Driveway	Pedestrian Bridges	Multi-use Walkways	Connector Walkways Away from Streets	Plazas & Special Ped. Zones
<b>NEW URBANIZING AREA WITH MAJOR NEW DEVELOPMENT</b>																
Developer Built & Dedicated or Fair Share In Lieu Fee	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	?
Developer Initiated Facilities Benefit Assessments	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
Federal STP Grant or State RIP Grant	?	?	?	?	-	-	-	-	-	-	-	-	-	-	-	-
SANDAG Transportation Development Act Grants	?	?	?	?	-	-	-	-	-	-	-	-	-	-	-	-
<b>MAJOR INFILL PROJECT OR REDEVELOPMENT</b>																
Developer Built & Dedicated or Fair Share In Lieu Fee	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Developer Impact Fees	?	?	?	?	+	+	+	+	+	+	+	+	+	+	+	+
Developer Volunteers as Requested by Comm. Group	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Federal Congestion Mitigation & Air Quality	-	-	-	-	?	?	?	?	?	?	?	?	?	?	?	?
Federal STP Grant or State RIP Grant	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
SANDAG Transportation Development Act Grants	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
SANDAG Smart Growth Incentive Program	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
TRANSNET Walkability Grant	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
Redevelopment Tax Increment Financing	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Transient Occupancy Tax Funding	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
<b>CITY STREET, CIP PROJECT OR OTHER COMMUNITY</b>																
Federal CDBG Funding	-	-	-	-	?	?	?	?	!	!	!	!	!	!	!	!
Fed /CALTRANS Transportation Enhancement Grant	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
Federal Congestion Mitigation & Air Quality	-	-	-	-	!	!	!	!	!	!	!	!	!	!	!	!
Federal STP Grant or State RIP Grant	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
State Safe Routes to School Grants	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
SANDAG Transportation Development Act Grants	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!	!
SANDAG Smart Growth Incentive Program	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TRANSNET Walkability Grant	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Oceanside Capital Improvement Project / General Fund	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
City of Oceanside Accessibility ADA Transition Plan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Improvement District Funding	?	+	+	+	+	?	?	?	+	+	+	!	!	!	!	!
Landscape Maintenance Assessment Districts	-	-	-	-	?	?	?	?	-	-	-	-	-	-	-	-
Parking District Funding (Meter Funds)	?	+	+	?	+	?	?	?	-	-	-	-	-	-	-	-
<b>MINOR MINISTERIAL PROJECT, CONDO CONVERSION OR NO TRIGGERING PROJECT</b>																
Adj. Property Owner Required by Permit	-	-	-	-	-	?	?	?	!	!	!	!	!	!	!	!
Adj. Property Owner/ City Match Sidewalk Program	-	-	-	-	-	-	-	-	!	!	!	!	!	!	!	!
City Street Division Sidewalk Replacement	-	-	-	-	-	-	-	-	!	!	!	!	!	!	!	!
City Street Division Sidewalk Temporary Repair	-	-	-	-	-	-	-	-	!	!	!	!	!	!	!	!
Business Improvement District Sidewalk Repair	-	-	-	-	-	-	-	-	!	!	!	!	!	!	!	!
Code Compliance Action/ Adj. Property Owner to Fix	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+
Best Method for Implementing	+	+	+	+	!	!	!	!	!	!	!	!	!	!	!	!
Not Recommended or Other Methods are Better	-	-	-	-	-	-	-	-	?	?	?	?	?	?	?	?



**Appendix A - Public Workshop**

**Appendix B - Questionnaire Results**

## Appendix A: Public Workshop

Appendix A has been included to document the results of the public input process. It includes all of the results of the community wide public open house including results of the original issues and solutions matrices that have been adjusted for Chapter 3 based on this input.



# CITY OF OCEANSIDE PEDESTRIAN MASTER PLAN PUBLIC WORKSHOP

**WHAT:**  
Do you want Oceanside to be a safer and easier place to walk for you or your children?  
Help decide on the most important streets and intersections to fix the walking environment.  
Attend the community workshop to learn about ways to improve the walkability, identify walkway deficiencies you are familiar with, and help prioritize Oceanside's issues and solutions. This is an open workshop format that allows you to come and go anytime within the stated hours. No presentations are made. You will be asked to review exhibits & maps and provide comments.

**WHEN:**  
Thursday, February 26th  
4:30 pm - 7:30 pm  
(Refreshments provided)

**WHERE:**  
Oceanside Civic Center  
300 North Coast Highway  
Library Community Room



Visit our project website  
at [www.oceansidepmp.org](http://www.oceansidepmp.org)

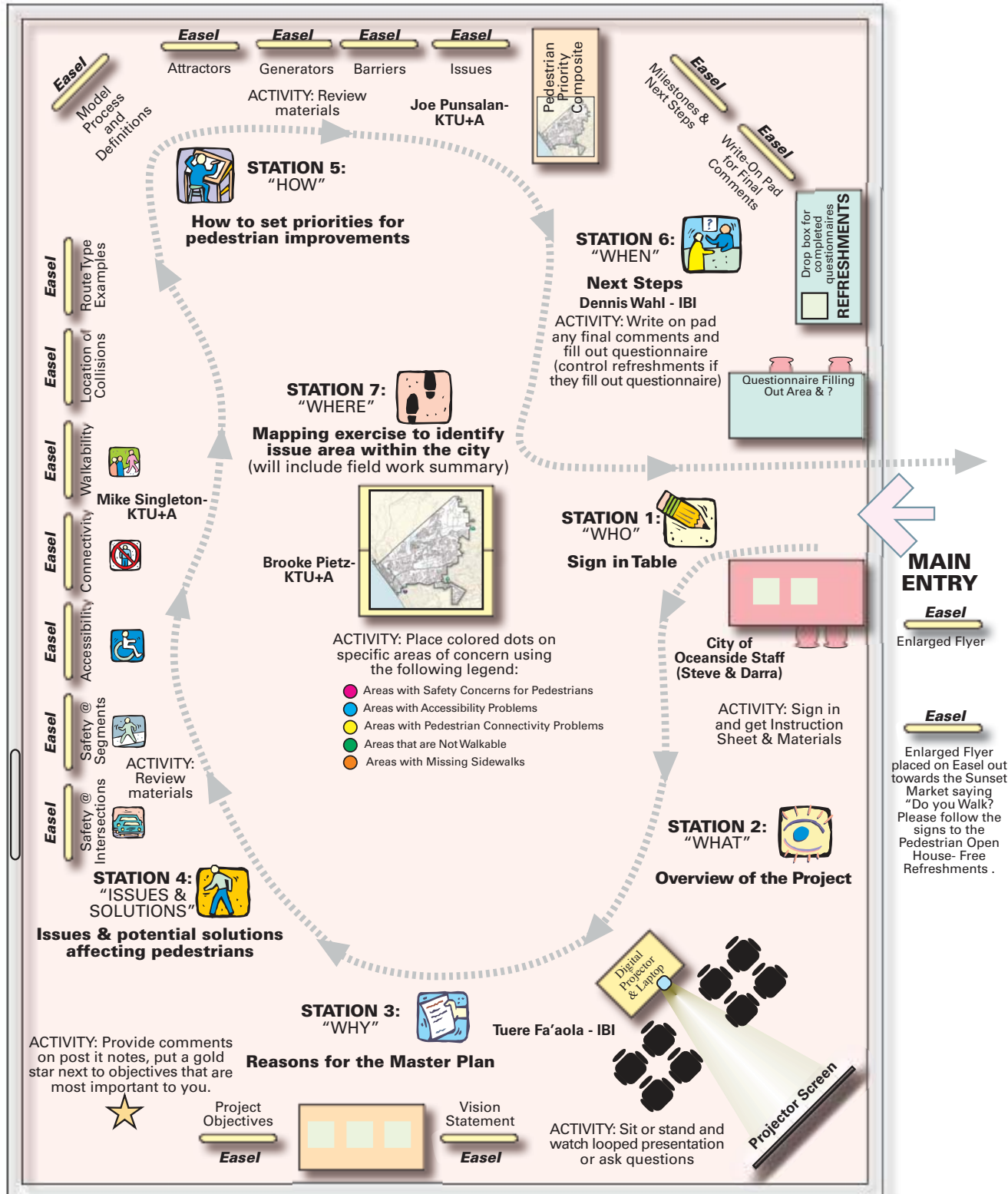


This information is available in alternative format upon request. Assistive listening devices, sign language interpretation, description, and alternative formats are available at City of Oceanside functions with a 48-hour notice. Contact Steve Tisdale at [stisdale@ci.oceanside.ca.us](mailto:stisdale@ci.oceanside.ca.us) or call (760) 435-5088 with these or other ADA-accommodation requests as early as possible.



# CITY OF OCEANSIDE - PEDESTRIAN MASTER PLAN

## PUBLIC WORKSHOP LAYOUT- FEBRUARY 26, 2009



## Written Comments Received at the Oceanside Pedestrian Master Plan Workshop February 26, 2009.

### Large Map

A – Intersection of Oceanside Blvd and Canyon Drive is dangerous. Slow down traffic from Oceanside Blvd to Canyon Drive. Also provide a better way to cross Oceanside Blvd.

B – Need pedestrian crosswalk/access from Loretta St. to Bike Trail.

C – Traffic speeds high. (On Surfrider Way)

D – Ivy Ranch. (Note stated Ivy Ranch only)

E – Several students from high school walk and there are missing sidewalks. (El Camino High School on Rancho Del Oro Drive)

No Corresponding Point on Map: Sidewalks too narrow; The Strand

### Issues/Solutions Graphics

#### **-Walkability Issues: Potential Solutions**

1W – 2 Stars (Provide greater than minimum sidewalk widths)

2W – 1 Star (Provide trees, awnings or building overhangs to shade walkways)

#### **-Safety Issues: Potential Solutions**

4S – 1 Star (Elevated and/or specially paved crosswalks)

12S – 1 Star (Mid-block crosswalks with signs, medians or curb extensions and flashing lights in roadway)

#### **-Connectivity Issues: Potential Solutions**

4C – 1 Star (Street widths reduced or features added to narrow crossing distance)

## Appendix B: Questionnaire Results

Appendix B is a summary of the electronic and paper form questionnaire used throughout this study.

### Oceanside Pedestrian Master Plan Survey Results

- 1) How many hours a week do you commute by walking to work, school, or walking to transit to get to work or school?

None	65%
Less than 15 minutes	6%
15-30 minutes	7%
30 minutes - 1 hour	7%
2 - 3 hours	9%
Over 4 hours	6%

- 2) How many hours a week do you walk to stores, entertainment, library, dining, or errands from home or office?

None	18%
Less than 15 minutes	7%
15-30 minutes	9%
30 minutes - 1 hour	29%
2 - 3 hours	29%
Over 4 hours	8%

- 3) How many hours a week do you spend walking, jogging, walking the dog, social walking or walking the kids?

None	9%
Less than 15 minutes	0%
15-30 minutes	11%
30 minutes - 1 hour	15%
2 - 3 hours	29%
Over 4 hours	36%

Questions 4-7. What is most important to you when deciding to walk? (Rank 1-4 with 1 most important)

- 4) Safety (I need to feel safe walking along sidewalks or when crossing streets)

1	71%
2	11%
3	5%
4	13%

- 5) Accessibility (I need to have fully accessible, maintained and continuous walkways)

1	24%
2	33%
3	25%
4	18%

- 6) Connectivity (I need to have connected and adequate walkways going to where I want)

1	25%
2	29%
3	31%
4	15%

- 7) Walkability (I need protection from harsh weather, places to sit, things to see and do)

1	15%
2	13%
3	26%
4	47%

### Survey Results

Questions 8-32 Please rate the following improvements: (To help develop priorities, please avoid marking everything as HIGH priority.)

		Low	Moderate	High
8	Add devices to control or warn of drivers speed	38%	44%	18%
9	Improve pedestrian safety through driver education/law enforcement	35%	36%	29%
10	Install more marked crosswalks at intersections	18%	38%	44%
11	Install more audible traffic signals at intersections	46%	38%	16%
12	Install midblock crosswalks in areas with long commercial blocks	24%	51%	25%
13	Make crosswalk markings more visible	22%	38%	40%
14	Install more pedestrian crossing warning signs	31%	42%	27%
15	Install more traffic signals to assist in safe pedestrian crossings	32%	44%	24%
16	Install countdown walk signals that show the time remaining to cross	19%	42%	39%
17	Install flashing lights in the crosswalk pavement to warn drivers of pedestrians	18%	38%	44%
18	Give pedestrians a head start at crossings before vehicles are allowed to go	22%	25%	53%
19	Increase pedestrian crossing time at signals	31%	36%	33%
20	Put in sidewalks where they are missing from entire neighborhoods	22%	36%	42%
21	Make sidewalks continuous by filling in missing gaps	14%	36%	50%
22	Repair damaged sidewalks and maintain them to be free of trip hazards	7%	35%	58%
23	Remove obstacles blocking or crowding sidewalks	13%	36%	51%
24	Improve sidewalk/pedestrian facility cleanliness	20%	45%	35%
25	Increase pedestrian street lighting levels	22%	53%	25%
26	Install more benches, trashcans, drinking fountains, etc.	36%	40%	24%
27	Plant more street trees to shade sidewalks	38%	20%	42%
28	Install parkways with trees or other barriers to buffer pedestrians from vehicles	26%	28%	47%
29	Construct more walkways away from streets	25%	46%	29%

Which one category describes you best?		Number of respondents
Resident	45%	25
Community Advocate	9%	5
Community Group Member	11%	6
Business Owner	5%	3
Pedestrian Advocate	11%	6
Agency or Department Representative	2%	1
Other	16%	9
Totals	100%	55

## Survey Comments

### Are there problems affecting walking in your neighborhood? Please state problem with street/cross street location. (255 words or less please)

25. I-5/San Luis Rey: Underpass inaccessible by bike or stroller, etc. Needs ramp, lighting, cleaning, graffiti removal.
24. missing sidewalks
23. No problems in my neighborhood.
22. Perceived safety, uneven sidewalks, cars blocking sidewalks (sometimes), inconsiderate drivers
21. Downs Street has poor sidewalks yet connects two major pedestrian traffic/shopping/public transportation routes.
20. Around downtown Oceanside there is litter and unkempt areas and also sometimes "scary" looking people "hang out".
19. Division and Grant: Vendors parked in alleyway blocking view of cars and kids. Vendors parking overnight in more than one space and not cleaning up mess. Residents taking up more than one space to retaliate against vendors.
18. traffic traveling too fast
17. Skyhaven & Sunset: No sidewalk from Skyhaven to Hacienda and trees need cutting on skyhaven.
16. Coast Highway is ugly and no greenery. Slow the traffic w/ traffic circles, stop signs are just noisy w/ engines revving.
15. South Pacific between Oceanside Blvd and Wisconsin Streets: Front set backs/ no sidewalks/ driveways.
14. Oceanside Blvd, 101 to Pacific St: Power wash sidewalks & keep clean!
13. Tremont & Washington: Cars driving TOO fast through intersection.
12. Driver speed and winding road on Avenida de la Plata and College Bl east.
11. Joe Balderama Park: Sidewalks are too narrow. I'm really dreaming about an access to the bike path - It would REALLY raise my beach walking potential.
10. El Camino & Arbolitos: Drivers turning right on red don't stop for me when I cross with a green light.
9. Vine St, north of Oceanside Blvd: Speeding cars on Vine Street, also parkway needs shade trees & bicycle lanes.
8. I'm afraid to walk through the underpass that goes from San Luis Rey Dr. to Coast Hwy. The one other pedestrian option is to cross a freeway offramp!! (Camp Pendleton)!! Are you kidding me? So I feel unsafe with my only two options out of my neighborhood.
7. Grant and Division: Discontinuation of 311/312 bus routes.

6. NS Morse btwn Coast Hwy & Alverado: Eroding cement in gutter/ramp @ California & La Salina
5. There are power cable/telephone poles that are in the middle of the sidewalk. They take up a lot of space. Oceanside Blvd and Crouch St. Crouch St and Canyon Dr.
4. Foxwood/Sunningdale - DOGS RUNNING LOOSE....afraid to walk my own dog due to dogs running loose - fear of attacks!
3. ditmar/wisconsin Tree root damage to sidewalks and over grown trees that don't belong on the coast
2. Motorist speeding and frequent illegal use of hand held cell phones on Sleeping Indian Road between North River Road and the city Limit. Please address these problems while also respecting the South Morro Hills Neighborhood Association's goal of retaining the rural agricultural atmosphere. The city has been requested to specifically exclude traffic signals, streetlights, traditional city sidewalks, curbs, and gutters from the neighborhood.

1. Blank

**Please state additional problem with street/cross street location #1.**

17. No access from Academy Rd + Lowes Shopping Center. 300 Academy Road + Mission Ave. No side of Mission.
16. Oceanside / Greenbrier. Needs a crosswalk. Major entry point for sprinter
15. Front Capistrano neighborhood: Incomplete sidewalk system. requires pedestrians to walk in street. No ramps from sidewalks to street. Recommend 1-way streets w/complete sidewalk.
14. Parking close to intersections in Crown Heights where there are no stop signs. Hinders walking/biking as easily as in places where there are 4 way stops at each corner.
13. N. Cleveland Street/Sportfisher Drive - NE corner has no curb cut.
12. Cross walk next to blind corner
11. All of 101: Same as above.
10. Driver Speed on College Blvd south from Avenida de la Plata to shopping.
9. Loretta and Hwy76: There is no access to the bike path/harbor from these neighborhoods. People have to dash into traffic breaks or cross freeway exits. Sidewalks from Lorretta to the 101 would be cool also.
8. Mission & El Camino: Intersection is so large, doesn't allow enough time to cross.
7. Vine Street, north of Oceanside Blvd: Cars speed down hill to Oceanside Blvd. while children playing. Suggest similar calming treatments to Fire Mtn. area.
6. Grant and Division: Street too narrow, should have a side of street parking.
5. SS Oceanside Blvd east of I-5 to Crouch: No sidewalk, only gravel at best.
4. The crosswalks are not consistently marked. Oceanside Blvd and Crouch St. Crouch St. and Canyon Dr.
3. kids racing...cars and "pocket bikes"

## 2. cars speeding on coast highway & residential area

1. There is no sidewalk on the north side of Mission Road from Academy Road under 76 to the Lowe's Shopping Center entrance. References: Transportation Commission November 15, 2005 Meeting Minutes, General Item #3. Letter to Peter Weiss and petition signed by more than 100 residents of Oceanside and the managers of both the Lowe's and Ralph's stores.

Answers to Question 34: Please state additional problem with street/cross street location #2.

10. Downs. Remove stop signs at round about. Beyond ineffective and defeats the purpose of a roundabout!

9. Capistrano Park/River: Incomplete sidewalk on river side. Could be beautiful walk w/view not requiring me to cross street @ blind crossing @ top of hill on west side. Maybe sitting area @ river.

8. Avocado Road goes down from Fire Mountain to the shopping center yet has no sidewalk

7. Idiot drivers, near schools

6. Los Arbolitos & El Camino Real: As stated- Heavy volume, lack of driver awareness.

5. Grant and Division: Parked cars combined w/ busses navigating across street. Visibility, one side street parking or red (no parking from corners to bus stop)

4. ES Coast Hwy @ Topeka, across from Dolphin hotel: Poor drainage, puddling in sidewalk.

3. Traffic too fast and in too close proximity to sidewalk. Oceanside Blvd. and Greenbrier. Oceanside Blvd and Crouch St.

2. sidewalks in public walking areas s/b WIDER

1. PCH from city limit to Harbor Drive. Please include the pedestrian friendly aspects of the recent charrettes in the PMP

### **Please state additional problem with street/cross street location #3.**

5. Harbor Free Parking Lot Tunnel: Narrow tunnel w/ crossflow of vehicle and ped. traffic. \*ALSO\* @ Harbor Frontage Rd/Free Parking Tunnel: Unsafe crossing and congested intersection. Recommend ped. bridge.

4. Gangs

3. Rancho del Oro and Oceanside Blvd: Sidewalks. New senior center and future VA clinic.

2. SS Mission btwn Tremont & Cleveland: Poor clearance between street tree wells and building.

1. Would like to feel SAFE walking in the evening...lighting, cameras or whatever would deter crime

### **Comments: Please write in anything else we should consider for this project.**

23. I actually feel the city of Oceanside and the Parks Dept does a very good job taking care of this city considering the size! KUDOS! That's why I keep coming back.

22. Enforcement of regulation concerning dog on streets and the beach. Also, 'gang-bangers' hanging out making hard to walk and safety issues
21. Need published phone number & e-mail to request sidewalk grinding and smoothing
20. Harbor Dr., I-5/Camp Pendleton Exit Offramp: Dangerous crossing @ Camp Pendleton off ramp. Recommend Ped. Bridge or improve problem area @ I-5 & San Luis Rey Dr. mentioned above.
19. Thanks good stuff!
18. Our service is a very cost effective way to bring walkways to ADA standards. [www.safeside-walks.com](http://www.safeside-walks.com)
17. city has fair walkability in the beach area. Only time there have been real safety concerns for me are Fri and Sat nights at Mission and Coast Hwy when many aggressive young drivers are in town after dark. Trash and graffiti are bigger deterrents to walking as are homeless in some areas.
16. Any substantial changes or redesign of walkways should be included in the overall city planning, rather than simply taking one project or area at a time.
15. As a wheelchair user I advocate for accessible sidewalks
14. Police presence is essential so we feel safe as a pedestrian.
13. Please paint parking spaces and limit commercial parking to red zone.
12. Need more walkways amenable to exercise (walking/jogging). Also more trashcans would make it easier to clean up after pets. Finally, shade on San Luis Rey trail PLEASE!
11. Trees require water and only recycled water should be used! All plants should be "NATIVE" to use less water.
10. Less is more, more or less.
9. I love this town!!
8. Thank you for your excellent service to our community!
7. North side of the San Luis Rey river from Capistrano Park to the harbor would be a perfect place for a pedestrian trail to the beach from this isolated neighborhood.
6. I appreciate this survey and the chance for the powers to be to hear the local voices.
5. Restore left turn from Coast Hwy to Mission Ave. Don't pinch 4 lane streets to 2 lanes. Don't convert parallel to slant parking. Don't convert 2 way streets to 1 way.
4. To have a truly walkable area, new buildings should be built next to the sidewalk with parking in the back, rather than parking lots separating the side walk and businesses.

3. Consider asking RESIDENT HELP in maintaining neighborhood sidewalks...planting trees, etc. - possible incentives which would cost less than the city paying for plantings...Eagle Scout projects, perhaps? Church group projects? LOOK FOR CITIZENS WHO WILL HELP...If they help build/plant it, they will take better care of it!

2. Better lighting in public areas Coast Highway, Mission, etc. Crime still a concern

1. The city should be more proactive in engaging the schools through the Safe Routes program and education/encouragement programs to increase the number of school children who walk (or ride bikes) to school. Grant money is available and should be pursued for every school in the city, including those in other districts. For example, Lake Elementary and Madison Middle School are Vista schools within Oceanside. The city should be especially proactive in providing the new Vista Magnet High Schools on Hwy 76 with safe pedestrian and bicycle access. Traffic calming measures, including but not limited to raised crosswalks (with LED lighting), roundabouts, bulb outs, speed cushions, and radar speed indicators, should be utilized when requested by neighborhoods to improve pedestrian safety and slow motorist speeds. The Complete Streets (Assembly Bill 1358) is now law in California. Please include reference to this law and include a discussion of its provisions in the PMP. Review all pedestrian-motorist collisions to identify engineering and education/enforcement actions to reduce the frequency and severity. Pay special attention to preventable fatal collisions and provide specific recommendations to prevent recurrence.

# Appendix C

## Complete Streets Checklist for Oceanside







# Update to the General Plan Guidelines: Complete Streets and the Circulation Element

**The following are possible policy areas recommended within the Complete Streets and the Circulation Element update document. The City of Oceanside has several policies throughout the Circulation Element that are similar to the policy area recommendations shown within this document. The areas where the City of Oceanside is in compliance with the Complete Streets guidelines are marked by an “X” in the sections below. It should be noted that not all possible policy areas are applicable to the City of Oceanside.**

## Possible Policy Areas and Data Collection Technique Considerations

The following suggestions are examples of possible policy areas and data collection technique considerations that could be used to prepare or amend a circulation element. Suggestions are generally categorized based on the statutorily required portions of the circulation element as described in G.C. 65302(b). Not all of these suggestions will be relevant in every jurisdiction. Suggestions pertaining to multimodal transportation networks (i.e. complete streets) are marked with a ‡.

### Major Thoroughfares

#### Streets, Roads, and Highways

Policies and data collection for streets, roads, highways should include the consideration of transit services within a roadway right-of-way, in either mixed flow lanes, high occupancy vehicle (HOV) lanes, and/or street-running light rail tracks.

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The availability of a mix of transportation modes and the infrastructure to support those modes to meet community needs. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development and improvement of major thoroughfares, including future acquisitions and dedications, based on proposed land use patterns and projected demand. This may include a street, road, and highway classification system.</li> </ul>
	<ul style="list-style-type: none"> <li>• The consideration of street patterns; curvilinear, grid, modified grid, etc. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The design of streets (including, but not limited to, width, block size, etc.)               <ul style="list-style-type: none"> <li>○ The consideration of sidewalks and curbs as a standard street design principle. ‡</li> <li>○ The consideration of bicycle lanes and/or shared lanes as a standard street design principle. ‡</li> <li>○ The consideration of transit accessibility and transit priority measures as a standard street design principle. ‡</li> <li>○ The consideration of shade trees and planting strips as a standards street design principle. ‡</li> </ul> </li> </ul>
X	<ul style="list-style-type: none"> <li>• The consideration of traffic calming measures (narrower travel lanes, roundabouts, raised medians, speed tables, planting strips, etc.). ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The safety of the traveling public, including pedestrians and bicyclists. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The accessibility and accommodation of bicycle and pedestrian traffic, where appropriate, on and across major thoroughfares. ‡</li> </ul>

X	<ul style="list-style-type: none"> <li>The design of intersections and public right-of-ways to include adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>The development of a connected system of streets, roads, and highways that provides continuous, safe, and convenient travel for all users. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The consideration of separate performance and level-of-service standards for bicycle and pedestrian traffic or integrated performance and level-of-service standards that include multiple modes. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The development and improvement of transit, including transit services within a roadway right-of-way.</li> </ul>
	<ul style="list-style-type: none"> <li>The consideration of bus HOV lanes or other exclusive right-of-way for transit vehicles.</li> </ul>
X	<ul style="list-style-type: none"> <li>The consideration of transit priority measures such as signal priority and queue jump lanes.</li> </ul>

#### Data Collection Techniques:

- Identify existing and proposed modes of transportation. ‡
- Assess all thoroughfares to determine if they are providing sufficient multimodal transportation options. ‡
- Assess the number and distribution of households with and without an automobile. ‡
- Assess the transportation needs of special groups within the population and the extent to which such needs are being met by existing streets, roads, and highways. (e.g., children, persons with disabilities, and the elderly). ‡
- Project future modal split by estimating the percentage of trips by transit, passenger car, van pools, etc.
- Assess the adequacy of the existing streets, roads, and highway systems and the need for expansion, improvements, and/or transportation operations management based on projected traffic including that generated by planned land use changes. Consider that the need for expansion should recognize economic principles such as cost effectiveness and efficiency as well as environmental and social consequences. ‡
- Analyze existing street, road, and highway traffic conditions for all transportation modes to determine current levels of use throughout the entire day. Assess whether existing travel demand or transportation network supply could be better managed to limit the need for expansion of streets, roads, and highways. ‡
- Analyze existing performance and levels of service of existing streets, roads, and highways for all transportation modes. Compare projected with desired performance and level of service standards for all transportation modes. ‡
- Project future traffic volumes for all modes on existing and planned streets, roads, and highways by accounting for the effects of changes in the following built environment characteristics: ‡
  - Density of land uses;
  - Diversity of land uses;

- Design of network;
- Destinations (regional accessibility);
- Distance to transit;
- Demographics;
- Development scale; and,
- Demand management (i.e. pricing, etc.)
- Determine the effects of projected traffic volumes for all transportation modes on existing street, road, and highway capacities. ‡
- Identify physical barriers and other constraints that prevent or inhibit use or access by all modes. ‡
- Analyze historical data and trends with regard to collisions involving all modes of travel. ‡
- Review the CA Highway Patrol's Statewide Integral Traffic Record System to identify areas where safety could be addressed. ‡
- Identify problem locations by analyzing injury severity and determining collision frequency relative to exposure by conducting motor vehicle, pedestrian, and bicycle counts. ‡
- Review traffic projects pertinent to local planning that are proposed within neighboring jurisdictions.
- Review pertinent regional transportation plans and project funding priorities under the regional transportation improvement program.
- Analyze the potential effects of alternative plan proposals and implementation measures (related to transportation and/or land use) on desired projected performance and multimodal levels of service.
- Analyze the potential effects of alternative plan proposals and implementation measures (related to transportation and/or land use) on residential land uses.
- The identification of farm-to-market transportation needs on streets, roads, and highways. ‡

Transit and Railroads

Policies and data collection for transit and railroads should consider both passenger and freight rail, and light rail and bus rapid transit alignments.

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>● The development and improvement of transit and paratransit services, including mass rapid transit services, commuter light rail and heavy rail metro/subway systems, in consultation with the appropriate transportation agencies. ‡</li> </ul>

X	<ul style="list-style-type: none"> <li>• The accessibility and accommodation of all transit users. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The review and/or development of paratransit plan proposals for jitneys, car pooling, van pooling, taxi service, dial-a-ride, etc. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The adoption of technology that creates a more effective usage of existing transit such as real time monitors and personalized automatic notification arrivals. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development and improvement of railroad facilities and services.</li> </ul>
	<ul style="list-style-type: none"> <li>• The preservation and repositioning of abandoned railroad right-of-ways for future transportation corridor use, including bicycle paths and trails, or new passenger rail or bus services. ‡</li> </ul>

Data Collection Techniques:

- Analyze existing public transit demand on transit capacity and services. ‡
- Assess the adequacy of existing transit services and the need for expansion and improvements. ‡
- Examine trends in transit use and estimates of future demand. ‡
- Assess the needs of people who depend on public transit. ‡
- Determine the effects of projected public transit demand on transit capacity and services. ‡
- Determine existing and projected performance and levels-of-service standards for transit. ‡
- Evaluate the transportation needs that are or are not being met by public or private bus companies. ‡
- Examine private bus company plans to provide bus services in the future. ‡
- Inventory existing paratransit services, uses, and routes. ‡
- Inventory the existing and future needs served by paratransit. ‡
- Inventory rail lines and facilities and assess plans for expansion and improvements.
- Determine transportation needs that are not being met by railroads.
- Identify abandoned railroad right of ways which could be preserved for future transportation corridor use, including bicycle paths and trails, or new passenger rail or bus service. ‡
- The identification of farm-to-market transportation needs for rail services. ‡

Navigable Waterways

Possible Policy Areas:

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The maintenance and improvement of navigable waterways.</li> </ul>

Data Collection Techniques:

- Assess the adequacy of navigable waterways, including the need for expansion and improvements.

- Assess current and future land uses and communities near navigable waterways, ports, and harbors.
- Project future needs for navigable waterways.
- The identification of farm-to-market transportation needs on navigable waterways and at ports and harbors. ‡

### Transportation Operations Management

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The development of transportation operations management policies, such as the consideration of reducing speeds, separating pedestrians and bicyclists from vehicle traffic, and adding or upgrading traffic control devices, etc. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of adequate crossing times and detection for all users at signalized intersections, consistent with AB 1581 (Fuller, Statutes of 2007). ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The appropriate balancing of needs of various users when establishing speed limits for motor vehicles, consistent with AB 2767 (Jackson, Statutes of 2000). ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The scheduling and financing of circulation operations maintenance projects.</li> </ul>

#### Data Collection Techniques:

- Review pertinent regional, state, and federal corridor plans.
- Analyze the projected effects on the transportation system of construction improvements versus the projected effects of transportation operation management.
- Compare the costs of construction improvements versus the costs of transportation operation management.

### **Transportation Routes**

#### Truck Routes

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The development of proposed truck routes and policies supporting truck route regulations. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development and preservation of farm-to-market routes. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The accessibility and accommodation of pedestrian and bicycle traffic, where appropriate, on truck routes, including farm-to-market routes. ‡</li> </ul>

Data Collection Techniques:

- Identify existing truck routes and determine needed improvements. ‡
- The identification of farm-to-market routes. ‡

Pedestrian and Bicycle Routes

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The development of a comprehensive pedestrian and/or bicycle plan. See California Streets and Highways Codes Sec. 891.2 requirements for bicycle transportation plans. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The development and improvement of pedestrian and bicycle routes, on and off, streets, roads, and highways. Consider special accommodations such as car-free zones, bicycle boulevards, and paths. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The connectivity of pedestrian and bicycle routes between homes, job centers, schools and facilities, and other frequently visited destinations. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The development of Safe Routes to School programs that address pedestrian and bicycle safety for a two mile radius around all elementary, middle, and high school facilities. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The development of pedestrian and bicycle facilities along routes that support the use of these routes such as benches, shelters, trees, bicycle parking, etc. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The dedication and preservation of independent alignments (utility, abandoned waterways, or live rail right-of-ways) for the development of bicycle paths. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development of performance and level-of-service standards for pedestrian and bicycle routes and intersections. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The development and use of marketing and incentive programs to promote the increase of walking and bicycling. ‡</li> </ul>
<p><i>**It should be noted that the City of Oceanside has a Bicycle Master Plan and a Pedestrian Master Plan that provides goals and guidelines for bicycle and pedestrian planning in Oceanside.</i></p>	

Data Collection Techniques:

- Assess the adequacy of existing bicycle and pedestrian route access, accommodations, and the need for improvements or additional infrastructure, considering connectivity to other transportation modes. ‡
- Identify gaps in bicycle and pedestrian access routes and determine how future projects can improve pedestrian and bicycle circulation. ‡
- Assess the adequacy of existing bicycle and pedestrian routes to and from school facilities in regards to the accessibility and safety of children. ‡
- Assess the adequacy of existing pedestrian routes to determine if all routes meet *Americans with Disabilities Act (ADA) Accessibility Guidelines* and applicable ADA Transition Plans. ‡
- Examine trends in bicycle usage. ‡
- Study pedestrian activity and patterns. ‡
- Assess historical data and trends with regard to vehicle, bicycle, and pedestrian collisions. ‡

- Inventory availability and adequacy of bicycle parking at major land use destinations, along transit routes and at transit terminals. ‡

### Transit Routes

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The development and improvement of public and private transit routes. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development and improvement of access to and from transit routes by walking and bicycling and by people with disabilities. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development of performance and level-of-service standards for transit routes and intersections that consider all transportation modes. ‡</li> </ul>

#### Data Collection Techniques:

- Assess the adequacy of existing transit routes and the need for expansion or improvements. ‡
- Identify public and private bus routes within the local jurisdiction and determine the need for expansion or improvements. ‡
- Assess the accessibility to transit stops by walking or bicycling and by people of all abilities. ‡

### Emergency Routes

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The identification, development, and maintenance of evacuation and emergency access routes.</li> </ul>

#### Data Collection Techniques:

- Analyze the adequacy of emergency access and evacuation routes.

## **Terminals**

### General and Commercial Airports

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The development and improvement of aviation facilities found in Airport Master Plans and/or Airport Layout Plans.</li> </ul>
	<ul style="list-style-type: none"> <li>• The consistency of the general plan with the provisions of any applicable Airport Land Use Compatibility Plan (§65302.3).</li> </ul>
	<ul style="list-style-type: none"> <li>• The mitigation of aviation-related hazards including hazards to aircraft and hazards posed by aircraft.</li> </ul>

	<ul style="list-style-type: none"> <li>• The access to and from aviation facilities by all modes of transportation. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The inclusion of bicycle parking at airports. ‡</li> </ul>

Data Collection Techniques:

- Assess the adequacy of and safety hazards associated with existing aviation facilities and the need for expansion and improvements.
- Inventory potential noise and safety hazards posed by airport activities to surrounding land uses.
- Inventory potential safety hazards to aircraft passengers posed by existing or proposed land uses near airports.
- Assess the provisions of any Airport Land Use Compatibility Plan prepared pursuant to Public Utilities Code §21675.
- Assess the adequacy of access by all transportation modes to and from airports, based on existing and projected passenger and cargo loads. ‡

Ports and Harbors

Policies and data collection for ports and harbors should consider the needs of both deep-draft and small boats.

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The development and improvement of port, harbor, and waterway facilities.</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of the movement of goods to and from ports and harbors. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>• The accessibility to and from ports and harbors by all modes of transportation. ‡</li> </ul>

Data Collection Techniques:

- Assess the adequacy and accessibility of port and harbor facilities, by all modes of transportation, including the need for expansion and improvements. ‡
- Assess the adequacy and accessibility of goods movement to and from ports and harbors. ‡
- Assess current and future land uses and communities near ports and harbors.
- Project future needs for port and harbor facilities.
- Review plans for improvements by harbor and port districts.

Railroad Depots

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The development and improvement of railroad depots.</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of the movement of goods to and from railroad depots. ‡</li> </ul>

Data Collection Techniques:

- Assess the adequacy of existing railroad depots including the need for expansion or improvements.
- Assess the adequacy and accessibility of goods movement to and from railroad depots. ‡

Public and Private Transit Terminals

Policies and data collection for both public and private transit terminals should consider public or private buses, light rail systems, rapid transit systems, commuter railroads, high-speed rail, ferryboats, etc.

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The location and characteristics of transit terminals to maximize accessibility by all modes of transportation. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development and improvement of both public and private transit terminals and stops. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The development of intermodal transfer facilities, such as bicycle parking and bus transfer stations. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of adequate and safe transit facilities including covered shelters, lighting, safe crossings, and locations that support eyes on the street. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of safe and efficient multimodal access to and within transit terminals, complying with ADA standards. ‡</li> </ul>

Data Collection Techniques:

- Identify all public transit terminals. ‡
- Assess the adequacy and accessibility of all public transit terminals. Ensure that all terminals are accessible by and accommodate for all potential users. ‡
- Evaluate public and private bus company terminal services and facilities; conditions, locations, and capital improvement plans. ‡
- Identify transportation nodes suitable for future transit-oriented development, including passenger rail. ‡
- Inventory and assess the need for bicycle parking improvements at all terminal types. ‡

Freight Truck Terminals and Warehouses

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"> <li>• The development and improvements of freight trucking terminals and warehouses. ‡</li> </ul>

	<ul style="list-style-type: none"> <li>• The provision of the movement of goods to and from freight truck terminals and warehouses. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>• The provision of the movement of goods from farms to storage facilities. ‡</li> </ul>

- 

Data Collection Techniques:

- Project future needs for future freight trucking terminals and warehouses. ‡
- Assess the adequacy and accessibility of goods movement to and from freight truck terminals and warehouses. ‡
- Assess the adequacy and accessibility of goods movement from farms to storage facilities. ‡

### Military Facilities

Policies and data collection for military facilities should consider military airports, ports and harbors, and accessible routes to and from military operations.

Compatible with City of Oceanside Policies	Possible Policy Areas:
	<ul style="list-style-type: none"> <li>• The inclusion of all military transportation thoroughfares and infrastructure in the planning area as part of the overall circulation system.</li> </ul>
	<ul style="list-style-type: none"> <li>• The consideration of the needs of military installations and training needs when planning transportation and infrastructure projects.</li> </ul>
	<ul style="list-style-type: none"> <li>• The reassurance that community and military transportation corridors maintain viability.</li> </ul>
	<ul style="list-style-type: none"> <li>• The consideration of all military terminals including airports, ports, and harbors.</li> </ul>

Data Collection Techniques:

- Consult with neighboring military planners to ensure that military installations, infrastructure, and training activities are considered in the circulation system.
- Assess major streets, roads, and highways near or surrounding all military facilities, including the need for development and maintenance of adequate ingress and egress routes.
- Assess all military terminals in the same manner as general and commercial terminals.

## Utilities

Policies and data collection for utilities should consider sewer, water and drainage lines and facilities, oil and natural gas pipelines, power plants, transmission lines and corridors, proposed or state identified transmission line corridors, renewable and non-renewable energy, and energy storage.

Compatible with City of Oceanside Policies	Possible Policy Areas:
	<ul style="list-style-type: none"> <li>• The acquisition of necessary public utility right-of-ways.</li> </ul>
	<ul style="list-style-type: none"> <li>• The development of standards for transportation and utility-related exactions.</li> </ul>
	<ul style="list-style-type: none"> <li>• The development, improvement, timing, and location of community sewer, water, and drainage lines and facilities.</li> </ul>
	<ul style="list-style-type: none"> <li>• The development, improvement, timing, and current and future locations of:               <ul style="list-style-type: none"> <li>○ Oil and natural gas pipelines;</li> <li>○ Power plants;</li> <li>○ Major electric transmission lines and corridors;</li> <li>○ Utility scaled and distributed energy generation; and,</li> <li>○ Telecommunication cables and equipment.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• The development of preferences for financing measures to expand and improve public facilities.</li> </ul>
	<ul style="list-style-type: none"> <li>• The availability of assistance to those who cannot afford utility services.</li> </ul>

### Data Collection Techniques:

- Assess the adequacy and availability of existing community water, sewer, energy, and drainage facilities, and the need for expansion and improvements.
- Assess existing and projected capacity of treatment plants and trunk lines.
- Determine the location of existing and proposed power plants, oil and gas pipelines, and major electric transmission lines and corridors.
- Assess potential future development of power plants, transmission lines, and renewable and non renewable energy. Consider such factors as the demand for transmission facilities, the transport and storage of hazardous materials, and local transportation impacts of current and future power plant developments.
- Assess power line or other utility easements for future bicycle paths or multipurpose paths. ‡
- Determine the locations of utility infrastructure that may be blocking the pedestrian right-of-way such as utility poles. ‡ - *It should be noted that the City of Oceanside's Pedestrian Master Plan (November 2009) identified areas where pedestrian improvements were needed (which included sidewalks blocked by utility infrastructure).*
- Determine the locations of utility infrastructure that may create hazardous conditions for bicyclists. ‡ - *It should be noted that the City of Oceanside's Bicycle Master Plan (December 2008) identified areas where bicycle improvements were needed (which included identifying areas with hazardous conditions for bicyclists).*

## Other Issues

### Land Uses and Transportation Integration

Compatible with City of Oceanside Policies	Possible Policy Areas:
	<ul style="list-style-type: none"> <li>The development of transit-oriented development standards, including the appropriate mix of density and intensity of land uses near transit stations, parking requirements, and service and delivery requirements. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The creation of land use patterns, such as mixed-use overlay districts, that allow frequently visited destinations to be accessible by multiple transportation modes. ‡</li> </ul>
X	<ul style="list-style-type: none"> <li>The availability of transportation infrastructure needed to accommodate increased density and transit-oriented development. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The consideration of flexible performance and level-of-service standards, in areas planned for increased density and mixed uses to increase walking, bicycling, and transit ridership. ‡</li> </ul>

#### Data Collection Techniques:

- Assess needed land uses, facilities, and structures that will enhance pedestrian, bicycle, and transit travel. ‡

### Parking Facilities

Compatible with City of Oceanside Policies	Possible Policy Areas:
X	<ul style="list-style-type: none"> <li>The provision of bicycle parking. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The development of strategies for the control of parking demand such as improved transit • services, amenities for bicyclists, subsidized rideshare vehicles, and the consideration of eliminating minimum parking requirements. ‡</li> </ul>
	<ul style="list-style-type: none"> <li>The development of strategies for the management of vehicle parking supply such as increased parking fees, graduated parking fees, shared parking, metered on-street parking, staggered work schedules, etc.</li> </ul>

#### Data Collection Techniques:

- Assess the supply, demand, and utilization of existing on- and off-street parking, particularly in urban and commercial areas.
- Assess the effects of parking policies (i.e. off-street parking standards, on-street parking restrictions, graduated parking fees, etc.) on congestion, energy use, air quality, and public transit ridership. ‡
- Assess the need for and types of bicycle parking. ‡
- Analyze existing bicycle parking standards or requirements including parking requirements for commercial buildings, retail complexes, schools, etc. ‡

Air Pollution

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
	<ul style="list-style-type: none"><li>• The development of measures that would reduce public, private, and commercial motor vehicle emissions, consistent with regional air quality and transportation plan policies. ‡</li></ul>

Data Collection Techniques:

- Assess existing air quality pursuant to air quality district plans.
- Analyze air quality trends.
- Estimate air quality impacts of motor vehicle trips generated by land use changes and new thoroughfares based on regional air quality and transportation plans.

- Identify and evaluate measures that will reduce the air quality impacts of motor vehicle trips that are consistent with regional air quality and transportation plans.

Electric and Non-Carbon Emitting Vehicles

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The development of infrastructure implementation strategies focused on supporting the use of electric and other non-carbon emitting vehicles.</li> </ul>

Data Collection Techniques:

- Analyze the demand for electric and non-carbon emitting supportive infrastructure along streets, roads, and highways.

Green Streets

<b>Compatible with City of Oceanside Policies</b>	<b>Possible Policy Areas:</b>
X	<ul style="list-style-type: none"> <li>• The development of shade trees, green medians, and landscape standards for streets, roads, highways, and pedestrian and bicycle paths and trails.</li> </ul>
	<ul style="list-style-type: none"> <li>• The inclusion of trees, planting strips, and other landscaping as a street design standard.</li> </ul>

Data Collection Techniques:

- Assess current tree canopy conditions on existing streets, roads, and highways, as well as at existing transit terminals. ‡
- Assess future tree canopy conditions for proposed future streets, roads, and highways, as well as at proposed future transit terminal sites. ‡
- Assess the adequacy of budgets for maintaining shade trees and related landscaping along streets and paths. ‡

# Appendix D

## Existing Roadway Segment Classification, ADT and LOS Tables







***TRAFFIC IMPACT ANALYSIS REPORT***

***MASTER TRANSPORTATION PLAN  
Existing Roadway Volumes & LOS and  
Intersection Delay & LOS***

**FINAL**

APRIL 2012

Prepared by:







## 1.0 EXISTING CONDITIONS

The project study area includes major roadways and intersections located in the City of Oceanside. Descriptions of existing geometric features for roadways and intersections with level of service analysis results are included in this section.

### 1.1 ROADWAY CONDITIONS

#### 1.1.1 Existing Roadway Network

Roadways within the City of Oceanside are described in this section. Items of note include existing geometry, bicycle facilities, adjacent land uses, and the City of Oceanside Circulation Element roadway classification designation.

**Cannon Road** is a major arterial between the western city limits and Melrose Drive. It is a four-lane divided roadway that transitions to a two-lane divided roadway west of Leisure Village Drive. Cannon Road primarily provides access to commercial and retail shopping centers and connecting residential streets. Class II bicycle lanes are striped along both sides of the street within the city limits and on-street parking is not permitted. It currently does not connect to Cannon Road in the City of Carlsbad.

**Canyon Drive** is secondary collector between SR76 and Mission Avenue and a collector with a two-way left-turn lane between Mission Avenue and Oceanside Boulevard. It primarily provides access to residential neighborhoods. It is a four-lane undivided roadway between SR76 and Mission Avenue and a two-lane roadway with a continuous two-way left turn lane between Mission Avenue and Oceanside Boulevard. Class II bicycle lanes are striped along both sides of the street within the study area and on-street parking is permitted intermittently between Loma Alta Drive and Crouch Street.

**Coast Highway** is a collector between Harbor Drive and SR76 and a secondary collector with left turn pockets between SR76 and the southern City limits. It primarily provides access to commercial and retail shopping centers. It is a two-lane undivided roadway between Harbor Drive and SR76 and a four-lane undivided roadway between SR76 and the southern City limits. There are no designated bicycle lanes but on-street parking is permitted.

**College Boulevard** is a major arterial and provides access to retail/commercial centers and residential neighborhoods. It is a six-lane divided roadway between N. River Road and SR76 (except on the bridge over the San Luis Rey River), a four-lane divided roadway between SR76 and Waring Road, and a six-lane divided roadway between Waring Road and Lake Boulevard, and a four-lane roadway between Lake Boulevard and the southern city limits. Class II bicycle lanes are striped along both sides of the street within the study area and on street parking is permitted between Thunder Drive and Roselle Street.

**Douglas Drive** is a secondary collector between North River Road and Vandegrift Boulevard and a major arterial between North River Road and SR76. It is a four-lane roadway with a two-way left turn lane between Vandegrift Boulevard and Via Malaguena, and it has a two-way left turn lane or striped median between Via Malaguena and North River Road. It is divided between North River Road and El Camino Real. There is a two-way left turn lane or striped median



between El Camino Real and SR76. Class II bicycle lanes are provided on both sides of the street between Vandegrift Boulevard and Mission Avenue. On-street parking is not permitted.

**El Camino Real** is a major arterial between Douglas Drive and Oceanside Boulevard and a prime arterial between Oceanside Boulevard and SR78. It provides access to retail/commercial centers and residential neighborhoods. It is a four-lane roadway with a continuous two-way left turn lane between Douglas Drive and Mission Avenue, a four-lane divided roadway between Mission Avenue and Oceanside Boulevard, and a six-lane divided roadway between Oceanside Boulevard and SR78. Class II bicycle lanes are striped along both sides of the street within the study area and on-street parking is not permitted.

**Emerald Drive** is a secondary collector between Sunset Drive and Lake Boulevard. It is a four-lane roadway with a continuous center two-way left-turn lane. Emerald Drive provides access to residential neighborhoods. Class II bicycle lanes are striped on both sides of the street and on-street parking is not permitted.

**Frazer Road** is a major arterial between Old Grove Road and College Boulevard and a collector road between College Boulevard and Sagewood Drive and west of Old Grove Road. It is a four-lane divided roadway between Old Grove Road and College Boulevard that primarily provides access to residential neighborhoods. Class II bicycle lanes are striped on both sides of the street and on-street parking is not permitted.

**Lake Boulevard** is a secondary collector that provides access to residential neighborhoods and retail/commercial centers. It is a four-lane roadway with a continuous two-way left-turn lane; however, it is a two-lane roadway with a continuous two-way left-turn lane between Thunder Drive and Sundown Lane. Class II bicycle lanes are striped on both sides of the street. On-street parking is permitted between Thunder Drive and Sundown Lane.

**Melrose Drive** is a major arterial between SR76 and Spur Avenue, an unimproved two-lane roadway between North Santa Fe Avenue and Sagewood Drive, a four-lane divided roadway between Sagewood Drive and Meadowbrook Drive and a two-lane unimproved roadway between Meadowbrook Drive and Oceanside Boulevard. It is five lanes (three southbound, two northbound) from Oceanside Boulevard to south of the railroad tracks and transitions to four-lanes within the City of Vista to SR78. It is a six-lane divided roadway within the city limits both north and south of Cannon Road. It provides access to retail/commercial shopping centers and residential neighborhoods. Class II bicycle lanes are striped on both sides of the street and on-street parking is not permitted.

**Mesa Drive** is a collector between Mission Avenue and Foussat Road and a secondary collector between Foussat Road and N. Santa Fe Avenue. It provides access to residential neighborhoods. It is a two-lane undivided roadway between Mission Avenue and just east of Foussat Road, and a two-lane roadway with a continuous two-way left-turn lane just east of Foussat Road to El Camino Real. It is four-lanes with a continuous two-way left-turn lane east of El Camino Real with raised medians just east and west of Rancho Del Oro Road. The two-way left-turn lane continues east of Rancho Del Oro Road to Via Empressa where it becomes a divided roadway with medians to College Boulevard. It is a four-lane roadway with a continuous two-way left-turn lane east of College Boulevard to N. Santa Fe Avenue. Class II bicycle lanes are striped along both sides of the street between Foussat Road and N. Santa Fe Avenue. On-street parking is not permitted.



**Mission Avenue** is a secondary collector between Pacific Street and Horne Street and a major arterial between Horne Street and just west of Rancho Del Oro Road. It provides access to commercial and retail shopping centers and districts. It also provides access to the beach and Oceanside Pier parking lots. Currently, Mission Avenue is a four-lane divided roadway between Pacific Street and Cleveland Street, a four-lane undivided roadway between Cleveland Street and Horne Street, and a four-lane divided roadway from Horne Street to just west of Rancho Del Oro Road. Mission Avenue becomes a two-lane divided road between just west of Rancho Del Oro Road and west of Old Grove Road. It is a four-lane divided roadway west of Old Grove Road to Frazee Road; however, a section of Mission Avenue between Old Grove Road and Valley Heights Road is only two-lanes. Class II bicycle lanes are striped along both sides of the street between I-5 and Frazee Road and on-street parking is not permitted. Mission Avenue between Cleveland Street and Clementine Street has been approved to become a collector two-lane one-way couplet with Seagaze Drive. This portion of Mission Avenue will allow parking on both sides of the street.

**North Avenue** is a secondary collector that provides access to residential neighborhoods, office complexes, and serves a connection to the City of Vista. It is a two-lane undivided roadway between Olive Drive and Seasons Road, a two-lane roadway with a center continuous two-way left-turn lane from Seasons Road to just west of Maryland Drive, and primarily a two-lane undivided roadway between Maryland Drive and Melrose Drive. Class II bicycle lanes are provided on western/southern side of North Avenue between Olive Drive and Seasons Drive. Class II bicycle lanes are also provided on both sides of the street between Seasons Drive and Lee Drive and on the southern side of North Avenue between Lee Drive and Maryland Drive. On-street parking is not permitted except between Lee Drive and Maryland Drive on the northern side of the street.

**North River Road** is a major arterial between Douglas Drive and Vandegrift Boulevard and a collector east of Vandegrift Boulevard to the city limits. It primarily provides access to residential neighborhoods. It is a four-lane divided roadway between Douglas Drive and Vandegrift Boulevard, a continuous two-lane with two-way left turn lane between Vandegrift Boulevard and Stallion Drive and a two-lane undivided roadway between Stallion Drive and the eastern city limits. Class II bicycle lanes are striped along both sides of the street between Douglas Drive and College Boulevard. On-street parking is not permitted.

**North Santa Fe Avenue** is a major arterial between SR76 and the eastern city limits. It primarily provides access to residential neighborhoods. It is a four-lane divided roadway between SR76 and the eastern city limits. Class II bicycle lanes are striped on both sides of the street between Mesa Drive and Melrose Drive. On-street parking is not permitted.

**Oceanside Boulevard** is a collector between Pacific Street and Coast Highway, a secondary collector between Coast Highway and El Camino Real, a prime arterial between El Camino Real and College Boulevard, and a major arterial between College Boulevard and the eastern city limits. It provides access to industrial, residential, and retail/commercial centers. It is a two-lane undivided roadway between Pacific Street and Coast Highway, a four-lane undivided roadway between Coast Highway and I-5, a four-lane roadway with a continuous two-way left turn lane between I-5 and El Camino Real, a six-lane undivided roadway between El Camino Real and Rancho Del Oro Road, a six-lane divided roadway between Rancho Del Oro Road and College Boulevard, and a four-lane divided roadway between College Boulevard and the eastern city



limits. Class II bicycle lanes are provided on both sides of the street and on-street parking is not permitted.

**Old Grove Road** is a collector north of Frazee Road, a major arterial between Frazee Road and College Boulevard, and a collector between College Boulevard and Pine Ridge Road. It provides access to residential neighborhoods, retail/commercial centers, and to the Rancho Del Oro Industrial Park. It is a two-lane undivided roadway north of Frazee Road, a four-lane divided roadway between Frazee Road and College Boulevard, and a two-lane divided roadway between College Boulevard and Pine Ridge Road. There are Class II bicycle lanes striped along both sides of the street and on-street parking is not permitted.

**Olive Drive** is a secondary collector that primarily provides access to residential neighborhoods and serves as a connection to the City of Vista. It is a four-lane roadway with a center continuous two-way left-turn lane. There are no designated bicycle lanes and on-street parking is not permitted.

**Pala Road** is a secondary collector roadway from Douglas Drive to its westerly terminus and a collector east of Douglas Drive. It primarily provides access to residential neighborhoods. It is a two-lane roadway with a continuous two-way left turn lane. Class II bicycle lanes are striped along both sides of the street within the study area and on-street parking is not permitted. It currently does not connect to Foussat Road.

**Plaza Drive** is a secondary collector to just east of SR78 Eastbound on/off-ramps. It provides access to retail/commercial centers and access to the SR78 and the City of Vista. It is primarily a four-lane divided roadway between College Boulevard and just west of the SR78 Eastbound on/off ramp. It is unimproved from just east of SR78 Eastbound on/off-ramps to just west of Thunder Drive. From Thunder Drive to the eastern city limits, it is three lanes (two eastbound and one westbound) with a continuous two-way left-turn lane. There are no designated bicycle lanes within the study area, and on-street parking is not permitted.

**Rancho Del Oro Drive/Road** is a major arterial and primarily provides access to residential neighborhoods, a school, and Ocean Ranch Industrial Park. However, south of Oceanside Boulevard Rancho Del Oro Road does not operate as a four-lane major arterial but is more rural in character with stop controlled intersections leading to Vista Way with the exception of one traffic signal at Glaser Drive. It is a four-lane divided roadway. There are Class II bicycle lanes striped along both sides of the street and on-street parking is not provided.

**Vandegrift Boulevard** is a major arterial and provides access to commercial shopping centers and residential neighborhoods. It is a five-lane divided roadway between College Boulevard and the back gate of Camp Pendleton with three lanes northbound and two lanes southbound between College Boulevard and Douglas Drive. It is two lanes northbound and three lanes southbound between Douglas Drive and the back gate of Camp Pendleton. Vandegrift Boulevard provides access to residential neighborhoods, small commercial shopping, and direct access to Camp Pendleton to the north. Class II bicycle lanes are striped along both sides of the street and on-street parking is not permitted.

**Vista Way** is a secondary collector and provides access to residential neighborhoods and retail/commercial centers. It is a four-lane roadway with a continuous two-way left turn lane between Jefferson Street and the eastern city limits. Vista Way is a two-lane roadway with a



continuous two-way left turn lane from Coast Highway to I-5/SR78 Interchange. Class II bicycle lanes are provided on both sides of the street and on-street parking is not permitted.

**State Route 76** is an expressway between I-5 and Melrose Drive and a major arterial east of Melrose Drive. It is a four-lane divided expressway between I-5 and Melrose Drive and a two-lane undivided roadway east of Melrose Drive. SR76 is currently under construction east of Melrose Drive to be widened to a four-lane roadway. Class II bicycle lanes are striped along both sides of the street within the study area and on-street parking is not permitted.

### 1.1.2 Existing Average Daily Traffic (ADT) and Roadway Level of Service (LOS)

Average Daily Traffic (ADT) volumes for the study area network are summarized in the table below. As seen in the table below, the following roadway segments operate at a deficient LOS:

- Coast Highway: Wisconsin Avenue to Oceanside Boulevard (LOS E)
- College Boulevard: Old Grove Road to Oceanside Boulevard (LOS E)
- College Boulevard: Oceanside Boulevard to Olive Drive (LOS F)
- College Boulevard: Olive Drive to Thunder Drive (LOS E)
- Lake Boulevard: Thunder Drive to Sundown Lane (LOS E)
- Oceanside Boulevard: I-5 to Crouch Street (LOS E)
- Oceanside Boulevard: Crouch Street to Foussat Road (LOS F)
- Oceanside Boulevard: Foussat Road to El Camino Real (LOS E)
- Vista Way: Coast Highway to I-5 (LOS F)
- Vista Way: College Boulevard to SR78 EB Ramps (LOS E)
- SR76: Melrose Drive to Eastern City Limits (LOS F)

**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
<b>Cannon Road</b>					
Melrose Drive to Shadowridge Drive	4D	Major Arterial	40,000	10,400	A
<b>Canyon Drive</b>					
SR76 to Mission Avenue	4U	Secondary Collector	25,000	5,400	A
Mission Avenue to Oceanside Boulevard	2TWLT	Collector	15,000	8,100	C
<b>Coast Highway</b>					
Harbor Drive to SR76	2U	Collector	10,000	9,000	D
SR76 to Mission Avenue	4U	Secondary Collector	25,000	18,300	D
Mission Avenue to Wisconsin Avenue	4U	Secondary Collector	25,000	21,600	D
Wisconsin Avenue to Oceanside Boulevard	4U	Secondary Collector	25,000	<b>22,100</b>	E



**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
Oceanside Boulevard to Cassidy Street	4U	Secondary Collector	25,000	20,400	D
Cassidy Street to Vista Way	4U	Secondary Collector	25,000	19,600	D
Vista Way to Southern City Limits	4U	Secondary Collector	25,000	17,900	C
<b>College Boulevard</b>					
N. River Road to SR76	6D	Major Arterial	50,000	38,500	C
SR76 to Frazee Road	4D	Major Arterial	40,000	30,300	D
Frazee Road to Mesa Drive	4D	Major Arterial	40,000	32,700	D
Mesa Drive to Old Grove Road	4D	Major Arterial	40,000	29,000	C
Old Grove Road to Oceanside Boulevard	4D	Major Arterial	40,000	<b>38,200</b>	<b>E</b>
Oceanside Boulevard to Olive Drive	4D	Major Arterial	40,000	<b>46,700</b>	<b>F</b>
Olive Drive to Thunder Drive	4D	Major Arterial	40,000	<b>35,800</b>	<b>E</b>
Thunder Drive to Waring Road	4D	Major Arterial	40,000	31,100	D
Waring Road to Vista Way	6D	Major Arterial	50,000	40,200	D
Vista Way to SR78	6D	Major Arterial	50,000	38,300	C
SR78 to Plaza Drive	6D	Major Arterial	50,000	40,500	D
Plaza Drive to Lake Boulevard	6D	Major Arterial	50,000	33,800	C
Lake Boulevard to Southern City Limits	4D	Major Arterial	40,000	24,300	C
<b>Douglas Drive</b>					
Vandegrift Boulevard to Via Malaguena	4D/U	Secondary Collector	30,000	8,200	A
Via Malaguena to Cardiff Bay Drive	2D	Collector	10,000	8,200	D
Cardiff Bay Drive to N. River Road	4TWLT	Secondary Collector	30,000	14,100	C
N. River Road to Pala Road	4D	Major Arterial	40,000	32,700	D
Pala Road to El Camino Real	4D	Major Arterial	40,000	35,000	D
El Camino Real to Mission Avenue	4TWLT	Secondary Collector	30,000	21,000	D
Mission Avenue to SR76	4U	Major Arterial	40,000	20,400	B
<b>El Camino Real</b>					
Douglas Drive to Mission Avenue	4TWLT	Major Arterial	40,000	22,600	C
Mission Avenue to Mesa Drive	4D	Major Arterial	40,000	21,200	C
Mesa Drive to Oceanside Boulevard	4D	Major Arterial	40,000	33,000	D



**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
Oceanside Boulevard to Fire Mountain Road	6D	Prime Arterial	60,000	35,800	C
Fire Mountain Road to Via Las Rosas	6D	Prime Arterial	60,000	36,200	C
Via Las Rosas to Vista Way	6D	Prime Arterial	60,000	43,700	C
Vista Way to SR78	6D	Prime Arterial	60,000	51,100	D
<b>Emerald Drive</b>					
Lake Boulevard to Sunset Dr	4TWLT	Secondary Collector	30,000	2,300	A
<b>Frazer Road</b>					
Old Grove Road to SR76	4D	Major Arterial	40,000	5,500	A
SR76 to College Boulevard	4D	Major Arterial	40,000	9,300	A
College Boulevard to Sagewood Drive	2D/U	Collector	10,000	3,600	A
<b>Lake Boulevard</b>					
College Boulevard to Thunder Drive	4TWLT	Secondary Collector	30,000	13,100	B
Thunder Drive to Sundown Lane	2TWLT	Collector	15,000	<b>14,800</b>	<b>E</b>
Sundown Lane to Sky Haven Lane	4TWLT	Secondary Collector	30,000	14,800	C
Sky Haven Lane to Cannon Road	4TWLT	Secondary Collector	30,000	13,400	B
<b>Melrose Drive</b>					
SR76 to Spur Avenue	4D	Major Arterial	40,000	9,300	A
N. Santa Fe Avenue to Oceanside Boulevard	2/4D	Major Arterial	40,000	14,300	A
Oceanside Boulevard to City Limits	4D	Major Arterial	40,000	19,400	B
City Limits to Cannon Road	6D	Prime Arterial	60,000	27,400	B
Cannon Road to Southern City Limits	6D	Prime Arterial	60,000	30,000	B
<b>Mesa Drive</b>					
Mission Avenue to Foussat Road	2U	Collector	10,000	5,600	C
Foussat Road to El Camino Real	2TWLT	Collector	15,000	4,700	A
El Camino Real to Rancho Del Oro Road	4U/TWL T/D	Secondary Collector	30,000	13,300	B
Rancho Del Oro Road to Old Grove Road	4TWLT	Secondary Collector	30,000	11,400	B



**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
Old Grove Road to College Boulevard	4TWLT	Secondary Collector	30,000	14,800	C
College Boulevard to N. Santa Fe Avenue	4TWLT	Secondary Collector	30,000	11,800	B
<b>Mission Avenue</b>					
Pacific Street to Coast Hwy	4U	Secondary Collector	25,000	8,500	A
Coast Hwy to Horne Street	4U	Secondary Collector	25,000	8,500	A
Horne Street to I-5	4D	Major Arterial	40,000	15,600	B
I-5 to Canyon Drive	4D	Major Arterial	40,000	27,900	C
Canyon Drive to Mesa Drive	4D	Major Arterial	40,000	23,800	C
Mesa Drive to Foussat Road	4D	Major Arterial	40,000	19,500	B
Foussat Road to El Camino Real	4D	Major Arterial	40,000	23,800	C
El Camino Real to Douglas Drive	4D	Major Arterial	40,000	20,200	B
Douglas Drive to Rancho Del Oro Road	4D	Major Arterial	40,000	25,000	C
Rancho Del Oro Road to Old Grove Road	2U/4U	Secondary Collector	25,000	10,500	B
Old Grove Road to Frazee Road	4TWLT/ U/D & 2U	Secondary Collector	30,000	8,500	A
<b>North Avenue</b>					
Olive Drive to Temple Heights Drive	2TWLT	Collector	15,000	6,600	B
Temple Heights Drive to Melrose Drive	2TWLT	Collector	15,000	3,800	A
<b>North River Road</b>					
Douglas Drive to College Boulevard	4D	Major Arterial	40,000	19,500	B
College Boulevard to Vandegrift Boulevard	5D	Major Arterial	45,000	31,900	C
Vandegrift Boulevard to Stallion	2TWLT	Collector	15,000	10,100	D
Stallion Road to Eastern City Limits	2U	Collector	10,000	4,800	B
<b>North Santa Fe Avenue</b>					
SR76 to Mesa Drive	4D	Major Arterial	40,000	21,800	C
Mesa Drive to Melrose Drive	4D	Major Arterial	40,000	22,700	C
Melrose Drive to Eastern City Limits	4D	Secondary Collector	30,000	15,400	C



**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
<b>Oceanside Boulevard</b>					
Pacific Street to Coast Hwy	2U	Collector	10,000	5,400	B
Coast Highway to I-5	4U	Secondary Collector	25,000	21,700	D
I-5 to Crouch Street	4TWLT	Secondary Collector	30,000	<b>29,800</b>	E
Crouch Street to Foussat Road	4TWLT	Secondary Collector	30,000	<b>31,300</b>	F
Foussat Road to El Camino Real	4TWLT	Secondary Collector	30,000	<b>25,900</b>	E
El Camino Real to Rancho Del Oro Road	6D	Prime Arterial	60,000	29,900	B
Rancho Del Oro Road to College Boulevard	6D	Prime Arterial	60,000	29,700	B
College Boulevard to Melrose Drive	4D	Major Arterial	40,000	25,400	C
Melrose Drive to Eastern City Limits	4D	Major Arterial	40,000	17,900	B
<b>Old Grove Road</b>					
Frazer Road to SR76	4D	Major Arterial	40,000	7,500	A
SR76 to Mission Avenue	4D	Major Arterial	40,000	10,800	A
Mission Avenue to Mesa Drive	4D	Major Arterial	40,000	11,200	A
Mesa Drive to College Boulevard	4D	Major Arterial	40,000	11,600	A
<b>Olive Drive</b>					
College Boulevard to Emerald Drive	4TWLT	Secondary Collector	30,000	16,100	C
<b>Pala Road</b>					
Los Arbolitos Boulevard to Douglas Drive	2TWLT	Collector	15,000	4,900	A
<b>Plaza Drive</b>					
College Boulevard to SR78 EB on/off-ramps	4D	Secondary Collector	30,000	20,000	C
SR78 EB on/off-ramps to Eastern City Limits	4D	Secondary Collector	30,000	14,500	C
<b>Rancho Del Oro Drive</b>					
Mission Avenue to SR76	4D	Major Arterial	40,000	8,900	A
SR76 to Mesa Drive	4D	Major Arterial	40,000	14,300	A
Mesa Drive to Oceanside Boulevard	4D	Major Arterial	40,000	12,400	A
Oceanside Boulevard to Cameo Drive	4D	Major Arterial	40,000	12,600	A



**Table 5-1  
Existing Segment Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
Cameo Drive to SR78	4D	Major Arterial	40,000	13,700	A
<b>Vandegrift Boulevard</b>					
Northern City Limits to Douglas Drive	5D	Major Arterial	45,000	21,700	B
Douglas Drive to N. River Road	5D	Major Arterial	45,000	22,800	B
<b>Vista Way</b>					
Coast Highway to I-5	2TWLT	Collector	15,000	<b>17,400</b>	<b>F</b>
Jefferson Street to El Camino Real	4TWLT	Secondary Collector	30,000	13,500	B
El Camino Real to Rancho Del Oro Road	4TWLT	Secondary Collector	30,000	14,300	C
Rancho Del Oro Road to College Boulevard	4TWLT	Secondary Collector	30,000	20,300	D
College Boulevard to SR78 WB Ramps	4TWLT	Secondary Collector	30,000	<b>28,000</b>	<b>E</b>
SR78 WB Ramps to Thunder Drive	4TWLT	Secondary Collector	30,000	16,200	C
<b>State Route 76</b>					
I-5 to Canyon Drive	4D	Expressway	60,000	49,500	C
Canyon Drive to Foussat Road	4D	Expressway	60,000	54,000	D
Foussat Road to Douglas Drive	4D	Expressway	60,000	51,000	D
Douglas Drive to Rancho Del Oro Road	4D	Expressway	60,000	45,500	C
Rancho Del Oro Road to Frazee Road	4D	Expressway	60,000	44,000	C
Frazee Road to College Boulevard	4D	Expressway	60,000	44,000	C
College Boulevard to N. Santa Fe Avenue	4D	Expressway	60,000	36,000	C
N. Santa Fe Avenue to Melrose Drive	4D	Expressway	60,000	40,000	C
Melrose Drive to Eastern City Limits	2U	Expressway	30,000	<b>35,500</b>	<b>F</b>

**Footnotes:**

- #D – total number of lanes in both directions divided by a raised median; #U – total number of undivided lanes in both lanes, including facilities with a striped median island; and #TWLT – total number of lanes in both directions with a center continuous two-way left turn lane.
- LOS E capacity is based on criteria established in the City of Oceanside Circulation Element Roadway Capacity Table (2009)
- ADT – average daily traffic volumes
- LOS – level of service

**Notes:**

- Bold** indicates an unacceptable level of service.
- It should be noted that some existing streets are not currently built to their full capacity/classification.



## 1.2 STUDY AREA INTERSECTIONS

### 1.2.1 Existing Intersection Geometry & Controls

Fifty study intersections have been selected for analysis based on the 1995 Circulation Element, city staff input, and major corridors.. The list of study intersections includes:

1. Coast Highway & SR76
2. Coast Highway & Surfrider Way
3. Coast Highway & Mission Avenue
4. Coast Highway & Oceanside Boulevard
5. Coast Highway & Vista Way
6. Mission Avenue & Horne Street
7. Mission Avenue & I-5 SB Ramps
8. Mission Avenue & I-5 NB Ramps
9. Mission Avenue & Canyon Drive
10. Oceanside Boulevard & I-5 SB Ramps
11. Oceanside Boulevard & I-5 NB Ramps
12. Oceanside Boulevard & Crouch Street
13. SR76 & Foussat Road
14. El Camino Real & Mission Avenue
15. El Camino Real & Mesa Drive
16. El Camino Real & Oceanside Boulevard
17. El Camino Real & Vista Way
18. El Camino Real & SR78 WB Ramps
19. El Camino Real & SR78 EB Ramps
20. Vista Way & Jefferson Street
21. Douglas Drive & North River Road
22. Douglas Drive & El Camino Real
23. Douglas Drive & Mission Avenue
24. Rancho Del Oro Drive & SR76
25. Rancho Del Oro Drive & Mesa Drive
26. Rancho Del Oro Road & Oceanside Boulevard
27. Rancho Del Oro Road & Vista Del Oro Drive
28. Rancho Del Oro Road & Cameo Drive
29. Rancho Del Oro Road & Trieste Way & Sicily Way
30. Rancho Del Oro Road & Vista Way
31. Vandegrift Boulevard & Douglas Drive
32. Vandegrift Boulevard & North River Road
33. College Boulevard & North River Road
34. College Boulevard & SR76
35. College Boulevard & Mesa Drive
36. Old Grove Road & Mesa Drive
37. College Boulevard & Old Grove Road
38. College Boulevard & Oceanside Boulevard
39. College Boulevard & Olive Drive
40. College Boulevard & Vista Way
41. College Boulevard & Plaza Drive
42. College Boulevard & Lake Boulevard
43. North Santa Fe Avenue & Mesa Drive
44. Melrose Drive & SR76
45. Melrose Drive & North Santa Fe Avenue
46. Melrose Drive & Oceanside Boulevard
47. Melrose Drive & Cannon Road
48. College Boulevard & SR78 EB Ramp
49. Vista Way & SR78 WB Ramp
50. Plaza Drive & SR78 EB Ramp



### 1.2.2 Existing Intersection Level of Service (LOS)

A summary of the peak hour level of service analysis results for the existing condition is included in the table below. There are several intersections that operate at a deficient level of service E or F under existing conditions:

- Mission Avenue & I-5 NB Ramps (PM - LOS F)
- Oceanside Boulevard & I-5 SB Ramps (PM - LOS E)
- Rancho Del Oro Road & Cameo Drive (AM & PM - LOS E)
- College Boulevard & North River Road (PM - LOS E)
- College Boulevard & SR 76 (PM - LOS F)

**Table 5-2  
Existing Peak Hour Intersection LOS**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>a</sup>	LOS <sup>b</sup>
1. Coast Hwy & SR76	Signal	AM	15.1	B
		PM	18.7	B
2. Coast Hwy & Surfdrider Way	Signal	AM	11.1	B
		PM	13.1	B
3. Coast Hwy & Mission Ave	Signal	AM	11.6	B
		PM	12.7	B
4. Coast Hwy & Oceanside Blvd	Signal	AM	36.4	D
		PM	42.1	D
5. Coast Hwy & Vista Way	Signal	AM	24.6	C
		PM	36.2	D
6. Mission Ave & Horne St	Signal	AM	22.8	C
		PM	33.3	C
7. Mission Ave & I-5SB Ramps	Signal	AM	24.3	C
		PM	30.7	C
8. Mission Ave & I-5NB Ramps	Unsignalized	AM	23.3	C
		PM	<b>309.8</b>	<b>F</b>
9. Mission Ave & Canyon Dr	Signal	AM	32.5	C
		PM	31.5	C
10. Oceanside Blvd & I-5 SB Ramps	Signal	AM	34.1	C
		PM	<b>55.3</b>	<b>E</b>



**Table 5-2  
Existing Peak Hour Intersection LOS**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>a</sup>	LOS <sup>b</sup>
11. Oceanside Blvd & I-5 NB Ramps	Signal	AM	20.5	C
		PM	31.6	C
12. Oceanside Blvd & Crouch St	Signal	AM	27.5	C
		PM	39.1	D
13. SR76 & Foussat Rd	Signal	AM	44.5	D
		PM	24.0	C
14. El Camino Real & Mission Ave	Signal	AM	36.9	D
		PM	35.0	C
15. El Camino Real & Mesa Dr	Signal	AM	31.5	C
		PM	26.0	C
16. El Camino Real & Oceanside Blvd	Signal	AM	49.2	D
		PM	30.2	C
17. El Camino Real & Vista Way	Signal	AM	35.5	D
		PM	48.7	D
18. El Camino Real & SR78 WB Ramps	Signal	AM	23.9	C
		PM	29.5	C
19. El Camino Real & SR78 EB Ramps	Signal	AM	23.3	C
		PM	39.6	D
20. Vista Way & Jefferson St	Signal	AM	23.9	C
		PM	33.5	C
21. Douglas Dr & North River Rd	Signal	AM	32.1	C
		PM	32.2	C
22. Douglas Dr & El Camino Real	Signal	AM	54.2	D
		PM	33.1	C
23. Douglas Dr & Mission Ave	Signal	AM	34.1	C
		PM	39.0	D
24. Rancho Del Oro Dr & SR76	Signal	AM	36.8	D
		PM	47.9	D
25. Rancho Del Oro Dr & Mesa Dr	Signal	AM	33.3	C
		PM	24.7	C



**Table 5-2  
Existing Peak Hour Intersection LOS**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>a</sup>	LOS <sup>b</sup>
26. Rancho Del Oro Rd & Oceanside Blvd	Signal	AM	25.0	C
		PM	27.2	C
27. Rancho Del Oro Rd & Vista Del Oro Dr <sup>c</sup>	AWSC <sup>d</sup>	AM	13.1	B
		PM	11.7	B
28. Rancho Del Oro Rd & Cameo Dr <sup>c</sup>	AWSC <sup>d</sup>	AM	<b>36.4</b>	<b>E</b>
		PM	<b>38.3</b>	<b>E</b>
29. Rancho Del Oro Rd & Trieste Way & Sicily Way <sup>c</sup>	AWSC <sup>d</sup>	AM	10.7	B
		PM	11.4	B
30. Rancho Del Oro Rd & Vista Way	Signal	AM	31.4	C
		PM	46.7	D
31. Vandegrift Blvd & Douglas Dr	Signal	AM	18.9	B
		PM	17.0	B
32. Vandegrift Blvd & North River Rd	Signal	AM	16.8	B
		PM	32.1	C
33. College Blvd & North River Rd	Signal	AM	21.5	C
		PM	<b>61.0</b>	<b>E</b>
34. College Blvd & SR76	Signal	AM	44.2	D
		PM	<b>88.2</b>	<b>F</b>
35. College Blvd & Mesa Dr	Signal	AM	28.2	C
		PM	40.9	D
36. Old Grove Rd & Mesa Dr	Signal	AM	18.6	B
		PM	23.9	C
37. College Blvd & Old Grove Rd	Signal	AM	30.7	C
		PM	33.4	C
38. College Blvd & Oceanside Blvd	Signal	AM	48.3	D
		PM	48.0	D
39. College Blvd & Olive Dr	Signal	AM	24.2	C
		PM	30.7	C
40. College Blvd & Vista Way	Signal	AM	52.3	D
		PM	53.6	D



**Table 5-2  
Existing Peak Hour Intersection LOS**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>a</sup>	LOS <sup>b</sup>
41. College Blvd & SR78 EB Off Ramp	Signal	AM	17.2	B
		PM	16.7	B
42. College Blvd & Plaza Dr	Signal	AM	21.6	C
		PM	31.6	C
43. College Blvd & Lake Blvd	Signal	AM	18.6	B
		PM	27.8	C
44. Vista Way & SR78 WB Ramp	Signal	AM	27.8	C
		PM	30.4	C
45. Plaza Dr & SR78 EB Ramp	Signal	AM	23.4	C
		PM	28.0	C
46. North Santa Fe Ave & Mesa Dr	Signal	AM	18.1	B
		PM	20.4	C
47. Melrose Dr & SR76	Signal	AM	23.9	C
		PM	21.6	C
48. Melrose Dr & North Santa Fe Ave	Signal	AM	15.3	B
		PM	21.1	C
49. Melrose Dr & Oceanside Blvd	Signal	AM	21.2	C
		PM	25.5	C
50. Melrose Dr & Cannon Rd	Signal	AM	12.2	B
		PM	13.3	B

**Footnotes:**

- a. Delay is expressed as average seconds of delay per vehicle.
- b. LOS – Level of Service
- c. These intersection calculations were done in Traffix using 2000 HCM methodologies. Synchro only allows geometry of 2-lanes per leg for AWSC intersections.
- d. AWSC – All way stop controlled intersection

**Notes:**

- 1. **Bold** indicates an unacceptable level of service.
- 2. Acceptable level of service at intersections in Oceanside is LOS D.

# Appendix E

## Proposed Master Transportation Plan Roadway Segment Classification, ADT and LOS Tables







## PROPOSED MASTER TRANSPORTATION ROADWAY PLAN (YEAR 2030) SEGMENT ANALYSIS

### 1.1 SEGMENT ANALYSIS

The Proposed Master Transportation Roadway Plan scenario traffic forecasting was conducted using the Series 11 North County Subarea Model. The model output average daily traffic (ADT) volumes were reviewed and post-processed. The Proposed Master Transportation Roadway Plan (Year 2030) scenario segment volumes are shown in the table below. As shown in table, there are segments that operate at a deficient level of service (LOS E or LOS F) under the Proposed Master Transportation Roadway Plan network. *(The Modified 1995 CE Alternative from the Traffic Impact Study, some of the unacceptable segments have mitigation measures accepted therefore they are no longer operating at unacceptable levels of service in the proposed Master Transportation Roadway Plan network.)*

- Coast Highway: Mission Avenue to Oceanside Boulevard (LOS E)
- College Boulevard: SR76 to Mesa Drive (LOS E)
- College Boulevard: Oceanside Boulevard to Olive Drive (LOS F)
- College Boulevard: Waring Road to Plaza Drive (LOS E)
- College Boulevard: Lake Boulevard to Southern City Limits (LOS F)
- Douglas Dr: N. River Road to El Camino Real (LOS E)
- El Camino Real: Mesa Drive to Oceanside Boulevard (LOS E)
- El Camino Real: Vista Way to SR78 (LOS E)
- Mesa Drive: Mission Avenue to Foussat Road (LOS F)
- Oceanside Boulevard: Crouch Street to Foussat Road (LOS E)
- Vista Way: College Boulevard to SR78 WB Ramps (LOS F)
- SR76: Melrose Drive to Eastern City Limits (LOS F)

**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
<b>Cannon Road</b>					
Melrose Drive to Shadowridge Drive	4D	Major Arterial	40,000	29,100	C
<b>Canyon Drive</b>					
SR76 to Mission Avenue	4U	Secondary Collector	25,000	10,700	B
Mission Avenue to Oceanside Boulevard	4U	Secondary Collector	25,000	9,300	B



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
<b>Coast Highway</b>					
Harbor Drive to SR76	4U	Secondary Collector	25,000	17,100	C
SR76 to Mission Avenue	4U	Secondary Collector	25,000	20,100	D
Mission Avenue to Wisconsin Avenue	4U	Secondary Collector	25,000	21,600	D
Wisconsin Avenue to Oceanside Boulevard	4U	Secondary Collector	25,000	<b>23,600</b>	<b>E</b>
Oceanside Boulevard to Cassidy Street	4U	Secondary Collector	25,000	21,800	D
Cassidy Street to Vista Way	4U	Secondary Collector	25,000	20,900	D
Vista Way to Southern City Limits	4U	Secondary Collector	25,000	19,700	D
<b>College Boulevard</b>					
N. River Road to SR76	6D	Major Arterial	50,000	42,200	D
SR76 to Frazee Road	4D	Major Arterial	40,000	<b>36,300</b>	<b>E</b>
Frazee Road to Mesa Drive	4D	Major Arterial	40,000	<b>36,900</b>	<b>E</b>
Mesa Dr to Old Grove Rd	4D	Major Arterial	40,000	32,600	D
Old Grove Road to Avenida de la Plata	6D	Major Arterial	50,000	39,000	C
Avenida de la Plata to Oceanside Boulevard	6D	Major Arterial	50,000	42,500	D
Oceanside Blvd to Olive Dr	6D	Major Arterial	50,000	<b>52,000</b>	<b>F</b>
Olive Drive to Thunder Drive	6D	Major Arterial	50,000	40,000	C
Thunder Drive to Waring Road	6D	Major Arterial	50,000	35,400	C
Waring Road to Vista Way	6D	Major Arterial	50,000	<b>45,800</b>	<b>E</b>
Vista Way to SR78	6D	Major Arterial	50,000	<b>47,100</b>	<b>E</b>
SR78 to Plaza Drive	6D	Major Arterial	50,000	<b>49,300</b>	<b>E</b>
Plaza Drive to Lake Boulevard	6D	Major Arterial	50,000	39,300	C
Lake Boulevard to Southern City Limits	4D	Major Arterial	40,000	<b>41,400</b>	<b>F</b>
<b>Douglas Drive</b>					
Vandegrift Boulevard to Cardiff Bay Drive	4TWLT	Secondary Collector	30,000	13,300	B
Cardiff Bay Drive to N. River Road	4TWLT	Secondary Collector	30,000	17,500	C
N. River Road to Pala Road	4D	Major Arterial	40,000	<b>37,500</b>	<b>E</b>
Pala Road to El Camino Real	4D	Major Arterial	40,000	<b>38,400</b>	<b>E</b>



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
El Camino Real to Mission Avenue	4U	Major Arterial	40,000	23,900	C
Mission Avenue to SR76	4U	Major Arterial	40,000	25,400	C
<b>El Camino Real</b>					
Douglas Drive to Mission Avenue	4D	Major Arterial	40,000	25,400	C
Mission Avenue to Mesa Drive	4D	Major Arterial	40,000	25,500	C
Mesa Drive to Oceanside Boulevard	4D	Major Arterial	40,000	<b>39,600</b>	<b>E</b>
Oceanside Boulevard to Fire Mountain Road	6D	Prime Arterial	60,000	43,100	C
Fire Mountain Road to Via Las Rosas	6D	Prime Arterial	60,000	48,200	C
Via Las Rosas to Vista Way	6D	Prime Arterial	60,000	53,600	D
Vista Way to SR78	6D	Prime Arterial	60,000	<b>58,900</b>	<b>E</b>
<b>Emerald Drive</b>					
Lake Boulevard to Sunset Drive	4TWLT	Secondary Collector	30,000	4,200	A
<b>Frazer Road</b>					
Old Grove Road to SR76	4D	Major Arterial	40,000	5,700	A
SR76 to College Boulevard	4D	Major Arterial	40,000	12,000	A
College Boulevard to Sagewood Drive	2D	Collector	10,000	5,200	B
<b>Lake Boulevard</b>					
College Blvd to Thunder Dr	4TWLT	Secondary Collector	30,000	19,500	C
Thunder Drive to Sundown Lane	4TWLT	Secondary Collector	30,000	16,200	C
Sundown Lane to Sky Haven Lane	4TWLT	Secondary Collector	30,000	16,200	C
Sky Haven Lane to Cannon Road	4TWLT	Secondary Collector	30,000	14,700	C
<b>Melrose Drive</b>					
N. River Road to SR76	4D	Major Arterial	40,000	13,100	A
SR76 to N. Santa Fe Avenue	6D	Major Arterial	50,000	26,500	B
N. Santa Fe Avenue to Oceanside Boulevard	6D	Prime Arterial	60,000	36,600	C
Oceanside Boulevard to City Limits	6D	Prime Arterial	60,000	43,800	C



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
City Limits to Cannon Road	6D	Prime Arterial	60,000	32,100	B
Cannon Road to Southern City Limits	6D	Prime Arterial	60,000	34,100	B
<b>Mesa Drive</b>					
Mission Avenue to Foussat Road	2U	Collector	10,000	<b>11,100</b>	<b>F</b>
Foussat Road to El Camino Real	2TWLT	Collector	15,000	8,800	C
El Camino Real to Rancho Del Oro Drive	4TWLT/D	Secondary Collector	30,000	17,300	C
Rancho Del Oro Drive to Old Grove Road	4TWLT/D	Secondary Collector	30,000	18,100	C
Old Grove Road to College Boulevard	4 TWLT	Secondary Collector	30,000	18,700	C
College Boulevard to N. Santa Fe Avenue	4 TWLT	Secondary Collector	30,000	15,100	C
<b>Mission Avenue</b>					
Pacific Street to Coast Highway	4U	Secondary Collector	25,000	14,400	C
Cleveland Street to Coast Highway	One-way (2-Lane)	Collector	15,000	7,200	C
Coast Highway to Clementine Street	One-way (2-Lane)	Collector	15,000	11,500	D
Clementine Street to Horne Street	4U	Secondary Collector	25,000	21,400	D
Horne Street to I-5	4D	Major Arterial	40,000	27,000	C
I-5 to Canyon Drive	4D	Major Arterial	40,000	34,600	D
Canyon Drive to Mesa Drive	4D	Major Arterial	40,000	27,000	C
Mesa Drive to Foussat Road	4D	Major Arterial	40,000	27,200	C
Foussat Road to El Camino Real	4D	Major Arterial	40,000	29,400	C
El Camino Real to Douglas Dr	4D	Major Arterial	40,000	25,300	C
Douglas Drive to Rancho Del Oro Drive	4D	Major Arterial	40,000	31,000	D
Rancho Del Oro Road to Old Grove Drive	4U	Secondary Collector	25,000	12,900	B
Old Grove Rd to Frazee Rd	4TWLT/U/D	Secondary Collector	30,000	9,100	A
<b>North Avenue</b>					
Olive Dr to Temple Heights Dr	4TWLT	Secondary Collector	30,000	7,800	A



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
Temple Heights Dr to Melrose Drive	4TWLT	Secondary Collector	30,000	3,900	A
<b>North River Road</b>					
Douglas Drive to College Boulevard	4D	Major Arterial	40,000	23,400	C
College Boulevard to Vandegrift Boulevard	5D	Major Arterial	45,000	38,300	D
Vandegrift Boulevard to Stallion Road	4D	Major Arterial	40,000	9,700	A
Stallion Road to Melrose Drive	4D	Major Arterial	40,000	10,600	A
Melrose Drive to Eastern City Limits	4TWLT	Secondary Collector	30,000	12,900	B
<b>North Santa Fe Avenue</b>					
SR76 to Mesa Drive	4D	Major Arterial	40,000	25,700	C
Mesa Drive to Melrose Drive	4D	Major Arterial	40,000	27,500	C
<b>Oceanside Boulevard</b>					
Pacific St to Coast Highway	2U	Collector	10,000	8,700	D
Coast Highway to I-5	4U	Secondary Collector	25,000	21,100	D
I-5 to Crouch Street	4TWLT	Major Arterial	40,000	32,600	D
Crouch Street to Foussat Road	4TWLT	Major Arterial	40,000	<b>37,900</b>	<b>E</b>
Foussat Road to El Camino Real	4TWLT	Major Arterial	40,000	33,800	D
El Camino Real to Rancho Del Oro Road	6D	Prime Arterial	60,000	37,100	C
Rancho Del Oro Road to College Boulevard	6D	Prime Arterial	60,000	41,400	C
College Boulevard to Melrose Drive	4D	Major Arterial	40,000	29,500	C
Melrose Drive to Eastern City Limits	4D	Major Arterial	40,000	28,000	C
<b>Old Grove Road</b>					
Frazee Road to SR76	4D	Major Arterial	40,000	8,000	A
SR76 to Mission Avenue	4D	Major Arterial	40,000	17,800	B
Mission Avenue to Mesa Dr	4D	Major Arterial	40,000	17,700	B
Mesa Drive to College Blvd	4D	Major Arterial	40,000	24,900	C
<b>Olive Drive</b>					
College Boulevard to Emerald Drive	4TWLT	Secondary Collector	30,000	17,700	C



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
<b>Pala Road</b>					
Foussat Road Los Arbolitos Boulevard	4TWLT	Secondary Collector	30,000	7,000	A
Los Arbolitos Boulevard to Douglas Drive	4TWLT	Secondary Collector	30,000	8,300	A
<b>Plaza Drive</b>					
College Boulevard to SR78 EB on/off-ramps	4D	Secondary Collector	30,000	22,100	D
SR78 EB on/off-ramps to Eastern City Limits	4D	Secondary Collector	30,000	16,000	C
<b>Rancho Del Oro Drive</b>					
Mission Avenue to SR76	4D	Major Arterial	40,000	9,000	A
SR76 to Mesa Drive	4D	Major Arterial	40,000	24,200	C
Mesa Drive to Oceanside Blvd	4D	Major Arterial	40,000	26,500	C
Oceanside Boulevard to Cameo Drive	4D	Major Arterial	40,000	32,400	D
Cameo Drive to SR78	4D	Major Arterial	40,000	30,800	D
<b>Vandegrift Boulevard</b>					
Northern City Limits to Douglas Drive	5D	Major Arterial	45,000	26,000	C
Douglas Drive to N. River Rd	5D	Major Arterial	45,000	27,600	C
<b>Vista Way</b>					
Coast Highway to I-5	4TWLT	Secondary Collector	30,000	18,100	C
Jefferson Street to El Camino Real	4TWLT	Secondary Collector	30,000	15,400	C
El Camino Real to Rancho Del Oro Road	4TWLT	Secondary Collector	30,000	18,100	C
Rancho Del Oro Road to College Boulevard	4TWLT	Secondary Collector	30,000	24,600	D
College Boulevard to SR78 WB Ramps	4TWLT	Secondary Collector	30,000	<b>31,500</b>	<b>F</b>
SR78 WB Ramps to Thunder Drive	4TWLT	Secondary Collector	30,000	19,200	C
<b>State Route 76</b>					
I-5 to Canyon Drive	6D	Expressway	80,000	60,700	D
Canyon Drive to Foussat Road	6D	Expressway	80,000	65,900	D
Foussat Road to Douglas Dr	6D	Expressway	80,000	59,800	C
Douglas Drive to Rancho Del Oro Drive	6D	Expressway	80,000	54,100	C



**Proposed Master Transportation Roadway Plan Year 2030  
Segment ADT Volumes**

Street	Lanes <sup>a</sup>	Classification	LOS E Capacity <sup>b</sup>	ADT <sup>c</sup>	LOS <sup>d</sup>
	Prior to Mitigation				
Rancho Del Oro Drive to Frazee Road	6D	Expressway	80,000	58,200	C
Frazee Road to College Boulevard	6D	Expressway	80,000	51,500	C
College Boulevard to N. Santa Fe Avenue	6D	Expressway	80,000	56,200	C
N. Santa Fe Avenue to Melrose Drive	6D	Expressway	80,000	58,000	C
Melrose Drive to Eastern City Limits	4D	Expressway	60,000	<b>61,800</b>	<b>F</b>

**Footnotes:**

- a. #D – total number of lanes in both directions divided by a raised median; #U – total number of undivided lanes in both lanes; #TWLT – total number of lanes in both directions with a center continuous two-way left turn lane
- b. LOS E is based on criteria established in the City of Oceanside Circulation Element Roadway Capacity Table (2009)
- c. ADT = Average Daily Traffic Volumes
- d. LOS = Level of Service

**Notes:**

- 1. **Bold** indicates an unacceptable level of service.
- 2. **Red** text indicates a change from the Existing Network.



## 1.2 POTENTIAL MITIGATION MEASURES

The following are the proposed mitigation measures for the impacted locations for the Modified 1995 CE Alternative (*now Master Transportation Roadway Plan*).

POTENTIAL MITIGATION MEASURES			
Location	Mitigation Measure	Additional Comments	Action by City
<b>Roadways:</b>			
Coast Hwy: Wisconsin Ave to Oceanside Blvd	Remove on-street parking and widen to a Secondary Collector 64/84 cross section	The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
College Blvd: SR76 to Frazee Rd	Widen to a 6-lane Major Arterial	<p>This segment has overriding considerations per the Pacific Coast Business Park study and El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>In addition, a hybrid of a 4- and 6-lane combination of College Blvd has been approved by Council.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
College Blvd: Frazee Rd to Mesa Dr	Widen to a 6-lane Major Arterial	<p>This segment has overriding considerations per the Pacific Coast Business Park study and El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>In addition, a hybrid of a 4- and 6-lane combination of College Blvd has been approved by Council.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
College Blvd: Oceanside Blvd to Olive Dr	Widen to a 6-lane Prime Arterial	<p>This segment has overriding considerations per the Pacific Coast Business Park study and El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>In addition, a hybrid of a 4- and 6-lane combination of College Blvd has been approved by Council. The College Blvd Study recommends College be widened to a 6-ln major from Aztec St to Olive Dr.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
College Blvd: Waring Rd to Vista Way	Widen to a 6-lane Prime Arterial	<p>This segment has overriding considerations per the Pacific Coast Business Park study and El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>In addition, a hybrid of a 4- and 6-lane combination of College Blvd has been approved by Council.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
College Blvd: Vista Way to SR78	Widen to a 6-lane Prime Arterial	<p>This segment has overriding considerations per the Pacific Coast Business Park study and El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>In addition, a hybrid of a 4- and 6-lane combination of College Blvd has been approved by Council.</p> <p>The new TMC can also be used to manage the transportation system through adaptive</p>	Adopt Overriding Consideration



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
		signals on congested corridors.	
College Blvd: SR78 to Plaza Dr	Widen to a 6-lane Prime Arterial	This would require a roadway reclassification.  The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
College Blvd: Lake Blvd to Southern City Limits	Widen to a 6-lane Major Arterial	This would require a roadway reclassification.  The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
Douglas Dr: N. River Rd to Pala Rd	Widen to a 6-lane Major Arterial	This segment has overriding considerations per The Pavilion study. However, this project assumed the Pala Rd extension between Foussat Rd and Los Arbolitos Dr is not constructed. Since this project possibly might not be built due to financing and the model has since been updated since this study, it is recommended that the overrides for this segment be reconsidered with the updated Circulation Element.	Implement the recommended mitigation measures.
Douglas Dr: Pala Rd to El Camino Real	Widen to a 6-lane Major Arterial	This would require a roadway reclassification.	Implement the recommended mitigation measures.
El Camino Real: Mesa Dr to Oceanside Blvd	Widen to a 5-lane Major Arterial (3NB, 2SB)	This would require a roadway reclassification.  The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Implement the recommended mitigation measures.
El Camino Real: Vista Way to SR78	Widen to 8-lanes	This segment has overriding considerations from the El Corazon study. This segment also has overriding considerations per the 1995 Circulation Element.  The extent of the impact to this segment has changed since the previous Circulation	Adopt Overriding Consideration



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
		<p>Element and the model has been updated since the El Corazon study. Therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	
Mesa Dr: Mission Ave to Foussat Rd	Widen to a 50/70 Collector	Widening Mesa Drive in this segment would impact existing homes that front it.	Adopt Overriding Consideration
Oceanside Blvd: Crouch St to Foussat Rd	Widen to a 6-lane Major Arterial	<p>This segment has overriding considerations from the El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this segment be reconsidered and adopted again with the updated Circulation Element.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
Vista Way: College Blvd to SR78 WB Ramps	Provide WB dedicated Right-Turn lane and lengthen the WB Left-Turn lanes at the College Blvd/Vista Way intersection. This will not fully mitigate this segment but will improve peak hour conditions.	This segment is relatively short in length and therefore the WB intersection improvements to College/Vista Way would improve the peak hour operations on this segment. However, the improvements do not fully mitigate this segment.	Implement the recommended mitigation measures to the College Blvd/Vista Way intersection. This will improve peak hour operations on this segment but will not fully mitigate the segment, so an overriding consideration should be adopted.



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
State Route 76: Melrose Dr to Eastern City Limits	Widen to a 6-lane Expressway	This is a Caltrans regional facility & would require coordination with them to mitigate.	Implement the recommended mitigation measures with coordination with Caltrans.

# Appendix F

## Proposed Master Transportation Plan Key Intersections Delay and LOS Tables







## PROPOSED MASTER TRANSPORTATION PLAN (YEAR 2030) INTERSECTION ANALYSIS

### 1.1 PROPOSED MASTER TRANSPORTATION PLAN (YEAR 2030) INTERSECTION OPERATIONS

The Proposed Master Transportation Roadway Plan, Year 2030 (*Modified 1995 CE Alternative from the Traffic Impact Study*) intersection turning movement volumes were calculated from the Series 11 North County Subarea model forecast volumes. As shown in the table, there are several intersections that operate at a deficient level of service (LOS E or LOS F) during one or both peak hour time periods under the Proposed Master Transportation Roadway Plan (*Modified 1995 CE Alternative*) scenario. (*The Modified 1995 CE Alternative from the Traffic Impact Study, some of the unacceptable intersections have mitigation measures accepted therefore they are no longer operating at unacceptable levels of service in the proposed Master Transportation Roadway Plan network.*)

- Mission Avenue & I-5 SB Ramps (PM - LOS E)
- Oceanside Boulevard & I-5 SB Ramps (PM - LOS F)
- Oceanside Boulevard & I-5 NB Ramps (PM - LOS E)
- Oceanside Boulevard & Crouch Street (PM - LOS E)
- SR76 & Foussat Road (AM - LOS E)
- El Camino Real & Oceanside Boulevard (AM - LOS E)
- El Camino Real & Vista Way (PM - LOS E)
- Vista Way & Jefferson Street (PM - LOS E)
- Douglas Drive & El Camino Real (AM - LOS F; PM - LOS E)
- Douglas Drive & Mission Avenue (AM & PM - LOS E)
- Rancho Del Oro Road & Vista Del Oro Drive (AM & PM - LOS F)
- Rancho Del Oro Road & Cameo Drive (AM & PM - LOS F)
- Rancho Del Oro Road & Trieste Way & Sicily Way (AM & PM - LOS F)
- College Boulevard & North River Road (PM - LOS F)
- College Boulevard & SR76 (AM - LOS E; PM - LOS F)
- College Boulevard & Oceanside Boulevard (PM - LOS E)
- College Boulevard & Lake Boulevard (PM - LOS E)
- Melrose Drive & SR76 (PM - LOS E)



**Proposed Master Transportation Roadway Plan Year 2030  
Intersection Operations & Level of Service**

Intersection	Control Type	Peak Hour	Master Transportation Roadway Plan (Prior to Mitigation)	
			Delay <sup>a</sup>	LOS <sup>b</sup>
1. Coast Hwy & SR76	Signal	AM PM	15.5 21.1	B C
2. Coast Hwy & Surf Rider Way	Signal	AM PM	11.6 14.3	B B
3. Coast Hwy & Mission Ave	Signal	AM PM	11.0 12.9	B B
4. Coast Hwy & Oceanside Blvd	Signal	AM PM	39.1 49.1	D D
5. Coast Hwy & Vista Way	Signal	AM PM	26.4 41.4	C D
6. Mission Ave & Horne St	Signal	AM PM	26.8 42.1	C D
7. Mission Ave & I-5SB Ramps	Signal	AM PM	46.4 <b>55.2</b>	D E
8. Mission Ave & I-5NB Ramps	Signal	AM PM	40.4 48.9	D D
9. Mission Ave & Canyon Dr	Signal	AM PM	28.2 41.5	C D
10. Oceanside Blvd & I-5 SB Ramps	Signal	AM PM	51.4 <b>82.4</b>	D F
11. Oceanside Blvd & I-5 NB Ramps	Signal	AM PM	28.3 <b>63.6</b>	C E
12. Oceanside Blvd & Crouch St	Signal	AM PM	33.8 <b>58.2</b>	C E
13. SR76 & Foussat Rd	Signal	AM PM	<b>67.3</b> 51.4	E D
14. El Camino Real & Mission Ave	Signal	AM PM	47.0 45.6	D D



**Proposed Master Transportation Roadway Plan Year 2030  
Intersection Operations & Level of Service**

Intersection	Control Type	Peak Hour	Master Transportation Roadway Plan (Prior to Mitigation)	
			Delay <sup>a</sup>	LOS <sup>b</sup>
15. El Camino Real & Mesa Dr	Signal	AM	38.5	D
		PM	31.5	C
16. El Camino Real & Oceanside Blvd	Signal	AM	<b>56.9</b>	<b>E</b>
		PM	41.3	D
17. El Camino Real & Vista Way	Signal	AM	37.1	D
		PM	<b>58.6</b>	<b>E</b>
18. El Camino Real & SR78 WB Ramps	Signal	AM	28.5	C
		PM	40.9	D
19. El Camino Real & SR78 EB Ramps	Signal	AM	23.5	C
		PM	43.5	D
20. Vista Way & Jefferson St	Signal	AM	26.6	C
		PM	<b>56.5</b>	<b>E</b>
21. Douglas Dr & North River Rd	Signal	AM	50.7	D
		PM	42.3	D
22. Douglas Dr & El Camino Real	Signal	AM	<b>90.7</b>	<b>F</b>
		PM	<b>57.7</b>	<b>E</b>
23. Douglas Dr & Mission Ave	Signal	AM	<b>64.4</b>	<b>E</b>
		PM	<b>66.6</b>	<b>E</b>
24. Rancho Del Oro Dr & SR76	Signal	AM	36.1	D
		PM	38.3	D
25. Rancho Del Oro Dr & Mesa Dr	Signal	AM	49.2	D
		PM	33.1	C
26. Rancho Del Oro Rd & Oceanside Blvd	Signal	AM	29.7	C
		PM	37.6	D
27. Rancho Del Oro Rd & Vista Del Oro Dr <sup>c</sup>	AWSC <sup>d</sup>	AM	<b>148.1</b>	<b>F</b>
		PM	<b>130.5</b>	<b>F</b>
28. Rancho Del Oro Rd & Cameo Dr <sup>c</sup>	AWSC <sup>d</sup>	AM	<b>183.9</b>	<b>F</b>
		PM	<b>185.0</b>	<b>F</b>
29. Rancho Del Oro Rd & Trieste Way & Sicily Way <sup>c</sup>	AWSC <sup>d</sup>	AM	<b>100.8</b>	<b>F</b>
		PM	<b>152.3</b>	<b>F</b>



**Proposed Master Transportation Roadway Plan Year 2030  
Intersection Operations & Level of Service**

Intersection	Control Type	Peak Hour	Master Transportation Roadway Plan (Prior to Mitigation)	
			Delay <sup>a</sup>	LOS <sup>b</sup>
30. Rancho Del Oro Rd & Vista Way	Signal	AM	31.1	C
		PM	46.4	D
31. Vandegrift Blvd & Douglas Dr	Signal	AM	24.5	C
		PM	30.3	C
32. Vandegrift Blvd & North River Rd	Signal	AM	18.7	B
		PM	37.7	D
33. College Blvd & North River Rd	Signal	AM	24.1	C
		PM	<b>89.8</b>	<b>F</b>
34. College Blvd & SR76	Signal	AM	<b>73.2</b>	<b>E</b>
		PM	<b>147.2</b>	<b>F</b>
35. College Blvd & Mesa Dr	Signal	AM	39.7	D
		PM	48.7	D
36. Old Grove Rd & Mesa Dr	Signal	AM	23.7	C
		PM	41.6	D
37. College Blvd & Old Grove Rd	Signal	AM	38.2	D
		PM	43.7	D
38. College Blvd & Oceanside Blvd	Signal	AM	44.8	D
		PM	<b>55.3</b>	<b>E</b>
39. College Blvd & Olive Dr	Signal	AM	25.0	C
		PM	32.6	C
40. College Blvd & Vista Way	Signal	AM	28.3	C
		PM	33.4	C
41. College Blvd & SR78 EB Off Ramp	Signal	AM	11.8	B
		PM	16.3	B
42. College Blvd & Plaza Dr	Signal	AM	26.6	C
		PM	26.6	C
43. College Blvd & Lake Blvd	Signal	AM	29.9	C
		PM	<b>58.7</b>	<b>E</b>
44. Vista Way & SR78 WB Ramp	Signal	AM	29.5	C
		PM	34.1	C



**Proposed Master Transportation Roadway Plan Year 2030  
Intersection Operations & Level of Service**

Intersection	Control Type	Peak Hour	Master Transportation Roadway Plan (Prior to Mitigation)	
			Delay <sup>a</sup>	LOS <sup>b</sup>
45. Plaza Dr & SR78 EB Ramp	Signal	AM	29.1	C
		PM	34.8	C
46. North Santa Fe Ave & Mesa Dr	Signal	AM	16.2	B
		PM	18.3	B
47. Melrose Dr & SR76	Signal	AM	51.9	D
		PM	<b>58.4</b>	<b>E</b>
48. Melrose Dr & North Santa Fe Ave	Signal	AM	33.3	C
		PM	30.7	C
49. Melrose Dr & Oceanside Blvd	Signal	AM	33.0	C
		PM	49.5	D
50. Melrose Dr & Cannon Rd	Signal	AM	43.4	D
		PM	32.4	C

**Footnotes:**

- Delay is expressed as average seconds of delay per vehicle.
- LOS = Level of Service
- These intersection calculations were done in Traffix using 2000 HCM methodologies. Synchro only allows geometry of 2-lanes per leg for AWSC intersections.
- AWSC = All-Way Stop Controlled unsignalized intersection.

**Notes:**

- Acceptable level of service at intersections in Oceanside is LOS D.
- Bold** indicates an unacceptable level of service.



## 1.2 RANCHO DEL ORO ROAD SIGNAL WARRANT ANALYSIS

There are three intersections along Rancho Del Oro Road that are shown as all-way stop controlled intersections.

- Rancho Del Oro Road & Vista Del Oro Drive
- Rancho Del Oro Road & Cameo Drive
- Rancho Del Oro Road & Trieste Way & Sicily Way

As seen in the previous table, the three unsignalized intersections are shown to operate at LOS F in both the AM and PM peak hours under the Modified 1995 CE scenario. Mitigation to bring these three intersections to an acceptable level of service would be in the form of a traffic signal. The Manual on Uniform Traffic Control Devices (MUTCD) signal warrant analysis for Warrant 3, Peak Hour has been performed at the three intersections for the Modified 1995 CE scenario traffic volumes. Two of the three unsignalized intersections meet the peak hour warrant requirements for traffic signals during both the AM and PM peak hours. The intersection of Rancho Del Oro Road and Trieste Way/Sicily Way does not have adequate minor street traffic (minimum of 100 peak hour trips for one approach) to meet the signal warrant. The MUTCD notes that satisfying one or more warrants alone does not in itself provide justification to install a traffic signal. A thorough analysis that considers accidents, field conditions such as sight distance and speed limits, and sound engineering judgment must all be considered before the installation of a traffic signal is officially proposed. However, for a Circulation Element and most other traffic studies where only peak hour volume data is available, showing that an intersection satisfies Warrant 3, Peak Hour is generally sufficient. Appendix E contains the Warrant 3, Peak Hour worksheets. As seen in Table 7-3, the two intersections, if signalized, would meet the signal warrant are expected to operate at LOS B or better during both the AM and PM peak hours under 2030 Modified 1995 CE if traffic signals were installed.

**Proposed Master Transportation Roadway Plan  
Additional Peak Hour Rancho Del Oro Road  
Intersection Operations**

Intersection	Control Type	Peak Hour	Master Transportation Roadway Plan	
			Delay <sup>a</sup>	LOS <sup>b</sup>
27. Rancho Del Oro Rd & Vista Del Oro Drive	Signal	AM	10.4	B
		PM	8.1	A
28. Rancho Del Oro Rd & Cameo Drive	Signal	AM	12.9	B
		PM	15.4	B

**Footnotes:**

- a. Delay is expressed as average seconds of delay per vehicle.
- b. LOS = Level of Service

**Note:**

The intersection calculations were done in Synchro for signalized intersection operations.



Even though, the Rancho Del Oro Road/Trieste Way/Sicily Way intersection did not meet Warrant 3, Peak Hour signal warrants and operates at an unacceptable level of service for the AM and PM peak hours, there are other warrants that should be reviewed to determine if a signal should be installed at this intersection. An all-way stop controlled intersection on a major arterial can interrupt the traffic progression on the corridor. If a traffic signal were installed at the unsignalized intersections on this corridor, it is anticipated that it would improve the traffic progression along the arterial corridor. MUTCD Signal Warrant 6 supports the installation of a traffic signal at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles on a corridor. If a signal were installed at the adjacent intersections of Rancho Del Oro Road/Trieste Way/Sicily Way, other signal warrants (such as Warrant 6) should be reviewed.

### 1.3 POTENTIAL MITIGATION MEASURES

The following are the proposed mitigation measures for the impacted locations for the Modified 1995 CE Alternative (*now Master Transportation Roadway Plan*).

POTENTIAL MITIGATION MEASURES			
Location	Mitigation Measure	Additional Comments	Action by City
<b>Intersections:</b>			
Mission Ave/I-5SB Ramps	EB – Provide 3 Thru Lanes  WB – Provide 2 Left-Turn Lanes, 3 Thru Lanes	This would require widening the Mission Avenue bridge over I-5 and is not deemed as feasible mitigation. In addition, the Caltrans I-5 widening plans show the Mission Avenue bridge remaining as 4-lanes.	Adopt Overriding Consideration
Oceanside Blvd/I-5SB Ramps	EB – Provide 2 Left Turn Lanes; 3 Thru Lanes  WB – Provide 3 Thru Lanes	The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
Oceanside Blvd/I-5NB Ramps	Provide 3 WB and EB Thru Lanes	This intersection has overriding considerations from the El Corazon study. The model has since been updated since this study; therefore, it is recommended that the overrides for this intersection be reconsidered and adopted again with the updated Circulation Element.  The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
Oceanside Blvd/Crouch St	Provide 3 WB and EB Thru Lanes	This intersection has overriding considerations from the El Corazon study.	Adopt Overriding



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
		<p>The model has since been updated since this study; therefore, it is recommended that the overrides for this intersection be reconsidered and adopted again with the updated Circulation Element.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Consideration
SR76/Foussat Rd	<p>The AM cannot be fully mitigated, but peak hour conditions can be improved to LOS E by:</p> <p>NB – Provide 2 Right Turn Lanes</p> <p>SB – Provide 3 Thru Lanes</p>		<p>Implement the recommended mitigation measures.</p> <p>This will not fully mitigate the intersection, so an overriding consideration should be adopted.</p>
El Camino Real/Oceanside Blvd	Provide 3 EB or WB Thru Lanes	<p>This intersection has overriding considerations from the El Corazon study and the Quarry Creek study. The model has since been updated since these studies; therefore, it is recommended that the overrides for this intersection be reconsidered and adopted again with the updated Circulation Element.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
El Camino Real/Vista Way	NB – Provide 3 Dedicated Thru Lanes and 1 Dedicated Right Turn Lane	<p>This intersection has overriding considerations from the Quarry Creek study and per the 1995 Circulation Element. The model has since been updated since these studies; therefore, it is recommended that the overrides for this intersection be reconsidered with the updated Circulation Element.</p>	Implement the recommended mitigation measures.



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
		The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	
Vista Way/Jefferson St	WB - Provide 1 Thru and 1 Shared Thru-Right Turn Lane		Implement the recommended mitigation measures.
Douglas Dr/El Camino Real	WB – Provide Dedicated Left and Thru Lane  SB – Provide 3 Thru Lanes  NB – Provide 2 Thru Lanes, 1 Dedicated Right Turn Lane	There is currently not enough right-of-way to widen this intersection.  The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Adopt Overriding Consideration
Douglas Dr/Mission Ave	WB – Provide Dedicated Right-Turn Lane and 2 Left-Turn Lanes	The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Implement the recommended mitigation measures.
Rancho Del Oro Rd/Vista Del Oro Dr	Provide a signal, if signal warrants are met.	It should be noted that the residents on Rancho Del Oro Road oppose the installation of a signal here.	Implement the recommended mitigation measures.
Rancho Del Oro Rd/Cameo Dr	Provide a signal, if signal warrants are met.	It should be noted that the residents on Rancho Del Oro Road oppose the installation of a signal here.	Implement the recommended mitigation measures.
Rancho Del Oro Rd/Trieste Way/Sicily Way	Provide a signal, if signal warrants are met.	It should be noted that the residents on Rancho Del Oro Road oppose the installation of a signal here.	Implement the recommended mitigation measures.
College Blvd/N. River Rd	NB – Provide 1 Left Turn Lane in addition to Shared Left-Thru Lane	The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Implement the recommended mitigation measures.
College Blvd/SR76	NB – Provide 3 Thru Lanes; 2 Right-Turn Lanes with Overlap  SB – Provide 3 Thru		Implement the recommended mitigation measures.



<b>POTENTIAL MITIGATION MEASURES</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Additional Comments</b>	<b>Action by City</b>
	Lanes		
College Blvd/Oceanside Blvd	EB – Provide 2 Right Turn Lanes	<p>This intersection has overriding considerations from the El Corazon study and the Quarry Creek study. The model has since been updated since these studies; therefore, it is recommended that the overrides for this intersection be reconsidered and adopted again with the updated Circulation Element.</p> <p>The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.</p>	Adopt Overriding Consideration
College Blvd/Lake Blvd	NB – Provide 2 Right Turn Lanes	The new TMC can also be used to manage the transportation system through adaptive signals on congested corridors.	Implement the recommended mitigation measures.
Melrose Dr/SR76	Increase the cycle length/green times for SR-76 through movements.	The signal timing for SR-76 would need to be adjusted through Caltrans.	Implement the recommended mitigation measures with coordination with Caltrans.

# Appendix G

## Traffic Impact Study Detailed Guidelines





# **REQUIRED COMPONENTS OF TRAFFIC IMPACT STUDY REPORTS**

(FINAL REPORTS SHALL BE SUBMITTED IN BOTH HARD COPY AND CD)

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The SANTEC/ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region, March 2000 (or most recent version) should be followed within the City of Oceanside for any proposed project that would have an impact of the City's roadway network. According to the SANTEC/ITE Guidelines, a TIS should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak hour trips. If a proposed project is not in conformance with the land use and/or circulation element of the General Plan, then threshold rates of 500 ADT or 50 peak hour trips should be used. A TIS can also be required based on the discretion of the City. Early consultation between the developer and the City is strongly recommended to establish the base input parameters, assumptions, and analysis methodologies for the TIS. The City of Oceanside has a list of required components for TIS reports which is outlined below.

As recommended in the SANTEC/ITE Guidelines, the use of SANDAG Trip Generation rates should be used or the rates from ITE's latest Trip Generation manual. For smart growth/mixed-use development areas, SANDAG has developed a Trip Generation for Smart Growth: Planning Tools for the San Diego Region to identify trip generation rates associated with smart growth developments. This new method of applying Smart Growth trip generation rates is intended to supplement data in the San Diego Traffic Generators Manual, published by SANDAG in 2000, and the accompanying Not-so-Brief-Guide to Trip Generation, published by SANDAG in 2002. The most recent version of the SANDAG Smart Growth or Trip Generation rates should be used.

## **1. EXECUTIVE SUMMARY**

- A. Overall Report Summary
- B. Conclusions and Mitigation Measures

## **2. INTRODUCTION**

- A. Project Description
  - i. Vicinity Map
  - ii. Project Location Map
  - iii. Project Site Plan
  - iv. Project Trip Generation

## **3. DESCRIPTION OF ANALYSIS**

- A. Project Analysis Timeframes
  - i. Existing Conditions
  - ii. Existing Conditions Plus Project

- iii. Existing Conditions Plus Near-Term Cumulative Projects
- iv. Existing Conditions Plus Near-Term Cumulative Projects Plus Project
- v. Buildout Conditions (2030)
- vi. Buildout Conditions Plus Project

B. Analysis Methodologies

- i. Intersection Delay Analysis
- ii. Roadway Segment Capacity Analysis
- iii. CMP Analysis (if warranted)
- iv. Levels of Significance

C. Traffic Volume Data (No more than 1 year old – must be City approved)

**4. EXISTING CONDITIONS**

A. Scenario Introduction

B. Study Area (must be City approved)

- i. Description of Study Area intersections and Roadway Segments
- ii. Map of Study Area intersections and Roadway Segments

C. Intersection Peak Hour Analyses (must use signal timing sheets provided by City)

- i. Map of Existing Conditions turn movement geometry
- ii. Map of Existing Conditions peak hour volumes
- iii. Intersection delay and Levels of Service (LOS) table

D. Roadway Segment Daily Analyses

- i. Map of Existing Conditions Average Daily Traffic volumes
- ii. Existing Conditions segment Volume-to-Capacity/LOS table

E. CMP Analyses (if warranted)

- i. LOS table (results may be included with intersections and roadway segment tables)

F. Freeway Mainline and Freeway Ramp Meters/Freeway Interchange analyses (if warranted)

- i. LOS table (results may be included with intersections and roadway segment tables)

G. Scenario Summary

## 5. EXISTING CONDITIONS + PROJECT

- A. Scenario Introduction
- B. Project Description
- C. Project Site Plan
- D. Project Trip Generation, Distribution and Assignment Maps (must be City approved)
- E. Map of Pass-By trips (if applicable)
- F. Existing Conditions + Project Intersection Peak Hour Analyses (must use signal timing sheets provided by City)
  - i. Must include all proposed project driveways
  - ii. Map of Existing Conditions proposed project driveway access turn movement geometry
  - iii. Map of Existing Conditions plus Project peak hour volumes
  - iv. Intersection delay and Levels of Service (LOS) table with comparisons to Existing Conditions delays and LOS
- G. Existing Conditions + Project Roadway Segment Daily Analyses
  - i. Map of Existing Conditions plus Project Average Daily Traffic volumes
  - ii. Existing Conditions plus Project segment Volume-to-Capacity/LOS table with comparisons to Existing Conditions v/c ratios
  - iii. Peak hourly segment analysis LOS table (if warranted under project conditions only)
- H. Existing Conditions + Project CMP Analyses Under Project Conditions (if warranted)
  - i. LOS table with comparisons to Existing Conditions (results may be included with intersections and roadway segment tables)
- I. Existing Conditions + Project Freeway Mainline and Freeway Ramp Meters/Freeway Interchange Analyses Under Project Conditions (if warranted)
  - i. LOS table with comparisons to Existing Conditions (results may be included with intersections and roadway segment tables)
- J. Scenario Summary and Mitigation Measures

## **6. EXISTING CONDITIONS + NEAR-TERM CUMULATIVE PROJECTS**

- A. Scenario Introduction
- B. List of Approved Cumulative Projects (provided by the City)
- C. Map of Cumulative Project Locations
- D. Approved Cumulative Projects Trip Generation Table
- E. Approved Cumulative Projects Trip Generation, Distribution and Assignment Map for Intersection and Roadway Segment Volumes
- F. Near-Term Intersection Peak Hour Analyses
  - i. Map of Near-Term Turn Movement Geometry (if changed from Existing Conditions)
  - ii. Map of Existing Conditions + Near-Term Cumulative Projects peak hour turn movement volumes
  - iii. Existing Conditions + Near-Term Cumulative Projects delay and LOS table
- G. Near-Term Roadway Segment Daily Analyses
  - i. Map of Existing Conditions + Near-Term Cumulative Projects Average Daily Traffic volumes
  - ii. Existing Conditions + Near-Term Cumulative Projects Volume-to-Capacity/LOS table
- H. Near-Term CMP Analyses (if warranted)
  - i. LOS table (results may be included with intersections and roadway segment tables)
- I. Near-Term Freeway Mainline and Freeway Ramp Meters/Freeway Interchange analyses (if warranted)
  - i. LOS table (results may be included with intersections and roadway segment tables)
- J. Scenario Summary

## **7. EXISTING CONDITIONS + NEAR-TERM CUMULATIVE PROJECTS + PROJECT**

- A. Scenario Introduction
- B. Near-Term + Project Intersection Peak Hour Analyses
  - i. Must include all proposed project driveways

- ii. Map of Existing Conditions + Near-Term Cumulative Projects + Project peak hour turn movement volumes
  - iii. Existing Conditions + Near-Term Cumulative Projects + Project delay and LOS table with comparisons to Existing Conditions + Near-Term Cumulative Projects Delays and LOS
- C. Near-Term + Project Roadway Segment Daily Analyses
  - i. Map of Existing Conditions + Near-Term Cumulative Projects + Project Average Daily Traffic volumes
  - ii. Existing Conditions + Near-Term Cumulative Projects + Project Volume-to-Capacity/LOS table with comparisons to Existing Conditions + Near-Term Cumulative Projects v/c ratios
  - iii. Peak hourly segment analysis LOS table (if warranted under project conditions only)
- D. Near-Term + Project CMP Analyses (if warranted)
  - i. LOS table with comparisons to Near-Term without Project Conditions (results may be included with intersections and roadway segment tables)
- E. Near-Term + Project Freeway Mainline and Freeway Ramp Meters/Freeway Interchange analyses (if warranted)
  - i. LOS table with comparisons to Near-Term without Project Conditions (results may be included with intersections and roadway segment tables)
- F. Scenario Summary and Mitigation Measures

**8. BUILDOUT CONDITIONS (Based upon the SANDAG Series 11 North County Model for Year 2030)**

- A. Scenario Introduction
- B. Description of Buildout network and/or anticipated issues
- C. Buildout Intersection Peak Hour Analyses
  - i. Map of Buildout Turn Movement Geometry (if changed from Existing Conditions, must be City approved)
  - ii. Map of Buildout peak hour turn movement volumes
  - iii. Buildout delay and LOS table
- D. Buildout Roadway Segment Daily Analyses
  - i. Map of Buildout Average Daily Traffic volumes
  - ii. Buildout Volume-to-Capacity/LOS table

- E. Buildout CMP Analyses (if warranted)
  - i. LOS table (results may be included with intersections and roadway segment tables)
- F. Buildout Freeway Mainline and Freeway Ramp Meters/Freeway Interchange analyses (if warranted)
  - i. LOS table (results may be included with intersections and roadway segment tables)
- G. Scenario Summary

## **9. BUILDOUT CONDITIONS + PROJECT**

- A. Scenario Introduction
- B. Map of Project Trip Distribution and Assignment if Changed Under the Buildout Network
- C. Buildout + Project Intersection Peak Hour Analyses
  - i. Map of Buildout Conditions + Project peak hour turn movement volumes
  - ii. Buildout Conditions + Project delay and LOS table with comparisons to Buildout delays and LOS
- D. Buildout + Project Roadway Segment Daily Analyses
  - i. Map of Buildout Conditions + Project Average Daily Traffic volumes
  - ii. Buildout + Project Volume-to-Capacity/LOS table with comparisons to Buildout v/c ratios
  - iii. Peak hourly segment analysis LOS table (if warranted under project conditions only)
- E. Buildout + Project CMP Analyses (if warranted)
  - i. LOS table with comparisons to Buildout Conditions (results may be included with intersections and roadway segment tables)
- F. Buildout Freeway Mainline and Freeway Ramp Meters/Freeway Interchange analyses (if warranted)
  - i. LOS table with comparisons to Buildout Conditions (results may be included with intersections and roadway segment tables)
- G. Scenario Summary and Mitigation Measures

## **10. CONCLUSIONS AND MITIGATION MEASURES (must be City approved prior to finalizing report)**

## **ANALYSIS METHODOLOGY FOR TRAFFIC IMPACT STUDY REPORTS**

(Consultation on the study area and methodology should always be confirmed with the City at the start of the project.)

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### **ROADWAYS**

Level of Service standards shall be used to determine acceptable levels of Average Daily Traffic (ADT) for all City roadways. LOS standards must be met by all new development projects or agreed upon mitigation measures must be implemented upon issuance of the certificate of occupancy of the first residential unit, commercial/industrial building or educational facility.

Each classification in the Circulation Element hierarchy of arterial roadways has a design capacity and associated LOS threshold. Table 1 shows the design capacity and LOS thresholds for each roadway classification. If a roadway is calculated to operate at LOS E, then an arterial peak hour analysis should be performed following the (most recent version of) the Highway Capacity Manual (HCM) methodology. The HCM methodology uses the results of signalized intersection analyses, the arterial classification and free flow speed to calculate an average travel speed. The average travel speed is used to determine the arterial level of service. The HCS computer software may be used to determine arterial level of service for peak hour analysis.

**Table 1  
Circulation Element Roadway Classification LOS & Capacity**

Class	Lanes	Cross Section <sup>1</sup>	Level of Service				
			A	B	C	D	E
Expressway	6	102/160 122/200	30,000	42,000	60,000	70,000	80,000
Expressway	4	102/160 122/200	25,000	35,000	50,000	55,000	60,000
Prime Arterial	6	104/124	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial	6	104/124	20,000	28,000	40,000	45,000	50,000
5-Lane Major Arterial <sup>2</sup>	5	102/122	17,500	24,500	35,000	40,000	45,000
4-Lane Major Arterial	4	80/100	15,000	21,000	30,000	35,000	40,000
Secondary Collector (4 lanes with 2-way left turn lane)	4	64/84	10,000	14,000	20,000	25,000	30,000
Secondary Collector (4 lanes without 2-way left-turn lane, with left turn pockets)	4	54/74, 60/80	9,000	13,000	18,000	22,000	25,000
Collector (commercial fronting, 2-lanes with 2-way left turn lane) <sup>3</sup>	2	50/70	5,000	7,000	10,000	13,000	15,000
Collector (residential streets in the Circulation Element or industrial fronting)	2	40/60, 50/70	4,000	5,500	7,500	9,000	10,000
Local Street (residential streets NOT in the Circulation Element)	2	36/56, 40/60	—	—	2,200	—	—

**Notes:**

1. Cross sections are listed as curb-to-curb width/total right-of-way width, in feet.
2. Vandegrift Boulevard is the only Circulation Element roadway designated as a 5-Lane Major Arterial. It is not intended that other roadways be built to 5-lane Major Arterial standards.
3. This capacity will also be assumed for a two-lane one-way collector.

## INTERSECTIONS

Intersection Level of Service analysis should be conducted using the HCM Methodology. For signalized intersections, the methodology described in the HCM for signalized intersections is used. With this methodology, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The relationship between control delay per vehicle and LOS for signalized intersections is summarized in Table 2.

**Table 2**  
**HCM Level of Service Description for Signalized Intersections**

<b>Level of Service</b>	<b>Description of Traffic Conditions</b>	<b>Control Delay (sec/veh)</b>
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 – 35
D	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 – 55
E	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2010.

For unsignalized intersections, the methodology described in the HCM for unsignalized intersections is used. With this methodology, LOS is related to the control delay for each stop-controlled movement. The relationship between control delay per vehicle and LOS for unsignalized intersections is summarized in Table 3.

**Table 3  
HCM Level of Service Description for Unsignalized Intersections**

<b>Level of Service</b>	<b>Description of Traffic Conditions</b>	<b>Control Delay (sec/veh)</b>
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2010.

## **FREEWAYS AND RAMPS**

Freeways and their interchanges must be evaluated, since all freeways are on the Congestion Management Program system. All signalized intersections of freeway ramps with arterials should be evaluated using the Highway Capacity Manual signalized intersection operational method. For diamond interchanges, the timing and phasing of the two signals must be coordinated to ensure queue clearances. Signal timing sheets should be requested from Caltrans or the City of Oceanside.

Freeways impacted by a proposed project should be evaluated for significant impacts. A proposed project that adds more than 0.01 to the volume to capacity ratio or adds more than 1 mile per hour to a freeway has a significant impact. Level of service (generally used by Caltrans) for freeways are categorized in Table 4.

If ramp metering is present at a freeway interchange, the effects of the metering should be analyzed. Inputs to this analysis are peak hour demands, flow rates, and ramp geometrics. The flow rates and ramp configurations are usually available from Caltrans. The outputs should consist of excess demand, delay and queue length. Ramp meters that have a delay above 15 minutes and a proposed project adds more than an additional two minutes of delay is determined to have a significant impact.

**Table 4  
Level of Service Description for Freeways**

<b>LOS</b>	<b>Demand/ Capacity</b>	<b>Congestion/ Delay</b>	<b>Traffic Description</b>
<b>A</b>	<0.41	None	Free flow.
<b>B</b>	0.42-0.62	None	Free to stable flow, light to moderate volumes.
<b>C</b>	0.63-0.79	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
<b>D</b>	0.80-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
<b>E</b>	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
<b>F</b>	>1.00	Considerable	Forced or breakdown. Delay measured in average flow, travel speed (mph). Signalized segments experience delays >60.0 secs/vehicle.
<b>F0</b>	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestions, long queues form behind breakdown points, stop and go.
<b>F1</b>	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
<b>F2</b>	1.36-1.45	Very Severe 2- 3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
<b>F3</b>	>1.46	Extremely Severe 3+ hours of delay	Gridlock.

## **SMART GROWTH OPPORTUNITY AREAS**

(Consultation with the City as to whether your project is in a Smart Growth Opportunity Areas should be done at the start of the project.)

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Projects that are within a Smart Growth Opportunity Area as identified by SANDAG or the City, will utilize the following documents as appropriate:

- Designing for Smart Growth, Creating Great Places in the San Diego Region;
- Planning and Designing for Pedestrians, Model Guidelines for the San Diego Region;
- Trip Generation for Smart Growth; and
- Parking Strategies for Smart Growth.

The most recent version of these publications can be found at [www.sandag.org/igr](http://www.sandag.org/igr).

# Appendix H

## Future Transit Service Information





The following table and map were created based on information taken from the NCTD 2011 Mobility Plan.

**Table 1  
Proposed Transit Service in Oceanside**

<b>Route</b>	<b>Endpoints</b>		<b>Major Corridors Served</b>	<b>Weekday Frequency (peak/midday)</b>	<b>Proposed Changes</b>
101	Oceanside Transit Center	UTC	Coast Hwy	30/30 mins	<ul style="list-style-type: none"> <li>• Possible shortening of route terminate at the VA Medical Center rather than UTC.</li> </ul>
302	Oceanside Transit Center	Vista Transit Center	Vista Way	30/30 mins	<ul style="list-style-type: none"> <li>• Reroute bus at Plaza Camino Real for faster travel time.</li> <li>• No longer serves Vista Way between el Camino Real and Jefferson.</li> <li>• More frequent service running every 15 minutes in peak periods on weekdays.</li> </ul>
303	Oceanside Transit Center	Vista Transit Center	Mission Ave. Douglas Dr. N. River Rd. N. Santa Fe Ave.	15/15 mins	<ul style="list-style-type: none"> <li>• More frequent service running every 20 minutes on weekends.</li> <li>• Trips will service the new San Luis Rey Transit Center when it opens.</li> </ul>
309	College Blvd Town Center North	Encinitas Station	El Camino Real Douglas Dr.	30/30 mins	<ul style="list-style-type: none"> <li>• New, more direct routing to Towne Center North and new rerouting at Plaza Camino Real for faster travel time.</li> <li>• No longer serves Vista Way between El Camino Real and Jefferson.</li> </ul>

**Table 1  
Proposed Transit Service in Oceanside**

<b>Route</b>	<b>Endpoints</b>		<b>Major Corridors Served</b>	<b>Weekday Frequency (peak/midday)</b>	<b>Proposed Changes</b>
311	Town Center North Shopping Center	Rancho Del Oro SPRINTER Station	Rancho Del Oro Blvd., Douglas Dr., College Blvd.	30/NA mins	<ul style="list-style-type: none"> <li>• New weekday peak period route serving Ocean Ranch Business Park, MLK Middle School, and El Camino High School.</li> <li>• Replaces portions of Routes 313 and 317.</li> <li>• Trips will service the new San Luis Rey Transit Center when it opens.</li> </ul>
313	Oceanside Transit Center	College Blvd Town Center North	Mesa Dr Mission Ave Rancho Del Oro Rd	--	<ul style="list-style-type: none"> <li>• Route discontinued and replaced by sections of Routes 309, 311, and 315.</li> </ul>
315	College Blvd Town Center North	22 Area Camp Pendleton	Vandegrift Blvd.	30/60 mins	<ul style="list-style-type: none"> <li>• Route extended to College Blvd. SPRINTER Station.</li> <li>• More frequent service running every 30 minutes during peak periods on weekdays.</li> </ul>
316	Rancho Del Oro SPRINTER Station	Ocean Ranch, Ivey Ranch Rancho Del Oro	Rancho Del Oro Dr., Mesa Dr., Avenida Del Oro, Avenida De La Plata, Corporate Centre Dr., Oceanside Blvd.	30/30 mins	<ul style="list-style-type: none"> <li>• New weekday service to Ocean Ranch and Ivey Ranch, including the V.A. Oceanside Clinic from Rancho Del Oro SPRINTER Station.</li> </ul>
317	Vandegrift Blvd/Gold Dr	Rancho Del Oro Sprinter Station	Vandegrift Blvd. College Blvd.	--	<ul style="list-style-type: none"> <li>• Route discontinued and replaced by Routes 311 and 315.</li> </ul>
318	Oceanside Transit Center	El Camino Real Sprinter Station	Oceanside Blvd.	60/60 mins	<ul style="list-style-type: none"> <li>• Route extended to Bobier, East Vista Way, and Vista Transit Center.</li> </ul>

**Table 1  
Proposed Transit Service in Oceanside**

<b>Route</b>	<b>Endpoints</b>		<b>Major Corridors Served</b>	<b>Weekday Frequency (peak/midday)</b>	<b>Proposed Changes</b>
319	El Corazon Senior Center	MiraCosta College	Rancho Del Oro Dr. Barnard Dr.	--	<ul style="list-style-type: none"> <li>Route discontinued.</li> <li>Service to MiraCosta College to be provided by Routes 302 and 325.</li> </ul>
320X	Oceanside Transit Center	Plaza Camino Real	I-5, Vista Way	30/30 mins (weekends only)	<ul style="list-style-type: none"> <li>New weekend only route providing express service between Plaza Camino Real and Oceanside Transit Center.</li> </ul>
325	Carlsbad Village	College Blvd Town Center North	College Blvd. Vista Way	30/30 mins	<ul style="list-style-type: none"> <li>Route significantly changed. New segments and destinations include MiraCosta College, and Vista Way between Rancho Del Oro and Jefferson.</li> <li>Eliminated segments replaced by Routes 315 and Quarry Creek flexible service.</li> <li>More frequent service, every 30 minutes on weekdays.</li> </ul>
332	Vista Transit Center SPRINTER Station	Buena Creek SPRINTER Station	Melrose Dr.	30/60 mins	<ul style="list-style-type: none"> <li>Route extended south end to serve Buena Creek SPRINTER Station, providing more direct service to Vista Business Park from Escondido.</li> <li>Route now serves Vista Courthouse.</li> <li>Service on Shadowridge discontinued.</li> </ul>
333	College Blvd Town Center North	Vista Transit Center	Frazee Rd. Old Grove Rd. Oceanside Blvd.	--	<ul style="list-style-type: none"> <li>Route discontinued and replaced in sections by Routes 309, 318, 332, and 334.</li> </ul>

**Table 1  
Proposed Transit Service in Oceanside**

<b>Route</b>	<b>Endpoints</b>		<b>Major Corridors Served</b>	<b>Weekday Frequency (peak/midday)</b>	<b>Proposed Changes</b>
395	Oceanside Transit Center	El Camino Real (Orange County)	Coast Hwy Camp Pendleton	180/180 mins	<ul style="list-style-type: none"> <li>No changes.</li> </ul>
SPRINTER	Oceanside Transit Center	Escondido Transit Center	Oceanside Blvd.	30/30 mins	<ul style="list-style-type: none"> <li>Future increase in frequency as demand warrants and additional segments of double track are added.</li> </ul>
COASTER	Oceanside Transit Center	Santa Fe Depot (San Diego)	Coast Hwy	35-45/90-230 mins	<ul style="list-style-type: none"> <li>Future increases in the number of daily trains as demand warrants and additional segments of double track are added.</li> </ul>

 New route

 Discontinued route

Source: 2011 NCTD Mobility Plan



# Appendix I

## City of Oceanside's Neighborhood Traffic Calming Program







# CITY OF OCEANSIDE NEIGHBORHOOD TRAFFIC CALMING PROGRAM

Development Services Department  
Engineering Transportation Section  
300 N. Coast Highway  
Oceanside, CA 92054



February 2011





## **Table of Contents**

1.	Introduction.....	1
2.	Traffic Calming Steering Committee.....	2
3.	Role of City Staff in Traffic Calming Program.....	2
4.	Traffic Calming Goals and Objectives.....	3
5.	Guiding Principles.....	4
6.	Traffic Calming Process for Existing Streets and Established Neighborhoods.....	5
	Figure 1: City of Oceanside Traffic Calming Program Flowchart .....	6
6.1	Phase I: Project Initiation .....	7
6.2	Phase II.....	8
6.2a	Establish Need .....	8
-	Initiate Process and Qualifying Criteria.....	8
-	Local Street and Neighborhood Ranking .....	9
-	Staff Evaluation.....	9
6.2b	Develop Solution .....	10
-	Localized Study Area Process .....	10
-	Neighborhood Study Area Process.....	10
-	Traffic Calming Survey .....	11
6.2c	Approval Process .....	12
-	Approved Projects .....	12
-	Projects That Are Not Approve .....	12
-	Funding .....	12
6.2d	Implementation.....	13
-	Final Design and Installation .....	13
-	Post Evaluation of Traffic Calming Devices Installation ....	13



---

7.	Traffic Calming in New Developments .....	14
8.	Stop Signs.....	15
9.	Landscaping .....	16
10.	Removal Process for Traffic Calming Devices .....	16
11.	Traffic Calming Toolbox – Fast Facts.....	19
12.	Traffic Calming Toolbox and Design Elements (Phase II).....	21

## **Attachments**

Attachment A. Resident Request Form and Neighborhood Petition

Attachment B. Traffic Calming Criteria Worksheet

Attachment C. Sample Traffic Calming Survey

Attachment D. Petition for Removal of Traffic Calming Device(s)



# City of Oceanside Neighborhood Traffic Calming Program

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## 1. INTRODUCTION

Traffic calming is the implementation of physical and visual devices along a road in order to reduce traffic speed and/or volume. According to the "U.S. Traffic Calming Manual" (Ewing and Brown, 2009), traffic calming is defined as follows:

*"changes to the street alignment, installation of barriers, and other physical measures to reduce traffic speed and/or cut-through volumes, in the interest of street safety, livability and other public purposes"*

In 1997, the Oceanside Neighborhood Traffic Action Program (ONTAP) was established. The program was initiated to address common neighborhood traffic concerns, including excessive speeding, traffic accidents, unfriendly pedestrian and/or bicycling environments, and cut-through traffic. These concerns often cause frustration and affect the quality of life in residential neighborhoods. After implementing the program, the City found that applying traffic calming resulted in measurable benefits to the community and has resulted in improvements to the safety and livability on local streets.



**Pacific Street**

Over the past several years, the traffic calming program has been updated to incorporate more uniform methods of evaluating traffic calming. In addition, a growing number of residents have expressed concerns about excessive speeding, noise, and/or the risk of pedestrian-involved accidents throughout the City. In 2010, the Oceanside Neighborhood Traffic Calming Program was created to standardize the process by which City staff and residents can work together to find solutions to the unique traffic calming issues in each neighborhood.

The purpose of the traffic calming program is to identify the cause of neighborhood traffic concerns and determine feasible traffic calming solutions. In some cases, implementing traffic calming devices may not be the appropriate solution. Therefore, not all neighborhoods who request traffic calming will qualify for the program.



## **City of Oceanside Neighborhood Traffic Calming Program**

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In general, this traffic calming program applies to local streets, as defined in the California Department of Transportation California Road System (CRS) maps. The CRS maps define the functional classification for each roadway in California and are updated annually. Typically most 25 mile per hour streets are defined as local streets in the CRS maps. CRS maps are available online at [http://www.dot.ca.gov/hq/tsip/hseb/crs\\_maps/](http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/). Other streets not classified as local streets are evaluated on a case-by-case basis by City staff.

### **2. TRAFFIC CALMING STEERING COMMITTEE**

To update the traffic calming program, a Steering Committee comprised of City staff; local business owners; Oceanside residents; representatives from the Transportation Commission, emergency services, and the Oceanside Police Department; and the City Traffic Engineer was developed in 2009. The Steering Committee met frequently to discuss and develop the goals and processes included in this traffic calming program. The Steering Committee reviewed the advantages and disadvantages of the existing traffic calming program and its effectiveness in solving speeding and/or safety issues in residential areas. In addition, the steering committee interviewed other jurisdictions with effective traffic calming programs to determine the successes and/or failures of each program and how to update the program to best suit the needs of Oceanside's residential neighborhoods.

### **3. ROLE OF CITY STAFF IN TRAFFIC CALMING PROGRAM**

The City of Oceanside's Engineering Transportation Section receives and processes numerous traffic calming requests each year. As requests are received, they will be evaluated based on the qualifying criteria identified in this manual and prioritized in accordance with the ranking criteria described in Section 6.

There is no simple solution that will address all neighborhood concerns. Identifying the appropriate solution that will be accepted by a neighborhood takes a collaborative effort on the part of the residents and the City. Several steps must be taken to ensure that the traffic calming devices selected for a neighborhood will be supported by both the residents and City staff. City staff will work with the



## City of Oceanside Neighborhood Traffic Calming Program

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residents in outlining the process and establishing a timeline. The traffic calming process can take up to six (6) months to a year to complete. However, implementing the devices can take longer due to funding and the number of qualified projects received each year. In addition, traffic calming devices can be very expensive to install depending on the complexity of the plan.

### 4. TRAFFIC CALMING GOALS AND OBJECTIVES

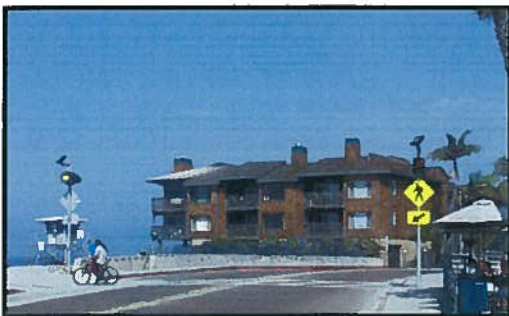
Collectively, the Steering Committee developed both the goals and objectives of the traffic calming program. Goals for the program identify the desired outcome of the traffic calming program. Objectives identify the method by which the goals of the traffic calming program will be achieved.

#### GOALS

- Improve street safety, promote community character, and enhance the quality of life in Oceanside neighborhoods.
- Educate residents on the traffic calming process and make available tools that would address their concerns.
- Actively involve the community in identifying solutions that achieve desired results for their neighborhood.

#### OBJECTIVES

- Provide a structure to clearly identify the traffic problems along a street or in a neighborhood.
- Provide a clear and concise list of tools that may be used to resolve traffic-related issues.
- Provide a structure for residents through the process of initiating traffic calming on their street or in their neighborhood.



**Pacific Street near Buccaneer Beach**

The goals and objectives of the traffic calming program are intended to aid in the development and implementation of a traffic calming plan.



## City of Oceanside Neighborhood Traffic Calming Program

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### 5. GUIDING PRINCIPLES

In order to achieve the desired goals and objectives of the City of Oceanside Traffic Calming Program, the following guiding principles were established. These principles represent the cornerstone of the traffic calming program:

1. The traffic calming program is intended to be a collaborative process between City staff and the community. Community participation is vital to the success of a traffic calming plan and is required for all physical traffic calming installations.
2. The traffic calming program is intended to treat requests for traffic calming in a fair and orderly manner. Specific criteria must be met in order for a street and/or neighborhood to qualify for traffic calming.
3. In general, the traffic calming program is primarily for local streets as defined in the CRS maps.
4. The traffic calming program is intended to improve the quality of life for pedestrians, bicyclists, motorists, and residents. Traffic calming measures identified for each neighborhood or street will be selected based on the unique characteristics and traffic issues of that area.
5. Emergency response times may be affected by the implementation of traffic calming devices. However, a traffic calming plan should attempt to minimize impacts to emergency response times.
6. Traffic calming devices should be designed to minimize the diversion of substantial traffic to another street.
7. Traffic calming devices will be constructed within the existing available right-of-way. Removal of on-street parking may be necessary to install selected traffic calming measures. Impacts to on-street parking will be minimized and will be evaluated on a case-by-case basis.

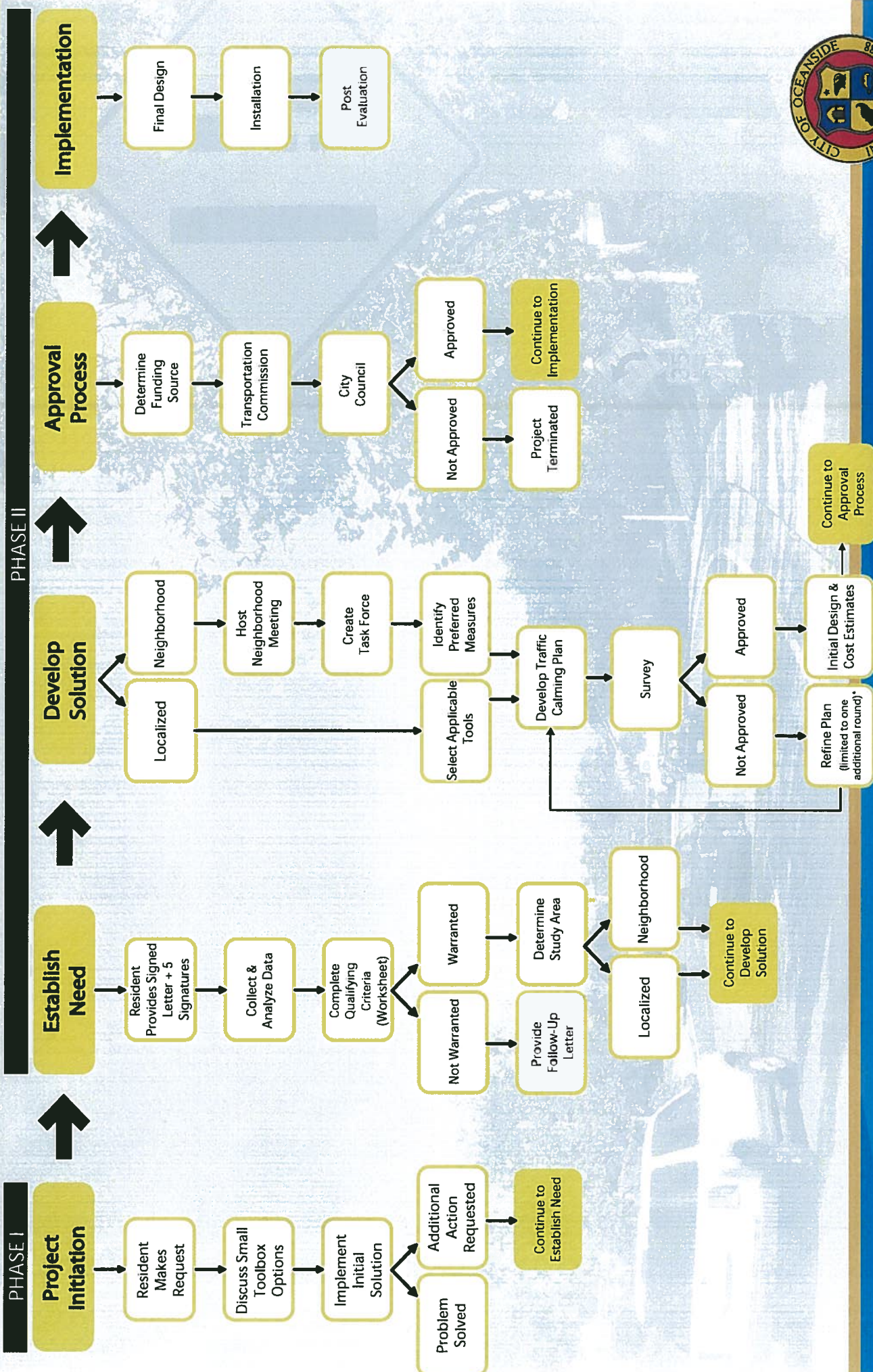


## **6. TRAFFIC CALMING PROCESS FOR EXISTING STREETS AND ESTABLISHED NEIGHBORHOODS**

For existing streets and neighborhoods, the traffic calming program consists of two phases. Phase I includes initiating the process and implementing smaller-scaled traffic calming measures. If the traffic issue persists, residents may proceed onto Phase II. In Phase II, a street or neighborhood must qualify for larger-scaled traffic calming measures based on qualifying criteria and neighborhood support. The process by which traffic calming requests are processed is summarized in Figure 1.

FIGURE 1

# City of Oceanside Neighborhood Traffic Calming Program Flowchart



\* Note: If refined plan is not approved, the project will be terminated.



## City of Oceanside Neighborhood Traffic Calming Program

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### 6.1 PHASE I

#### PROJECT INITIATION

To initiate the traffic calming process, a resident must contact City staff to discuss their traffic related concerns. City staff will work with the resident and assess the situation. During the Phase I process, City staff will evaluate the degree of traffic-related issues on a local street or in a neighborhood, and identify basic solutions that resolve or minimize the traffic concerns.

Phase I traffic calming (small toolbox) options include:

- **Community Education on Traffic Safety** – City staff will meet with residents to educate the community on traffic safety on local streets or in residential neighborhoods.
- **Radar Gun** – City staff will meet with the resident(s) and utilize a radar gun to determine if speeding is prevalent along the street. The radar gun is a helpful visual aid for residents to see how fast a motorist is actually traveling.
- **Posted Signage** – Appropriate signage may be posted on a street or for a neighborhood.
- **Radar Speed Trailer** – City staff will temporarily place a radar speed trailer on the street to educate and increase motorists' awareness of their traveling speed compared to the posted speed limit.
- **Police Enforcement** – City staff will request police enforcement to address vehicular speeding.



**Radar Speed Trailer**

Phase I traffic calming options will be explored to determine which options best suit the resident's concerns. Once the determination is made for the Phase I tool that is most appropriate, City staff will initiate the chosen option(s). Implementation of the Phase I traffic calming option(s) signifies the completion of Phase I efforts.

In many cases these simple changes will solve basic traffic issues. Recognizing that the Phase I options may not be effective for all conditions, Phase II of the traffic calming program was developed to produce more in-depth solutions if necessary.

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## City of Oceanside Neighborhood Traffic Calming Program

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### 6.2 PHASE II

All projects must be processed through Phase I before they can be considered for the second phase of this traffic calming program. Phase II integrates the community in the process of identifying issues and selecting the appropriate tools for their neighborhood. This phase can take several months to complete and will rely on the support of the community.

#### 6.2a ESTABLISH NEED

##### INITIATE PROCESS AND QUALIFYING CRITERIA

Requirements to initiate Phase II of the program are as follows:

- Written request with signature to City staff
- Petition with five (5) additional signatures from property owners or residents along the street in the vicinity of the identified area of concern. One signature per household will be accepted.



**Downs Street**

Once the written request and signed petition are received (see Attachment A), City staff will complete the Traffic Calming Criteria Worksheet (see Attachment B) to determine if the street meets the minimum criteria for larger-scaled traffic calming measures. At a minimum, the following criteria must be met to be considered:

- Street is classified as a local street in the California Road System (CRS) map
- Critical speed (85%) is 30 mph or higher
- Street width is 40 feet or less
- Street provides only one lane in each direction

Streets that meet these minimum requirements are eligible for Phase II of the traffic calming program.



## City of Oceanside Neighborhood Traffic Calming Program

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### LOCAL STREET AND NEIGHBORHOOD RANKING

In addition to qualifying a project for the traffic calming program, the Traffic Calming Criteria Sheet will be used to rank projects when multiple projects are considered for the program. The Ranking Criteria allocates points based on existing conditions, traffic volume, accident history, pedestrian facilities, and whether the street provides access to major pedestrian generators like schools, churches, and/or civic facilities. A total of 15 points are available in the Ranking Criteria section of the Traffic Calming Criteria Sheet (see Attachment B).

### STAFF EVALUATION

City staff will analyze relevant data, such as traffic volumes, speed, and accident history to establish the extent of the study area and boundaries of the project. The study area is also determined based on access points, travel patterns, potential diversion to adjacent streets, and other factors in the surrounding neighborhood. The study area will be classified as either localized or neighborhood:

- **Localized** - A study area is considered localized if the issues and potential solutions affect only a minimal portion of an area, such as a span of a few blocks along one street. Implementation of traffic calming tools would not affect adjacent streets, such as diversion of traffic or other externalities, in a localized study area.
- **Neighborhood** - A study area is considered to be at the neighborhood level if the issues and potential solutions affect the surrounding area where traffic calming is needed, such as along a street that feeds into other local streets. Implementation of traffic calming devices can potentially affect adjacent streets, and the access for others who may not live on the street where traffic calming is needed, but travel along the roadway to get to or from their home.



## City of Oceanside Neighborhood Traffic Calming Program

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### 6.2b DEVELOP SOLUTION

#### LOCALIZED STUDY AREA PROCESS

If the study area is determined to be localized, City staff will work with the resident who provided the request in determining and implementing applicable tools. Residents may choose to work with City staff directly or as part of a committee. Neighborhood meetings are not required in establishing a localized traffic calming plan. However, support for the traffic calming plan will be subject to the survey requirements, as described in this section.

#### NEIGHBORHOOD STUDY AREA PROCESS

If the study area is determined to be at a larger, neighborhood scale, the process by which traffic calming solutions are selected requires both a neighborhood meeting and formation of a Resident Task Force.

#### NEIGHBORHOOD MEETING

A neighborhood meeting will be conducted at which City staff will introduce residents of the neighborhood to the traffic calming program and identify the project study area. The goal of the meeting is to solicit input from the participants regarding their concerns and ideas, and to establish a Resident Task Force.

#### RESIDENT TASK FORCE

The Resident Task Force will be comprised of volunteers from the neighborhood who wish to be actively involved in establishing the traffic calming plan. The Resident Task Force is comprised of City staff and individuals who reside within the boundary of the study area and represent all areas of the neighborhood. Collectively this task force will be responsible for developing the traffic calming plan based on neighborhood concerns and ideas expressed at the neighborhood meeting. Resident Task Force meetings will be facilitated by City staff who will help identify the appropriate tools to address the traffic-related concerns of the neighborhood.

Once the Resident Task Force agrees on a traffic calming plan, it is their responsibility to communicate with their neighborhood regarding the proposed



## City of Oceanside Neighborhood Traffic Calming Program

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plan. The Resident Task Force should inform and educate neighbors about the purpose of the project, existing concerns and issues, and the objective of the project to calm traffic. When requested, City staff will aid in the Resident Task Force's efforts to communicate with their neighbors by providing necessary materials for the traffic calming plan.

### NEIGHBORHOOD SUPPORT

Neighborhood support of the traffic calming plan is essential to ensure community consensus and that the proposed solutions are supported by those who may be affected by the traffic calming measures. To establish neighborhood support of the traffic calming plan, a Traffic Calming Survey will be distributed to all residences in the project study area. For a neighborhood to successfully approve a traffic calming plan, the survey criteria must be met.

### **TRAFFIC CALMING SURVEY**

Once a traffic calming plan is developed and prior requirements are met, City staff will distribute a Traffic Calming Survey (see Attachment C) to all residences in the project study area. The Traffic Calming Survey consists of an introduction to the project, a summary of issues and the traffic calming process, the traffic calming plan (including descriptions of each proposed), and a map that illustrates the location of each proposed device. One survey per residence will be distributed, and one signature per household will be accepted by the City.

For a traffic calming plan to be approved, the survey criteria listed below must be met for:

#### Localized Street

- 70% of households shall be in support of the traffic calming plan
- 100% of households immediately adjacent to the proposed devices must approve the plan

#### Neighborhood

- 40% of distributed surveys must be returned
- 55% of the returned surveys must be in favor of the traffic calming plan
- 100% of households immediately adjacent to the proposed devices must approve the plan



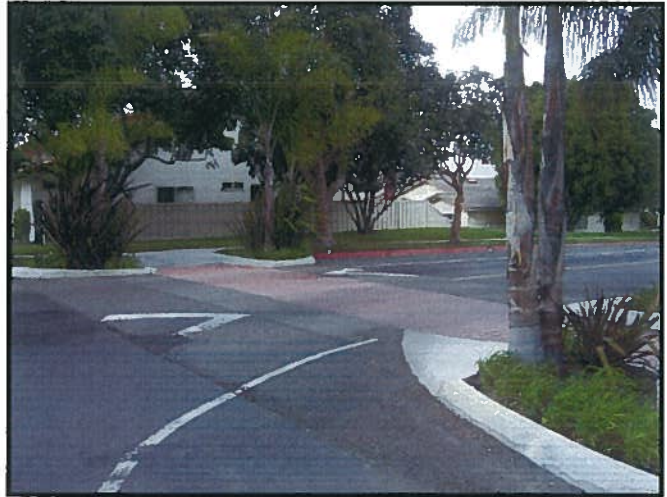
## City of Oceanside Neighborhood Traffic Calming Program

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If the Traffic Calming Survey process meets all the criteria, City staff will advance the traffic calming plan and initiate conceptual design plans and cost estimates. If the neighborhood does not meet all the survey criteria, the task force is responsible for refining the traffic calming plan and City staff will redistribute the Traffic Calming Survey. The Resident Task Force may revise the traffic calming plan and reissue the Traffic Calming Survey **only once** following the initial attempt. If neighborhood consensus cannot be reached, the project will be terminated.

### 6.2c APPROVAL PROCESS

After the traffic calming plan (localized or neighborhood) demonstrates community support by meeting the survey criteria and a funding source is determined, the traffic calming plan will be sent to the Transportation Commission and City Council for approval and funding.



**Skyhaven Lane and Zenith-Calaverro Lane**

#### APPROVED PROJECTS

Projects that are approved by City Council are permitted to move forward and will be implemented.

#### PROJECTS THAT ARE NOT APPROVED

If a traffic calming plan is not approved by City Council, the project will be terminated.

#### FUNDING

Projects may be funded from a variety of sources, such as the City's traffic management budget, Capital Improvement Plan (CIP) budget, Safe Route to School grants, and other grant programs. Whether large or small, the ability of the City to implement projects in any given year may be limited by the availability of City funds for such purposes. Depending on available funds, the project may be divided into phases or placed on a waiting list for future funding.



## **City of Oceanside Neighborhood Traffic Calming Program**

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### **6.2d IMPLEMENTATION**

#### **FINAL DESIGN AND INSTALLATION**

Final design plans will be prepared once the traffic calming plan is approved by City Council and funding is secured. Design of traffic calming devices shall reference the standards established in the Traffic Calming Toolbox and Design Elements of the Oceanside Traffic Calming Program. Modification to design standards shall require approval by the City Engineer and the City Traffic Engineer before final design plans are completed.

If construction of all devices of the traffic calming plan cannot be funded in one phase, the traffic calming plan for a neighborhood or street could be divided into a phased plan. Phasing the traffic calming devices may help residential neighborhoods install devices in the areas of greatest need first when resources to fund the improvements are limited. By implementing the traffic calming devices in phases, improvements in traffic conditions can be monitored to determine the benefits associated with the implementation. Results of the monitoring can also be used to determine when the other devices of the plan should be installed to further improve the conditions.

#### **POST EVALUATION OF TRAFFIC CALMING DEVICE INSTALLATION**

A component of a successful plan is the evaluation and monitoring of prior traffic conditions versus the results of post traffic calming device installation. Follow-up studies will be conducted to evaluate the measures of a project's success. This information can be used to determine whether the neighborhood's desired outcome has been achieved and to what degree. Follow-up studies will also be used to determine if the traffic problem has shifted to other neighborhood streets.

When applicable, methods by which follow up studies should be conducted include:

- Speed Surveys
- Traffic Volume Study
- Diversion Study



## City of Oceanside Neighborhood Traffic Calming Program

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City staff will present the results of the before and after studies to the Transportation Commission and/or the City Council as deemed necessary. This process will help ensure effectiveness towards improving and maintaining the traffic calming program for future use.

### 7. TRAFFIC CALMING IN NEW DEVELOPMENTS

In most cases traffic calming is implemented to address traffic problems that arise due to the design and operations of an existing road or roadway network. If traffic calming is integrated into the planning of new developments, potential issues such as excessive vehicular speeding, and/or pedestrian conflicts can be mitigated in the early stages of design and planning. This can also lead to cost savings to the broader community and the City as a whole. Also integrating traffic calming into the design of new developments can provide opportunities to integrate landscape, storm water management, and other features into the design for the neighborhoods.

Various factors can be reviewed in determining whether traffic calming should be integrated into the design of a new development such as the local street's anticipated vehicular volume, vehicular speeds, street layout, existing conditions surrounding the new development, and engineering judgment. In considering on whether traffic calming should be integrated into a new development will mainly be at the discretion of the Planning and Engineering Divisions.

Guidelines that staff may use in determining if there is a necessity for traffic calming on local streets is as follows:

- Traffic Speeds – Identify street design features that could lead to potential excessive vehicular speeding and may need traffic calming integrated into design of new development:
  - Street with unimpeded block lengths greater than 600 feet
  - Roadway grade
  - Potential pedestrian and vehicle conflicts due to pedestrian generators such as schools, parks, and community centers



## City of Oceanside Neighborhood Traffic Calming Program

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- Width of street such as:
    - o 36 - 40 feet curb to curb with parking on both sides
    - o 32 feet curb to curb with parking on one side
    - o 28 feet curb to curb when no on-street parking is provided
  - Bike activity
  - Contiguous vs. noncontiguous sidewalks
- Street Layout: Review layout of new development (and surrounding existing neighborhoods) to determine if there is potential for cut-through traffic.
  - Existing Adjacent Neighborhoods:
    - Review surrounding neighborhoods for existing traffic calming devices and how that might affect the new development
    - Review surrounding neighborhoods to determine if existing neighborhoods need traffic calming

Where feasible, traffic calming features should integrate storm water best management practices (BMP) to reduce urban run-off. Bio retention, drainage swales and other BMP features should be used to reclaim storm water for purposes of irrigating landscape in traffic calming features. Where feasible these features should be integrated into all new development design.

When deemed appropriate, City staff and the developer will meet to identify a mutually acceptable neighborhood traffic calming plan which can then be incorporated into the design of the new development. This is an opportunity for City staff to be proactive in addressing potential neighborhood traffic concerns.

## 8. STOP SIGNS

Stop signs are defined in the California Manual for Uniform Traffic Control Devices (CA MUTCD) as a traffic control device. As such, the purpose of a stop sign is to clearly identify the right-of-way at an intersection. Therefore, stop signs are not appropriate as a traffic calming measure. Stop signs are ineffective in reducing mid-block vehicular speeds. Also, increased noise and air pollution emissions occur at the stop sign location due to vehicle braking and acceleration patterns.



## **9. LANDSCAPING**

Although it may be possible to integrate landscape in some traffic calming devices, landscaping will not be funded through the Oceanside Traffic Calming Program. Providing landscaping within an approved traffic calming device, such as a median or choker, may be considered on a case-by-case basis. However, in most installations, traffic calming will be installed without landscape. Neighborhoods interested in landscape will need to demonstrate the ability to provide funding for planting, irrigation, and maintenance. Landscaping for traffic calming devices must abide by the guidelines outlined in the City of Oceanside's Landscape Development Manual and other applicable design standards.

## **10. REMOVAL PROCESS FOR TRAFFIC CALMING DEVICE(S)**

For new installations, requests for device removal will not be considered until 12 months following the installation of the device. This will allow City staff and residents to adequately evaluate the effectiveness of the devices.

Individuals in a neighborhood or on a street may determine that traffic calming devices should be removed or modified. If this occurs, the resident must submit a written request to initiate the removal process.

Once a request for removal of traffic calming devices has been submitted to City staff, a petition will be provided to the resident by staff which the resident will be required to circulate (see Attachment D). To demonstrate support for the removal of the device(s), 80% of the residences that live on the street with the device(s) must sign the petition. One signature per household will be accepted and all signatures will be verified by City staff.

When the petition requirements have been fulfilled, City staff has evaluated the circumstances, and funding has been allocated, then the request to remove the traffic calming device(s) will be sent to the Transportation Commission and City Council for consideration and approval.



## **City of Oceanside Neighborhood Traffic Calming Program**

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Once the traffic calming devices are removed, it is possible that traffic speeds or volumes may increase. Consideration for future traffic calming along such streets will be subject to engineering judgment and will be determined on a case-by-case basis. If a traffic calming device is to be reinstalled on the street, it will be the residents' responsibility to fund the future devices.



## City of Oceanside Neighborhood Traffic Calming Program

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# City of Oceanside Neighborhood Traffic Calming Program

## TRAFFIC CALMING TOOLBOX – FAST FACTS

	Applicable on...			Applicable for...		Impacts to...						Cost Range <sup>1</sup>	Page
	Local Street	Collector Street	Arterial Street	Reducing Traffic Speed	Reducing Traffic Volume	Noise	Access	Bicycles	Transit	Parking	Emergency Response		
<b>Initial Tools (Phase I) Tools not shown</b>													
Education	●	●	●	●								\$	N/A
Radar Gun	●	●	●									\$	N/A
Signage	●	●	●	●								\$	N/A
Radar Speed Trailer	●	●	●	●						P		\$	N/A
Enforcement	●	●	●	●								\$	N/A
<b>Speed Control Measures (Phase II)</b>													
Signing & Striping	●	●	●	●				P				\$	22
Diagonal Parking		●	P	●				●		●		\$	24
Speed Humps	●	P		●	P	●					●	\$	26
Speed Lumps	●	P		●	P	●						\$	28
Bulb Outs/Curb Extensions	●	●	●	●				P	●	P		\$\$	30
Center Island/Median	●	●	●	●			P			P		\$\$	32
Radar Feedback Sign	●	●	●	●								\$\$\$	34
Choker	●	●		●				P	P	●		\$\$\$	36
Chicane	●	●		●				P	●	●		\$\$\$	38
Traffic Circle	●	●		●				P	P	P		\$\$\$	40
Lateral Shift	●	●		●				P		●		\$\$\$	42
Raised Crosswalk	●	●		●	P	●				P	●	\$\$\$	44
Raised Intersection	●	●		●	P	●					●	\$\$\$\$	46
Roundabout	●	●	●	●				P	P	●		\$\$\$\$	48
<b>Volume Control Measures (Phase II)</b>													
Turn Restrictions	●	●	●		●		●	P	●			\$	50
Forced Turn Island	●	●			●		●	P	●	P		\$	52
Half Street Closure	●	P			●		●		●			\$\$\$	54
Full Street Closure	●				●		●	P	●		●	\$\$\$	56
Median Barricade	●	●	●		●		●	P	●		P	\$\$\$	58
Diagonal Diverter	●	P		P	●		●	P	●		●	\$\$\$\$	60

P = Possible

<sup>1</sup>Cost Range: (\$) Less than \$5,000  
 ( \$\$ ) \$5,000 - \$10,000  
 ( \$\$\$ ) \$10,000 - \$50,000  
 ( \$\$\$\$ ) Greater than \$50,000



## City of Oceanside Neighborhood Traffic Calming Program

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**Traffic Calming Toolbox and Design Elements  
(Phase II)**



## Description & Purpose

Signage, which may include regulatory and/or warning signs, can aid in increasing drivers' awareness of existing street conditions.

Striping a roadway helps define the travel lane for motorists and sometimes provides designated bike lanes or parking lanes. Striping a roadway can also visually narrow the width of the street.

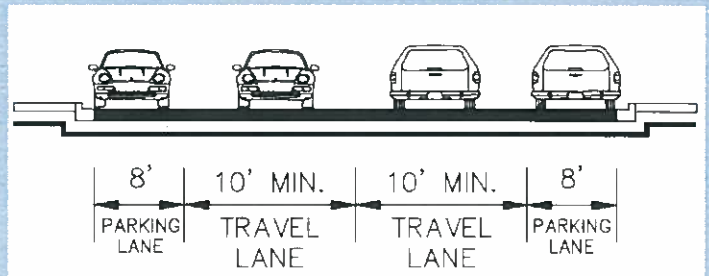


Via Rancho Road, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	No
Parking Impact	No
Emergency Response Impact	No

### Local Street



\* Lane widths may vary

## Advantages

- Increases motorist awareness of street conditions
- Can be easily modified
- Low cost
- No affect on emergency vehicles

## Disadvantages

- Temporary reduction in speeds
- Increases regular maintenance



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# Diagonal Parking

(\$8 per stall)

## Description & Purpose

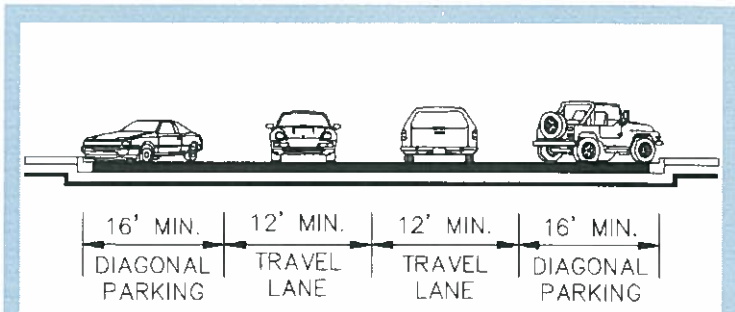
Diagonal parking is used to increase the supply of available on-street parking spaces. Installing angle parking requires the travel lanes to be narrowed, which generally results in slower speeds as motorists anticipate vehicles pulling out of the parking spaces.



Tremont Street, Oceanside

### Fast Facts:

Can be used on Local Street	No
Can be used on Collector	Yes
Can be used on Arterial	Possible
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Yes
Transit Impact	No
Parking Impact	Yes
Emergency Response Impact	No



\* Parking stall depths vary depending on the angle of parking

## Advantages

- Effective in reducing speeds
- No impact to emergency response times
- Provides additional parking spaces

## Disadvantages

- Increases regular maintenance
- Must meet street width requirements
- Impact to bicyclists

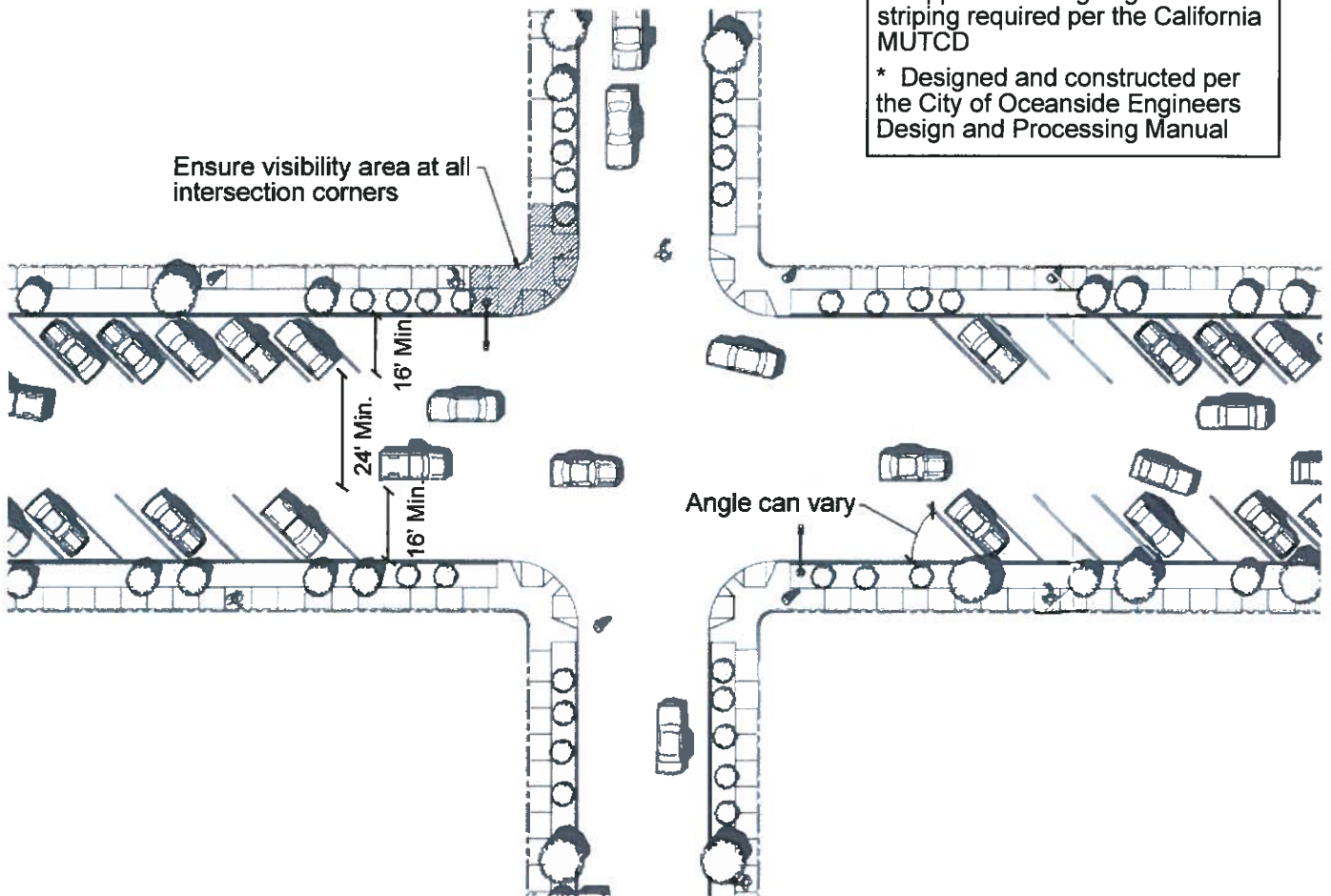


# Diagonal Parking

**Notes:**

\* Supplemental signing and striping required per the California MUTCD

\* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual





## Description & Purpose

Speed humps are rounded, tapered raised areas placed across a roadway to reduce speeds. Speed humps are supplemented with appropriate striping and signage to adequately inform motorists of the traffic calming device.



Via Clemente, Oceanside

### Fast Facts:

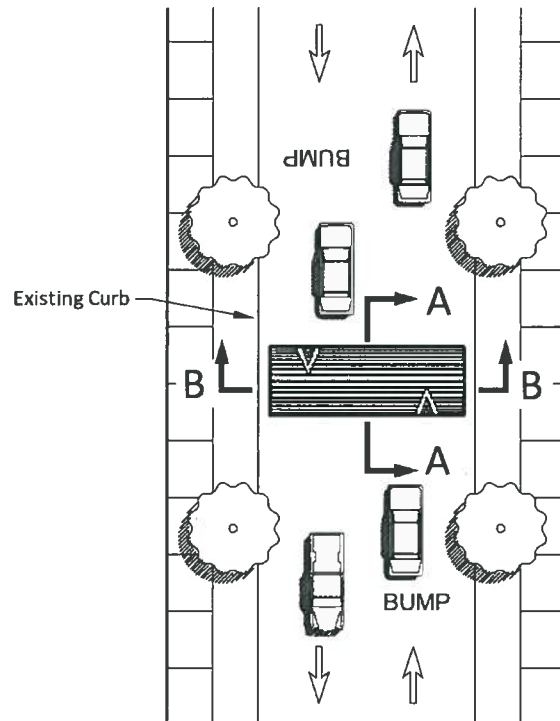
Can be used on Local Street	Yes
Can be used on Collector	Possible
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	Possible
Noise Impact	Yes
Restricts Access	No
Bicyclist Impact	No
Transit Impact	No
Parking Impact	No
Emergency Response Impact	Yes

## Advantages

- Effective in reducing speeds

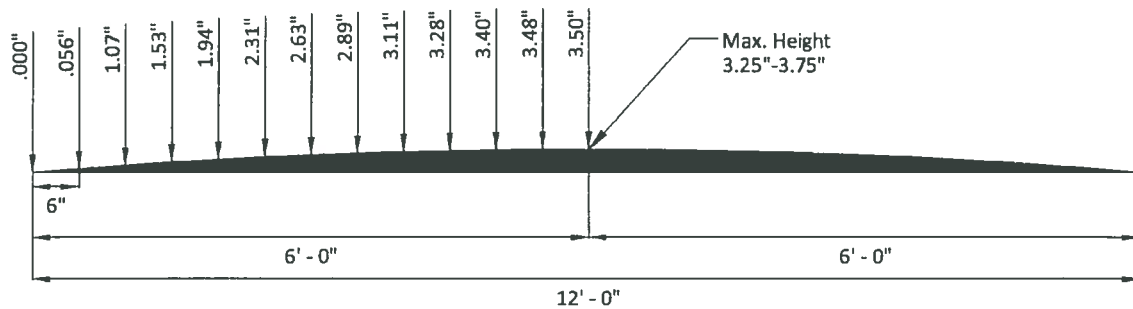
## Disadvantages

- Impacts emergency response times
- Increases regular maintenance

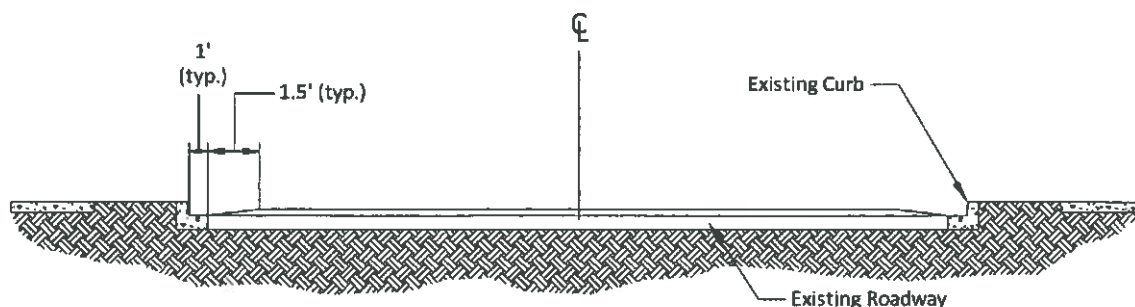


**Notes:**

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual
- \* Drainage requirements must be evaluated and addressed
- \* Begin speed humps at the edge of the gutter; if no gutter exists begin the speed humps 1' from the curb face



**Section A-A**



**Section B-B**



# Speed Lumps

(\$4,000 to \$6,000)

## Description & Purpose

Speed lumps are similar to speed humps in that they are rounded, tapered raised areas placed across a roadway to reduce speeds. However, speed lumps are designed to allow emergency vehicles to travel along a roadway with minimal impact to response times. Speed lumps are supplemented with appropriate striping and signage to adequately inform motorists of the traffic calming device.



Carey Road, Oceanside

### Fast Facts:

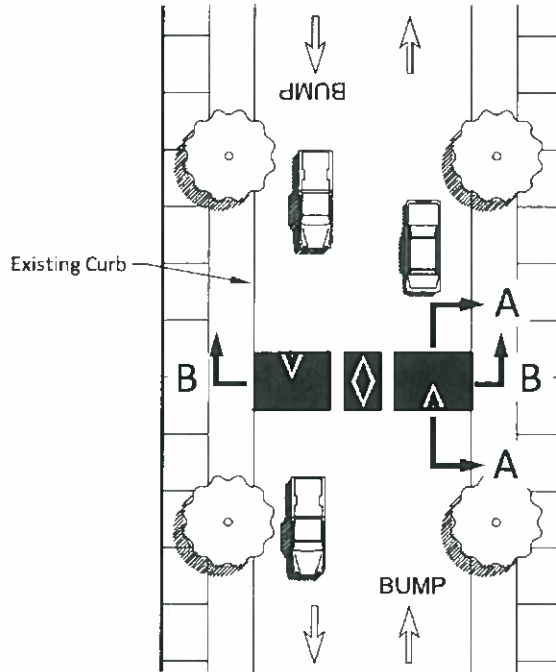
Can be used on Local Street	Yes
Can be used on Collector	Possible
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	Possible
Noise Impact	Yes
Restricts Access	No
Bicyclist Impact	No
Transit Impact	No
Parking Impact	No
Emergency Response Impact	No

## Advantages

- Effective in reducing speeds
- Minimal impact to emergency response times

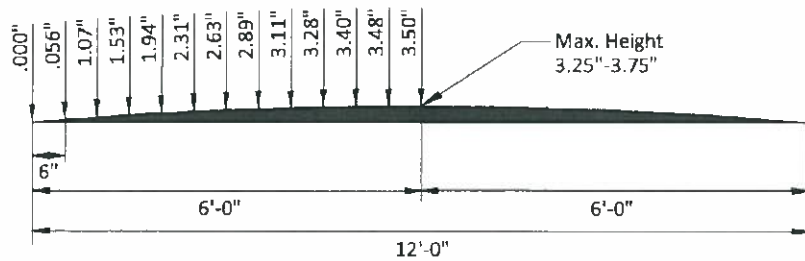
## Disadvantages

- Increases regular maintenance

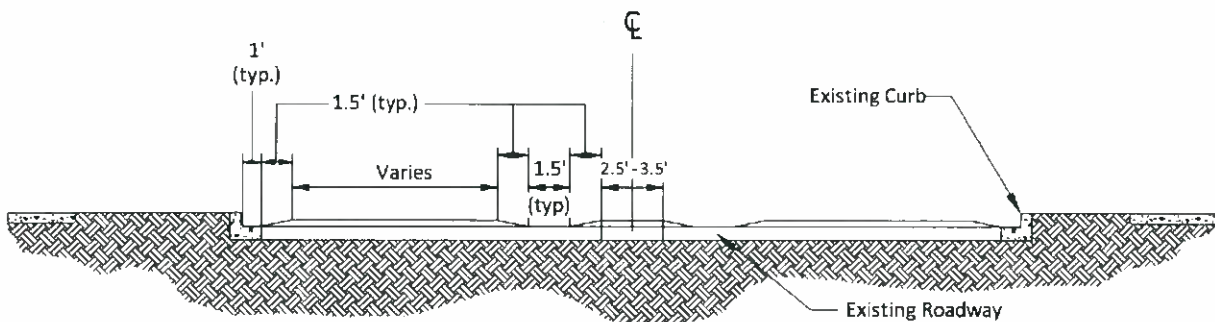


**Notes:**

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual
- \* Drainage requirements must be evaluated and addressed
- \* Begin speed lumps at the edge of the gutter; if no gutter exists begin the speed lumps 1' from the curb face



**Section A-A**



**Section B-B**



# Bulb Outs/ Curb Extensions

(\$5,000 to \$15,000 per corner)

## Description & Purpose

Bulb outs, also referred to as curb extensions, narrow the roadway at the corners of an intersection by extending the curb into the parking lane or shoulder. Bulb outs narrow the width of the road which can reduce motorists' speeds as they travel through the intersection, particularly when turning. These devices reduce the pedestrian crossing distance and improve motorists' visibility of pedestrians. Bulb outs may be installed at an intersection or mid-block. Bulb outs placed mid-block are also known as Chokers.



Tremont Street at Mission Avenue, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	Possible
Emergency Response Impact	No

### Advantages

- Effective in reducing turning speeds
- Shortens pedestrian crossing distance
- Improves visibility of pedestrians

### Disadvantages

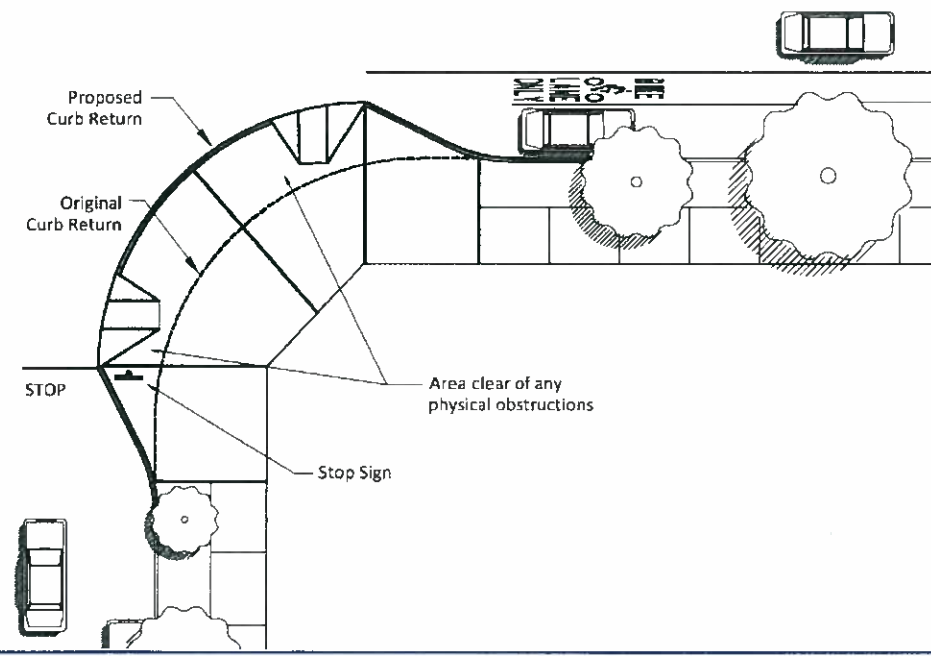
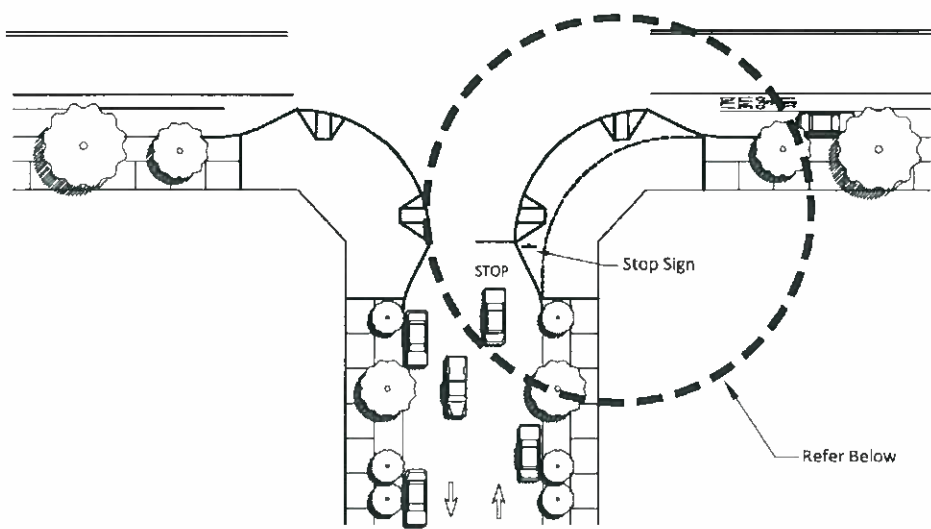
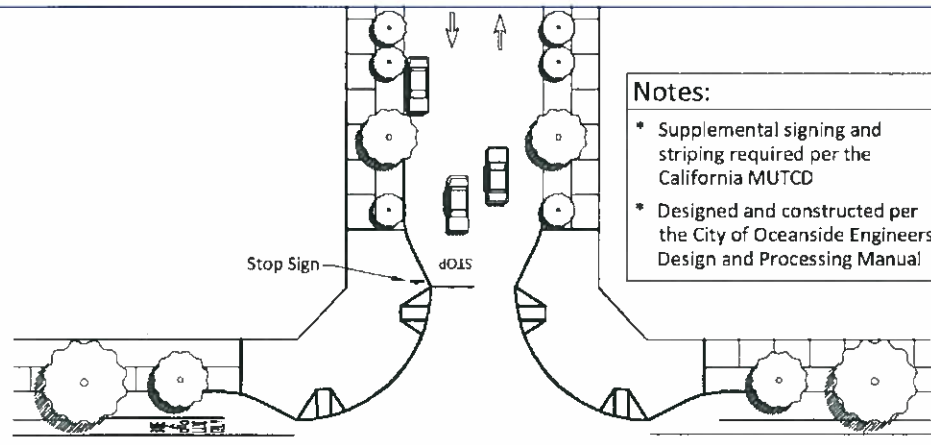
- Increases regular maintenance
- May affect larger vehicle turning radius



# Bulb Outs/ Curb Extensions

**Notes:**

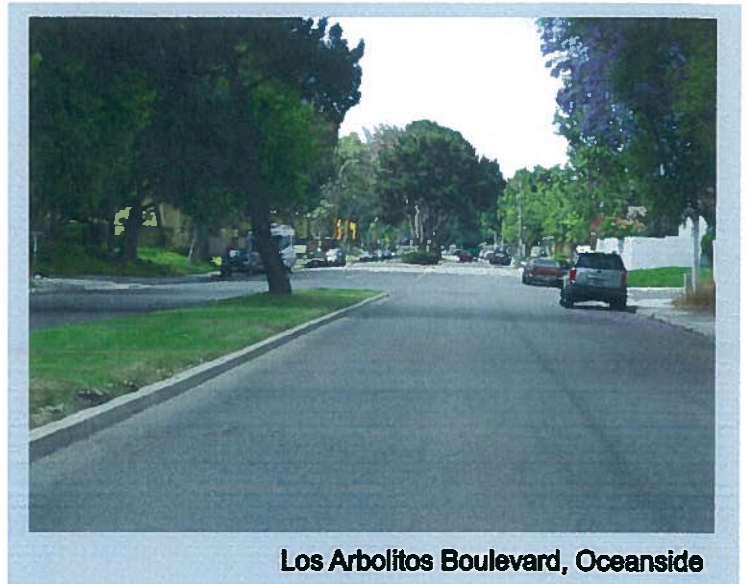
- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual





## Description & Purpose

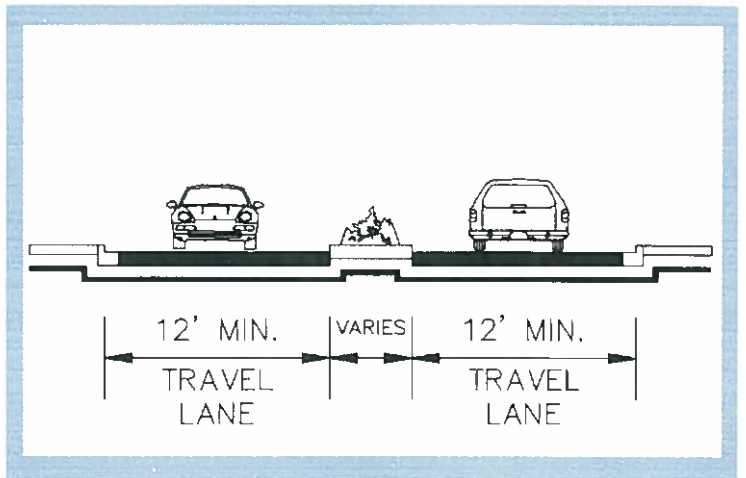
Center islands are raised medians placed between two directions of traffic, often within a center turn lane. Center islands are installed to narrow the width of the road which can reduce motorists' speeds as they travel through the area. Center islands are useful in reducing potential conflicting turning movements.



Los Arbolitos Boulevard, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	Possible
Bicyclist Impact	No
Transit Impact	No
Parking Impact	Possible
Emergency Response Impact	No

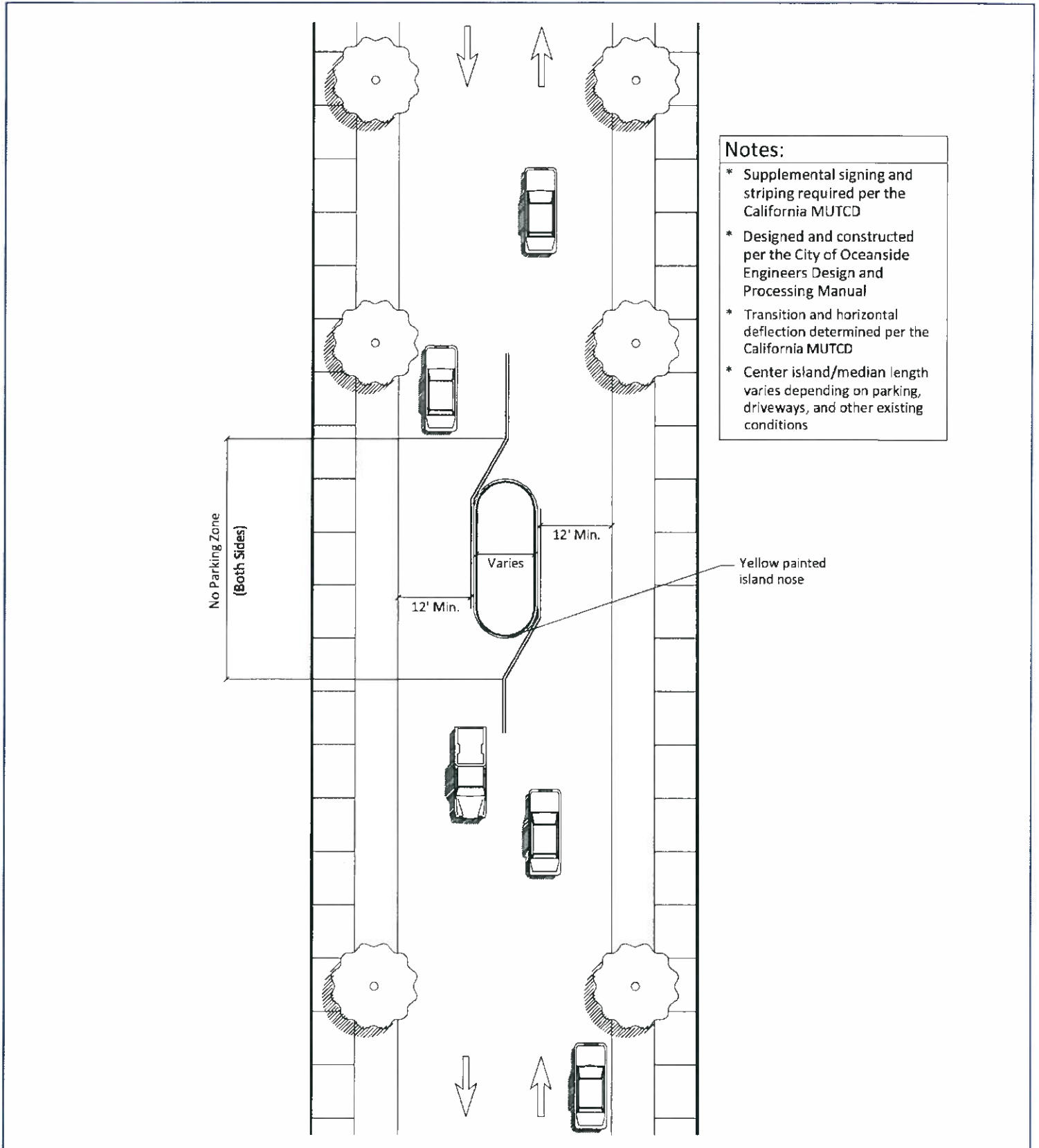


## Advantages

- Eliminates turning or passing conflicts
- Narrows road
- Provides buffer between opposing traffic

## Disadvantages

- Increases regular maintenance
- May require loss of parking spaces





## Description & Purpose

Radar feedback signs display the speed of oncoming vehicles, thereby increasing drivers' awareness of the speed they are traveling at versus the posted speed limit. Speed limit signs are posted as a supplement to the radar feedback sign.



Pacific Street, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	No
Transit Impact	No
Parking Impact	No
Emergency Response Impact	No

### Advantages

- Increases driver awareness of the posted speed limit
- Can be installed on an existing street light pole

### Disadvantages

- May lose effectiveness over time



# **Radar Feedback Sign**

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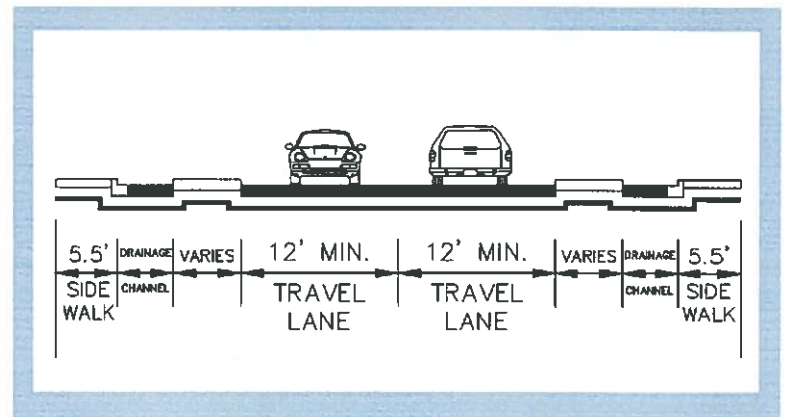
## Description & Purpose

A choker is a pair of mid-block curb extensions that narrow the width of the travel way, thereby reducing motorists' speed.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	Possible
Parking Impact	Yes
Emergency Response Impact	No

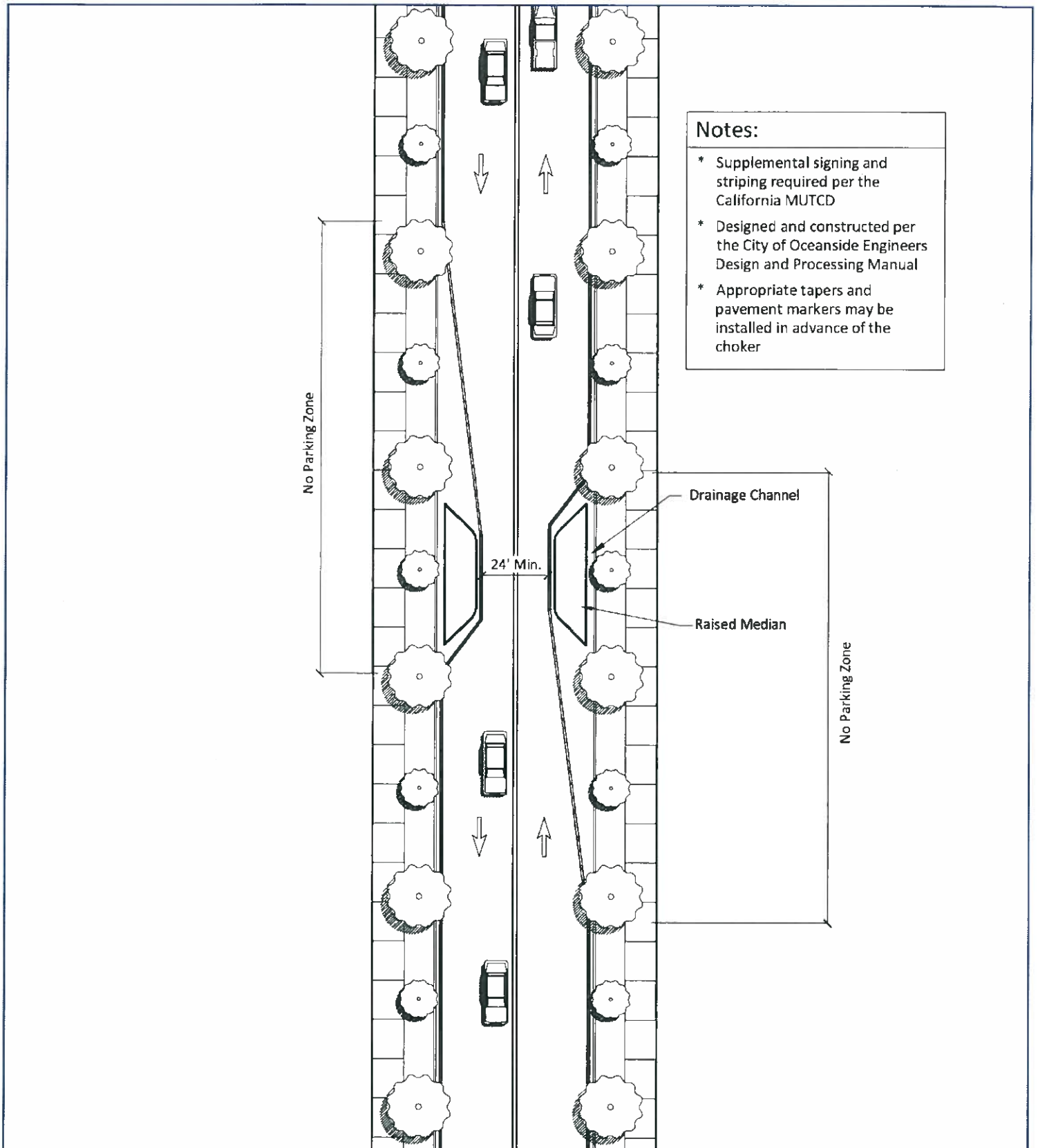


## Advantages

- Effective in reducing speeds
- Minimal affect on drainage
- Buffer for parked vehicles

## Disadvantages

- Eliminates parking spaces





## Description & Purpose

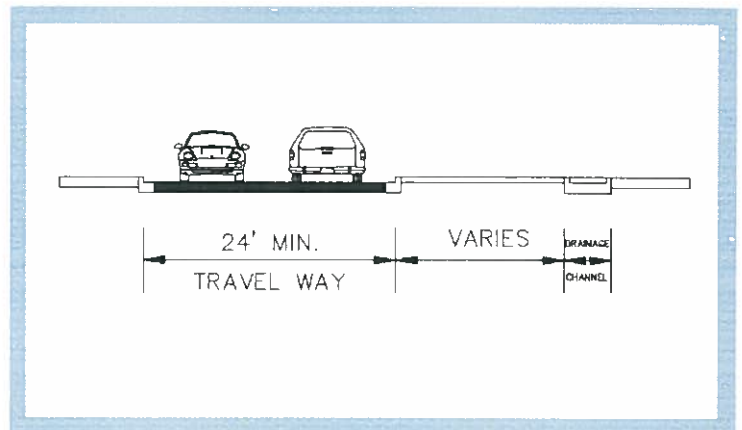
Chicanes narrow the roadway with alternating curb extensions to create an S-shaped curve. Chicanes alter the road alignment and narrow the width of the travel lane in order to reduce motorists' speed as they travel through the road segment.



Foussat Road, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	Yes
Emergency Response Impact	No

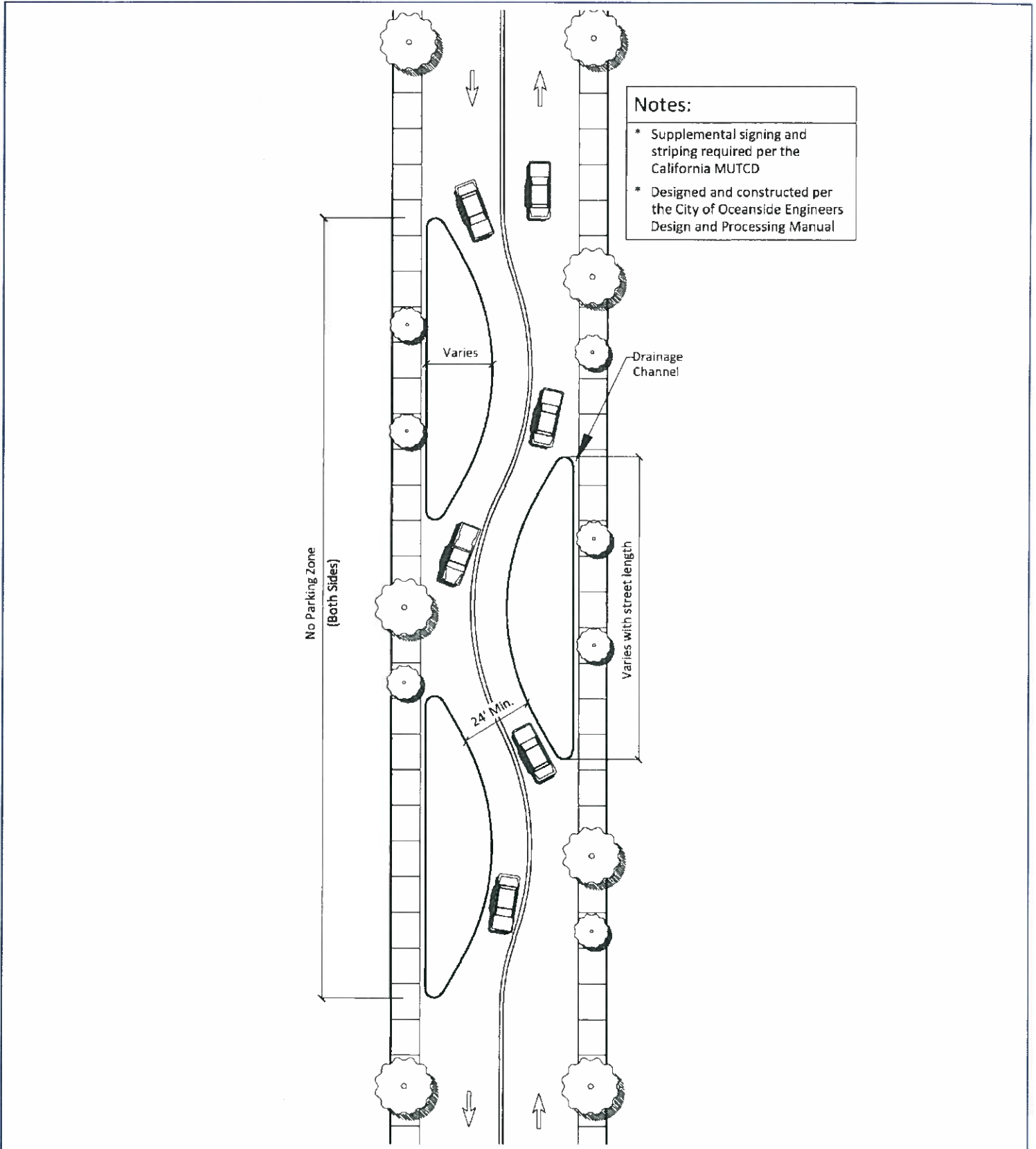


## Advantages

- Effective in reducing speeds

## Disadvantages

- Increases regular maintenance
- Loss of parking spaces





# Traffic Circle

(\$10,000 to \$25,000 excluding landscaping)

## Description & Purpose

Traffic circles are raised circular islands constructed in the middle of an intersection. Traffic circles require motorists to maneuver around the circle to proceed through the intersection, which will result in motorist speed reduction.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	Possible
Parking Impact	Possible
Emergency Response Impact	No

## Advantages

- Reduces speed through an intersection

## Disadvantages

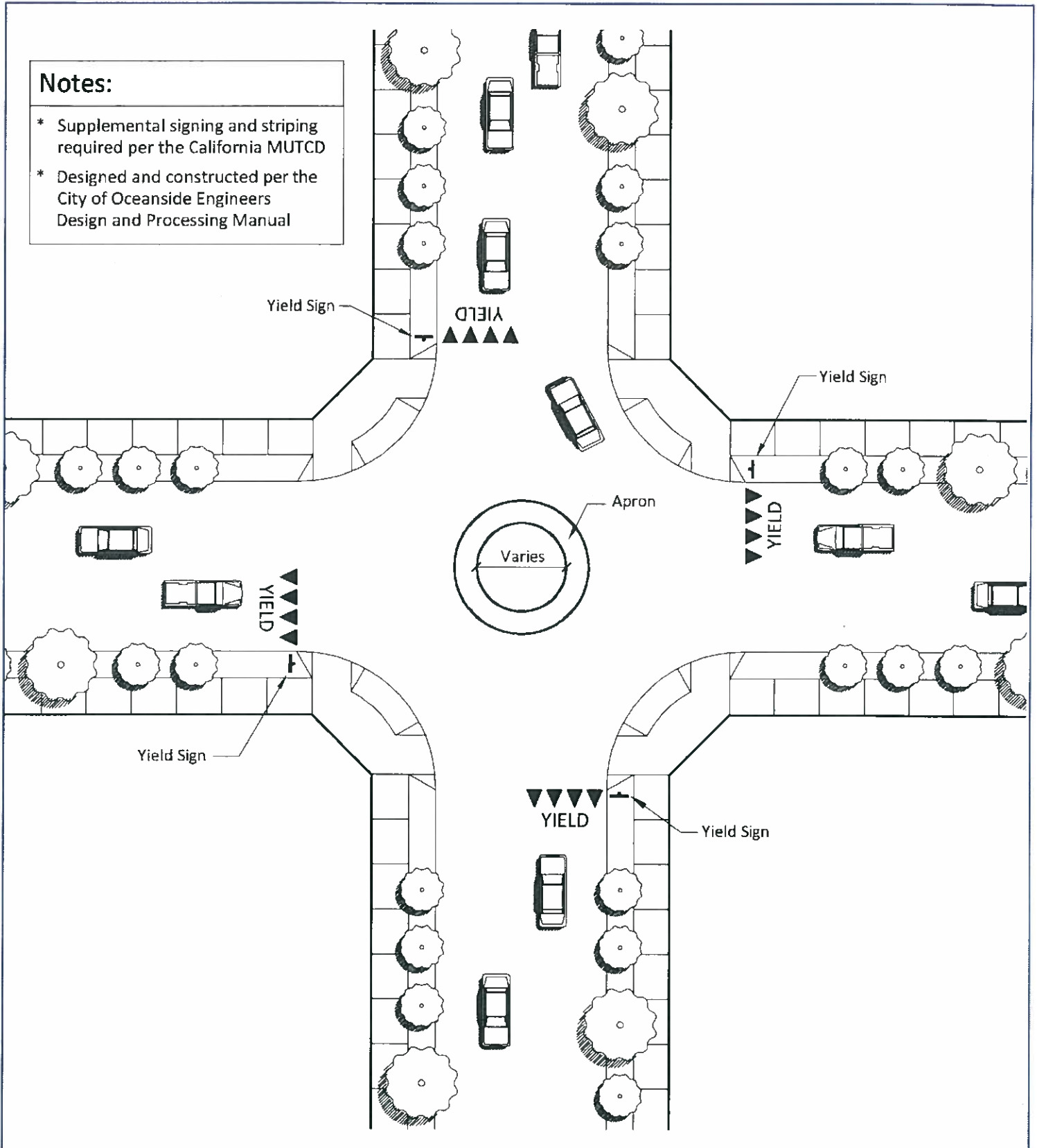
- Increases regular maintenance
- Wrong-way left-turns could occur



# Traffic Circle

## Notes:

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual





## Description & Purpose

A lateral shift is two intermittent curb extensions and a median constructed in the roadway. The curb extensions and median create curves in the roadway that motorists' have to maneuver through, which results in speed reduction.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	No
Parking Impact	Yes
Emergency Response Impact	No

## Advantages

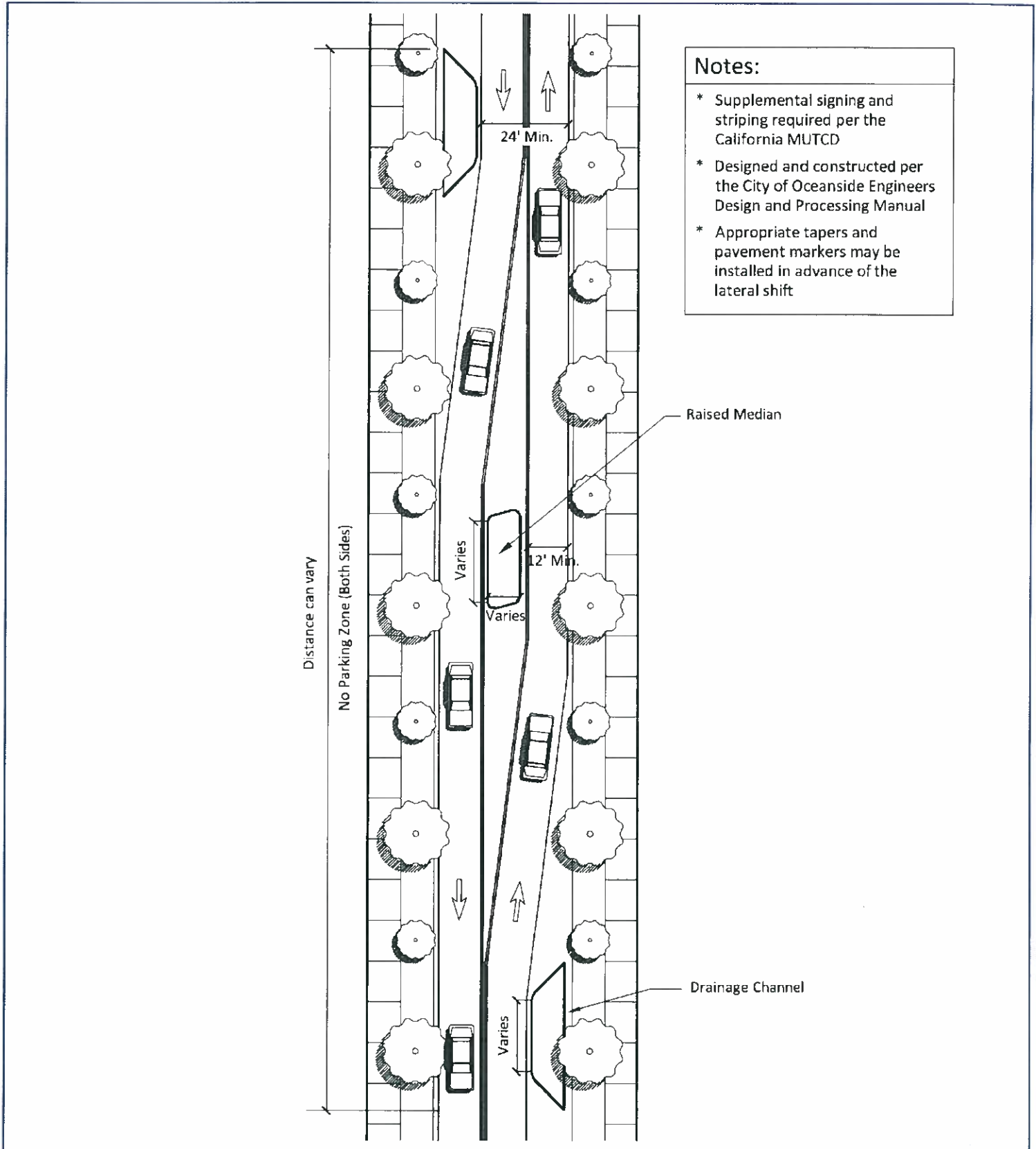
- Effective in reducing speeds

## Disadvantages

- Increases in regular maintenance
- Loss of parking



# Lateral Shift



## Notes:

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual
- \* Appropriate tapers and pavement markers may be installed in advance of the lateral shift



## Description & Purpose

A raised crosswalk is a flat-topped speed hump that requires motorists to reduce speeds as they proceed through the elevated section of the road.



Skyhaven Lane / Calavero Lane, Oceanside

## Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	Possible
Noise Impact	Yes
Restricts Access	No
Bicyclist Impact	No
Transit Impact	No
Parking Impact	Possible
Emergency Response Impact	Yes

## Advantages

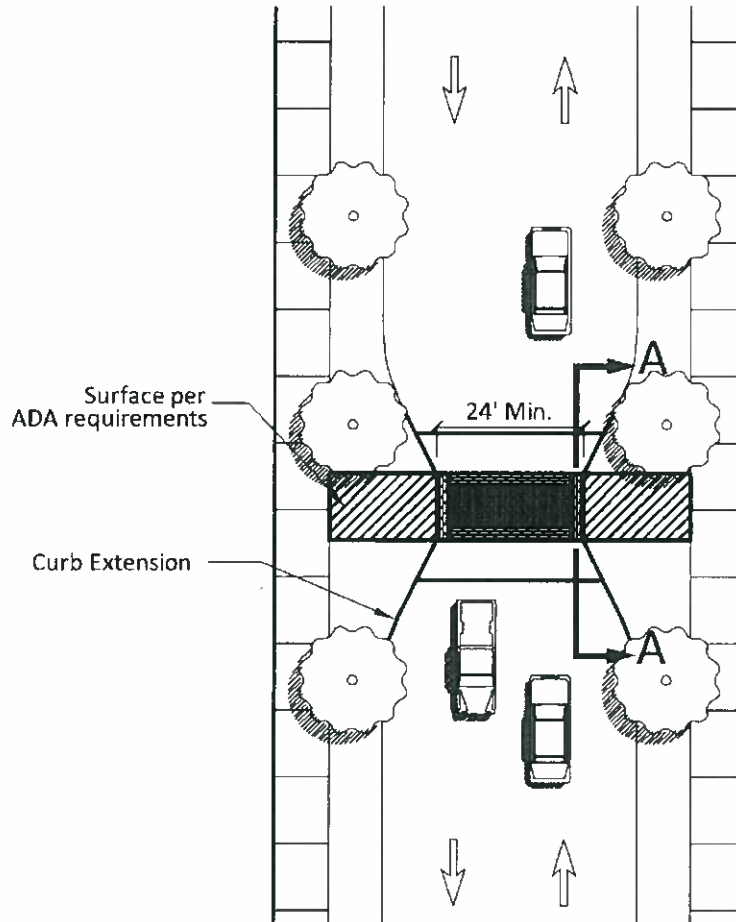
- Reduces speed
- Improves motorist visibility of pedestrians

## Disadvantages

- Increases regular maintenance
- May require modifications to drainage
- May require loss of parking

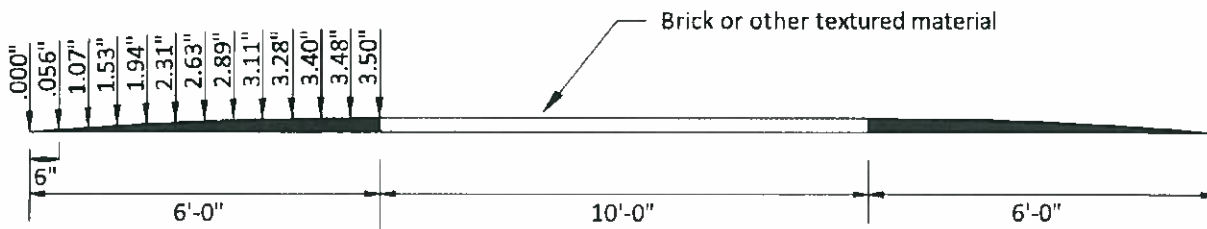


# Raised Crosswalk



### Notes:

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual
- \* Drainage requirements must be evaluated and addressed
- \* Crosswalks must meet traffic engineering requirements



Section A-A



# Raised Intersection

(\$125,000 to \$150,000)

## Description & Purpose

A raised intersection requires motorists to reduce speeds as they proceed through an elevated intersection. Raised intersections are typically constructed to be six inches in height. Raised intersections are supplemented with appropriate striping and signage to adequately inform motorists of the traffic calming device.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	Possible
Noise Impact	Yes
Restricts Access	No
Bicyclist Impact	No
Transit Impact	No
Parking Impact	No
Emergency Response Impact	Yes



## Advantages

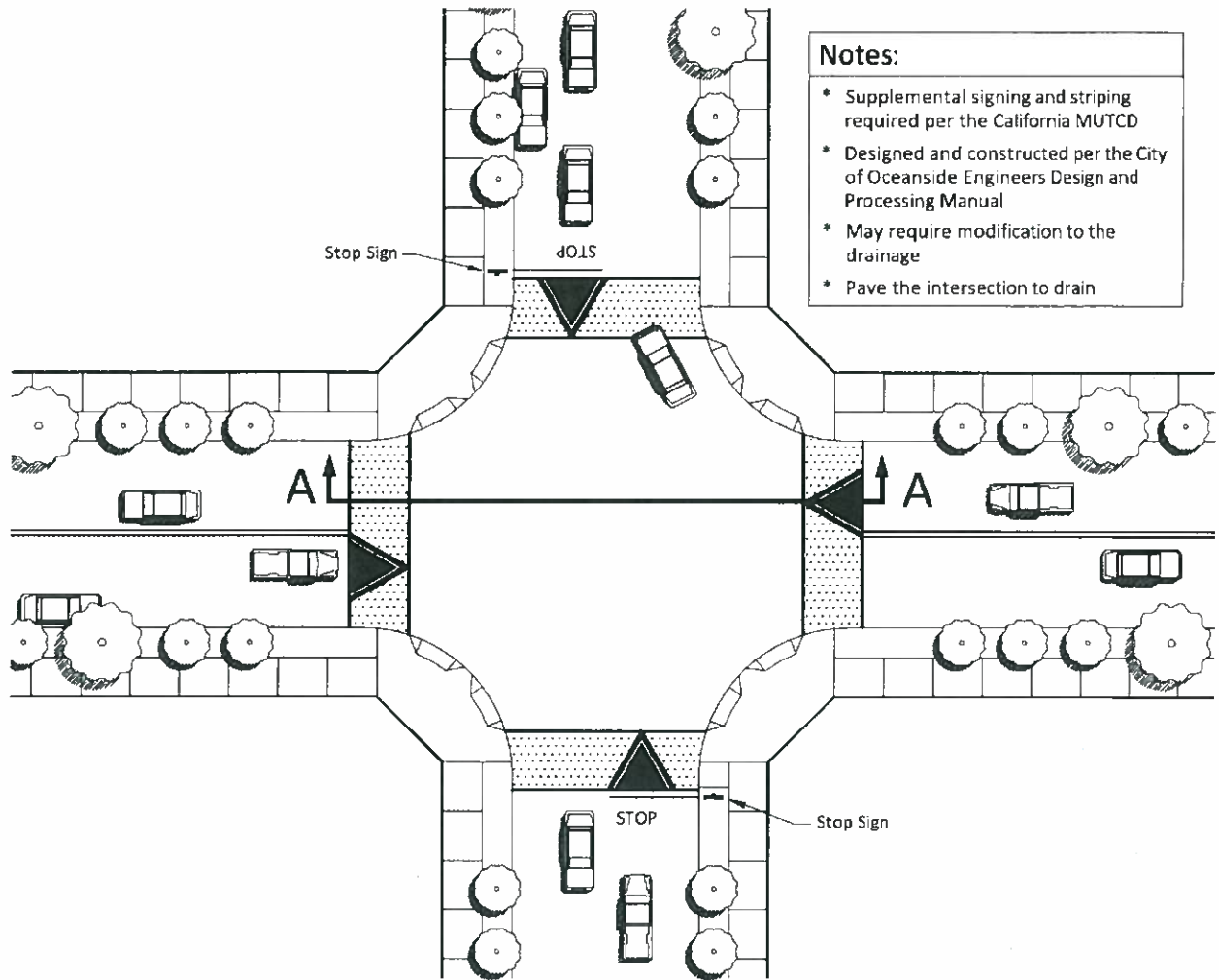
- Reduces speed through an intersection
- May improve pedestrian safety

## Disadvantages

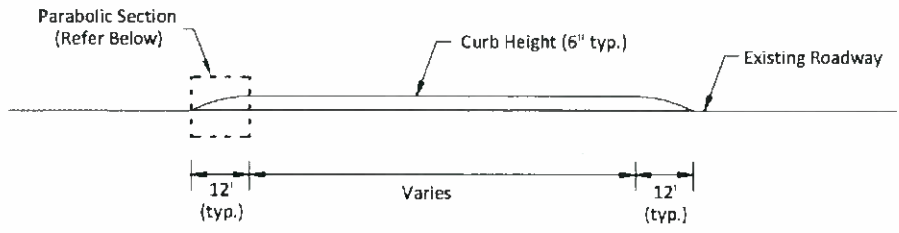
- Expensive
- Increases regular maintenance



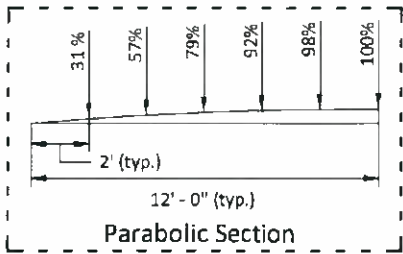
# Raised Intersection



- Notes:**
- \* Supplemental signing and striping required per the California MUTCD
  - \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual
  - \* May require modification to the drainage
  - \* Pave the intersection to drain



**Section A-A**





# Roundabout

(\$250,000 to \$500,000)

## Description & Purpose

Roundabouts are large raised circular islands placed in the middle of an intersection with channelized approaches. The purpose of roundabouts is to slow motorist speeds as they maneuver around the circle to proceed through the intersection. Motorists entering the intersection must yield to circulating traffic. The dimensions of the roundabout can vary depending on the volume and types of vehicle usage.



Santa Fe Drive & Rubenstein Street, Encinitas

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
<b>Reduces Speed</b>	<b>Yes</b>
Reduces Volume	No
Noise Impact	No
Restricts Access	No
Bicyclist Impact	Possible
Transit Impact	Possible
Parking Impact	Yes
Emergency Response Impact	No

## Advantages

- Reduces speed through an intersection
- Increases intersection capacity
- Reduces vehicle delay and queues
- Improves access

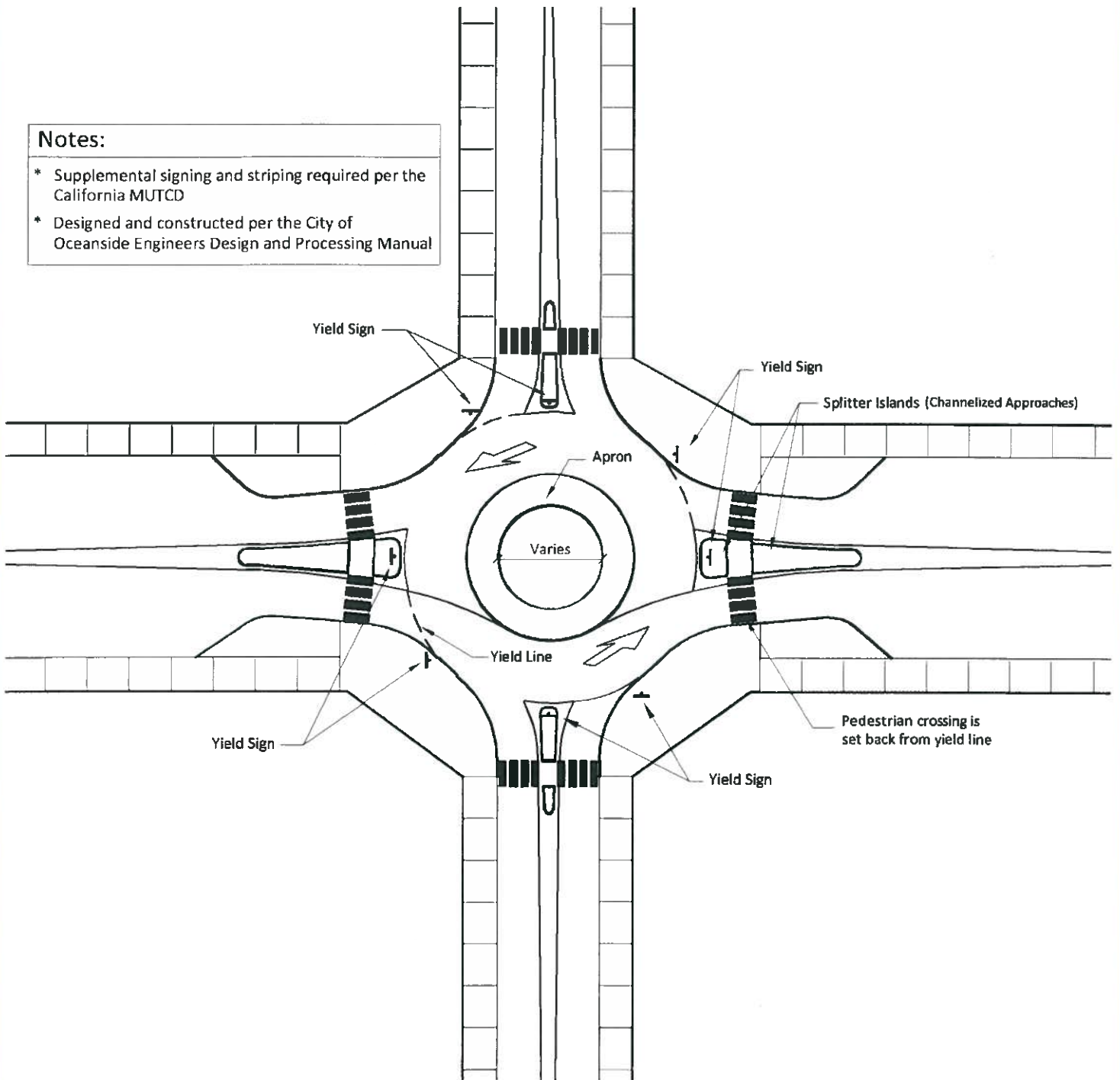
## Disadvantages

- Increases regular maintenance
- May require loss of parking
- May require additional right-of-way



**Notes:**

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual





# Turn Restrictions

(\$100 to \$250 per sign)

## Description & Purpose

Turn restrictions may be implemented by posting signage and/or striping. The purpose of turn restrictions is to prevent cut-through traffic or undesired turning movements from entering or exiting a street. Turn restrictions can be permanent or time specific.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
Reduces Speed	No
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	No
Emergency Response Impact	No



Capistrano Drive at  
San Rafael Drive, Oceanside

## Advantages

- Reduces cut-through traffic
- Low cost

## Disadvantages

- Diverts traffic to adjacent streets
- Effectiveness is subject to driver compliance; may require intermittent enforcement to remain effective



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# Forced Turn Island

(\$1,000 to \$15,000)

## Description & Purpose

Forced turn islands are striped or raised medians that channelize traffic at an intersection. Their purpose is to prevent cut-through traffic or undesired turning movements from entering or exiting a street.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	No
Reduces Speed	No
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	Possible
Emergency Response Impact	No

### Advantages

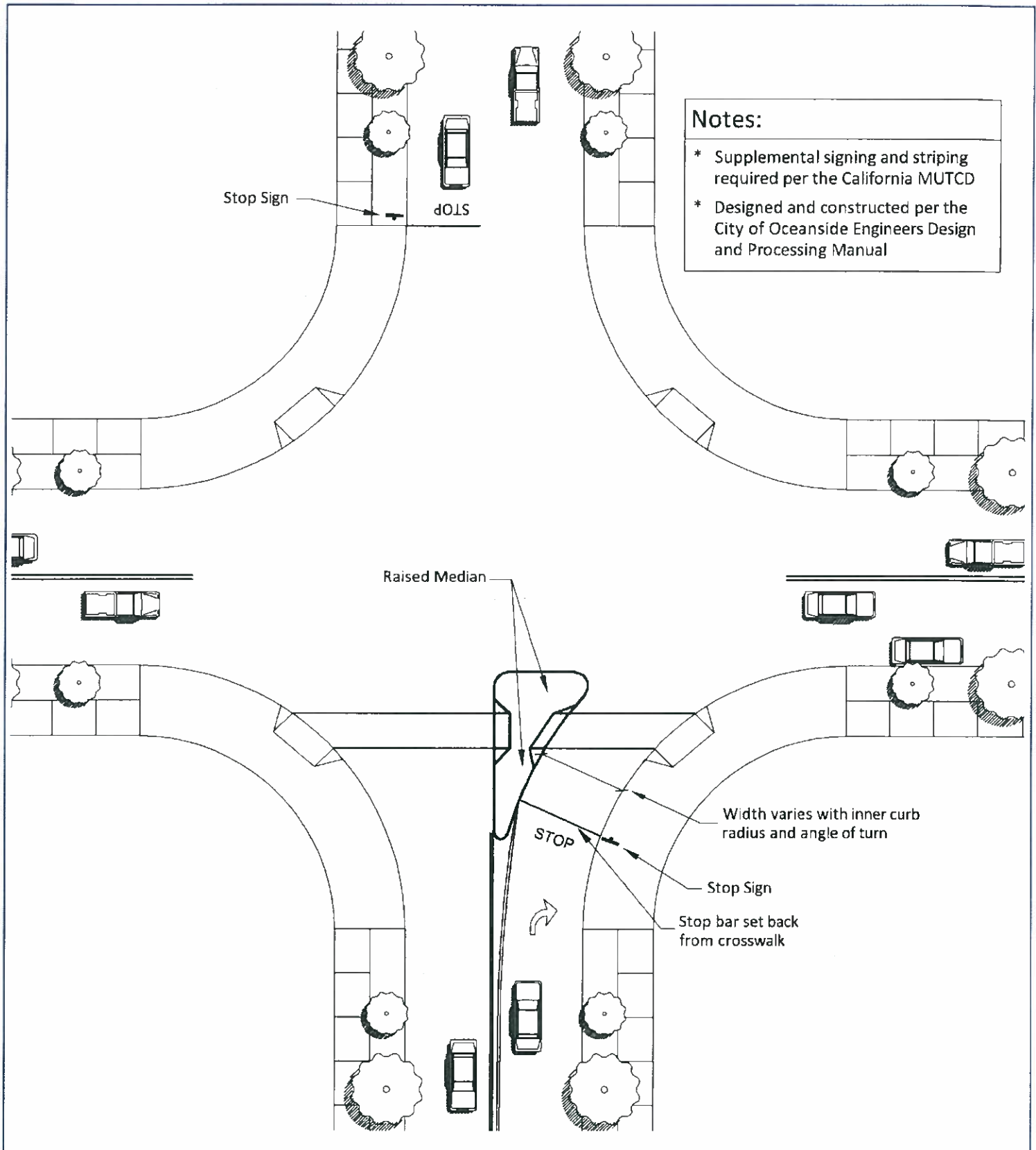
- Reduces cut-through traffic

### Disadvantages

- May divert traffic to adjacent streets



# Forced Turn Island





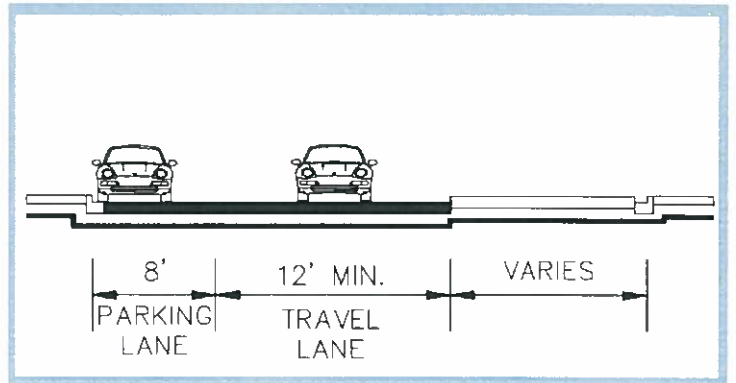
## Description & Purpose

Half street closures restrict motorists from entering or exiting a street in one direction with curb extensions, bollards, or other treatments. The purpose of a half street closure is to prevent cut-through traffic or undesired turning movements.



### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Possible
Can be used on Arterial	No
Reduces Speed	No
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	No
Transit Impact	Yes
Parking Impact	No
Emergency Response Impact	No



## Advantages

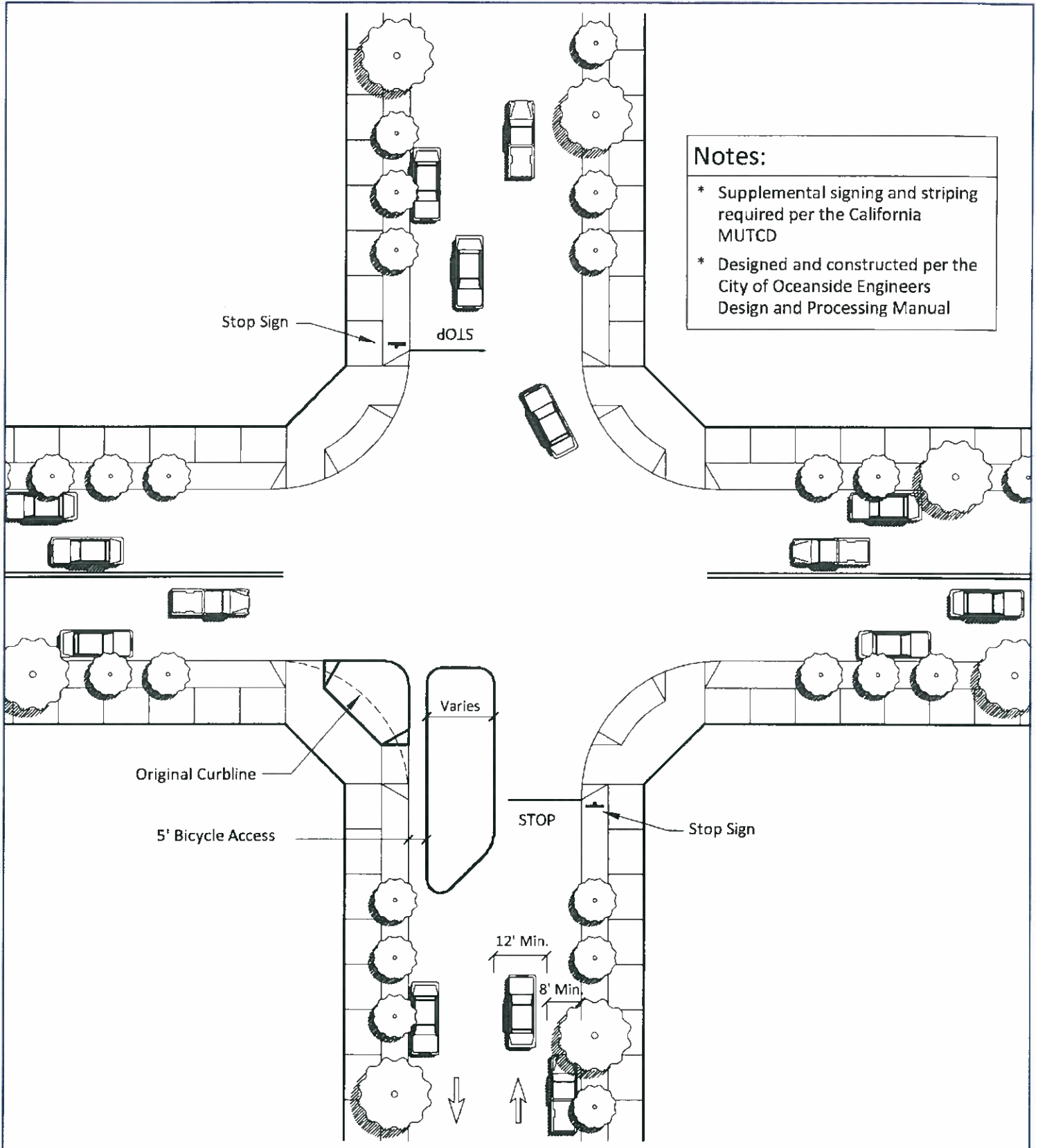
- Reduces cut-through traffic in one direction
- Allows two-way traffic along the remainder of a street
- Bicycle and pedestrian routes can be maintained

## Disadvantages

- Diverts traffic to adjacent streets
- Increases trip lengths
- Impacts access



# Half Street Closure





# Full Street Closure

(\$25,000 to \$50,000)

## Description & Purpose

Full street closures create cul-de-sacs which restricts all vehicle access into and out of the street at that location. The purpose of full street closures is to eliminate cut-through or undesired traffic from entering or exiting a street.



Mira Monte Drive, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	No
Can be used on Arterial	No
Reduces Speed	No
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	No
Emergency Response Impact	Yes

## Advantages

- Reduces cut-through traffic
- Pedestrian routes can be maintained
- Bicycle routes may be maintained

## Disadvantages

- Impacts access
- Diverts traffic to adjacent streets
- Increases trip lengths



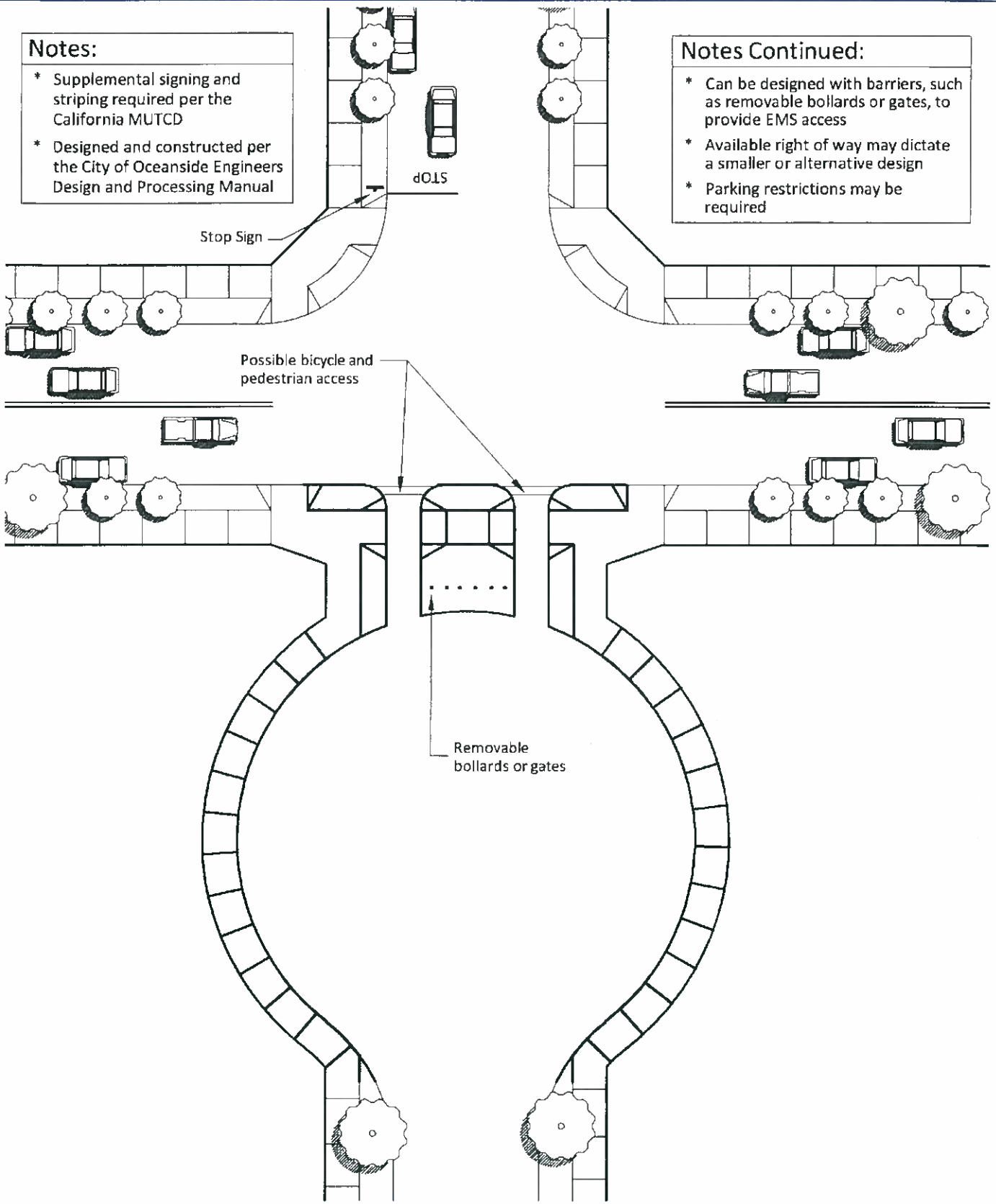
# Full Street Closure

**Notes:**

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual

**Notes Continued:**

- \* Can be designed with barriers, such as removable bollards or gates, to provide EMS access
- \* Available right of way may dictate a smaller or alternative design
- \* Parking restrictions may be required



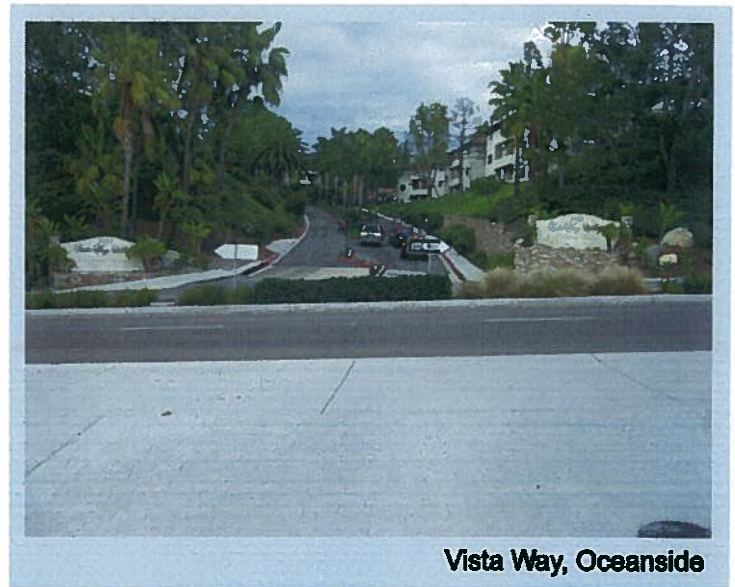


# Median Barricade

(\$250 per square foot)

## Description & Purpose

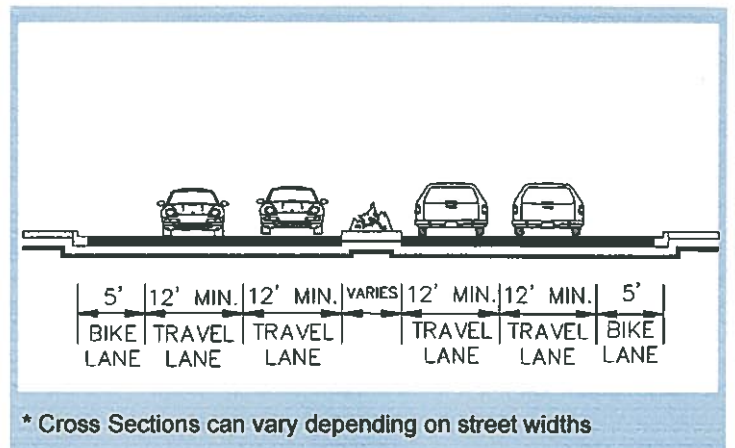
A median barricade is a raised island placed in the center of a roadway to restrict left-turn or through traffic access from a side street. Median barricades typically replace a two-way left turn lane or are placed in the middle of a wide roadway. Emergency access and access to intermittent side streets may be maintained by providing breaks in the median. The purpose of a median barricade is to reduce traffic volumes across a major street or reduce conflicts at an intersection.



Vista Way, Oceanside

### Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Yes
Can be used on Arterial	Yes
Reduces Speed	No
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	No
Emergency Response Impact	Possible



## Advantages

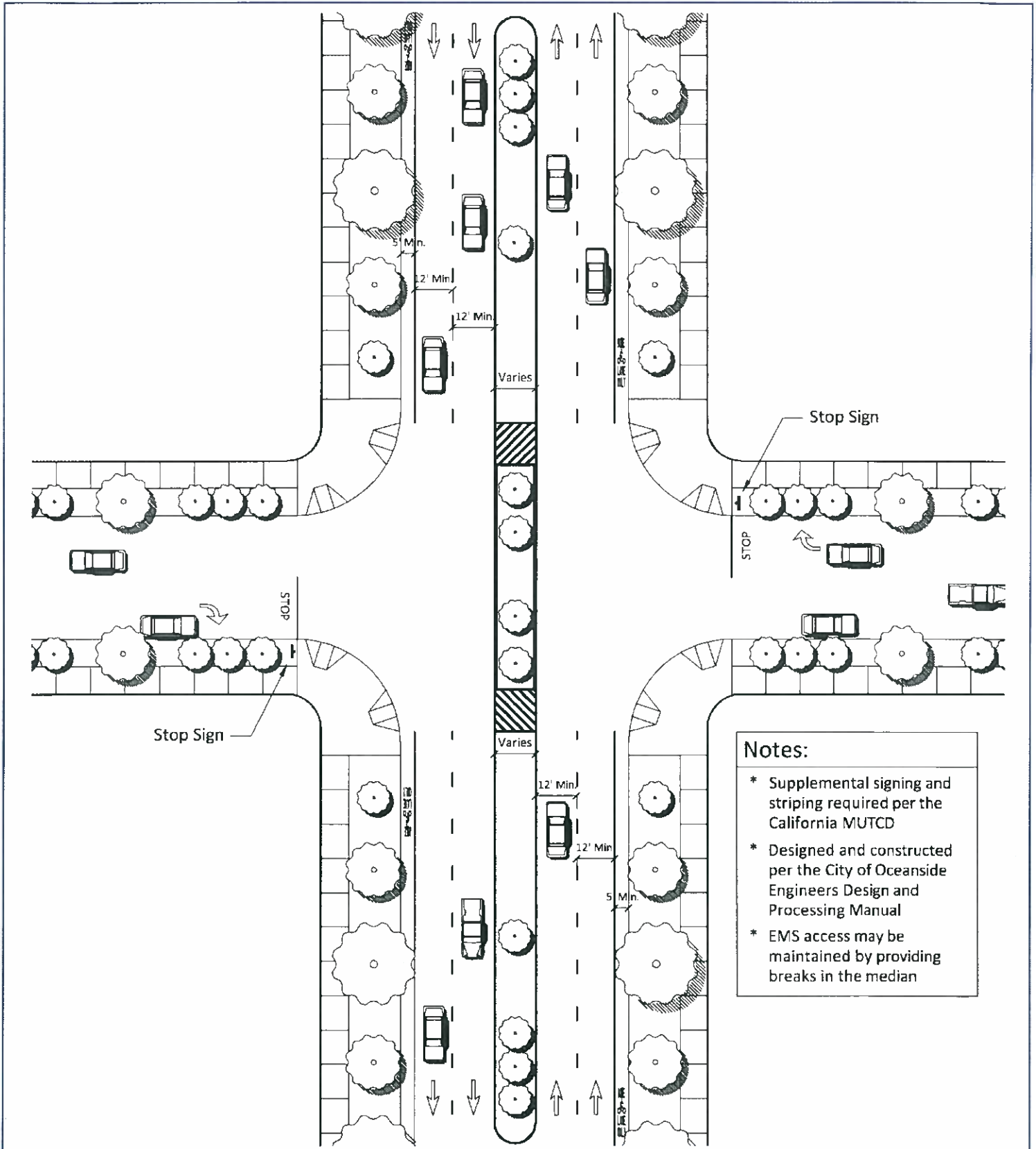
- Reduces traffic volumes along a roadway
- Reduces conflicts at intersections

## Disadvantages

- Impacts access
- Increases trip lengths
- Only applicable on wide roads



# Median Barricade





# Diagonal Diverter

(\$50,000 to \$75,000)

## Description & Purpose

A diagonal diverter is either a raised median, bollards, and/or another type of treatment placed diagonally across an intersection to restrict through traffic movements. Diagonal diverters split a four-way intersection into two L-shaped turns. Bicycle and pedestrian access may be maintained by providing breaks in the treatment. The purpose of a diagonal diverter is to reduce traffic volumes along a roadway and divert traffic to adjacent streets.



## Fast Facts:

Can be used on Local Street	Yes
Can be used on Collector	Possible
Can be used on Arterial	No
Reduces Speed	Possible
<b>Reduces Volume</b>	<b>Yes</b>
Noise Impact	No
Restricts Access	Yes
Bicyclist Impact	Possible
Transit Impact	Yes
Parking Impact	No
Emergency Response Impact	Yes

## Advantages

- Reduces cut-through traffic
- Bicycle and pedestrian access may be maintained

## Disadvantages

- Impacts access
- Increases trip lengths
- Increases traffic to adjacent streets



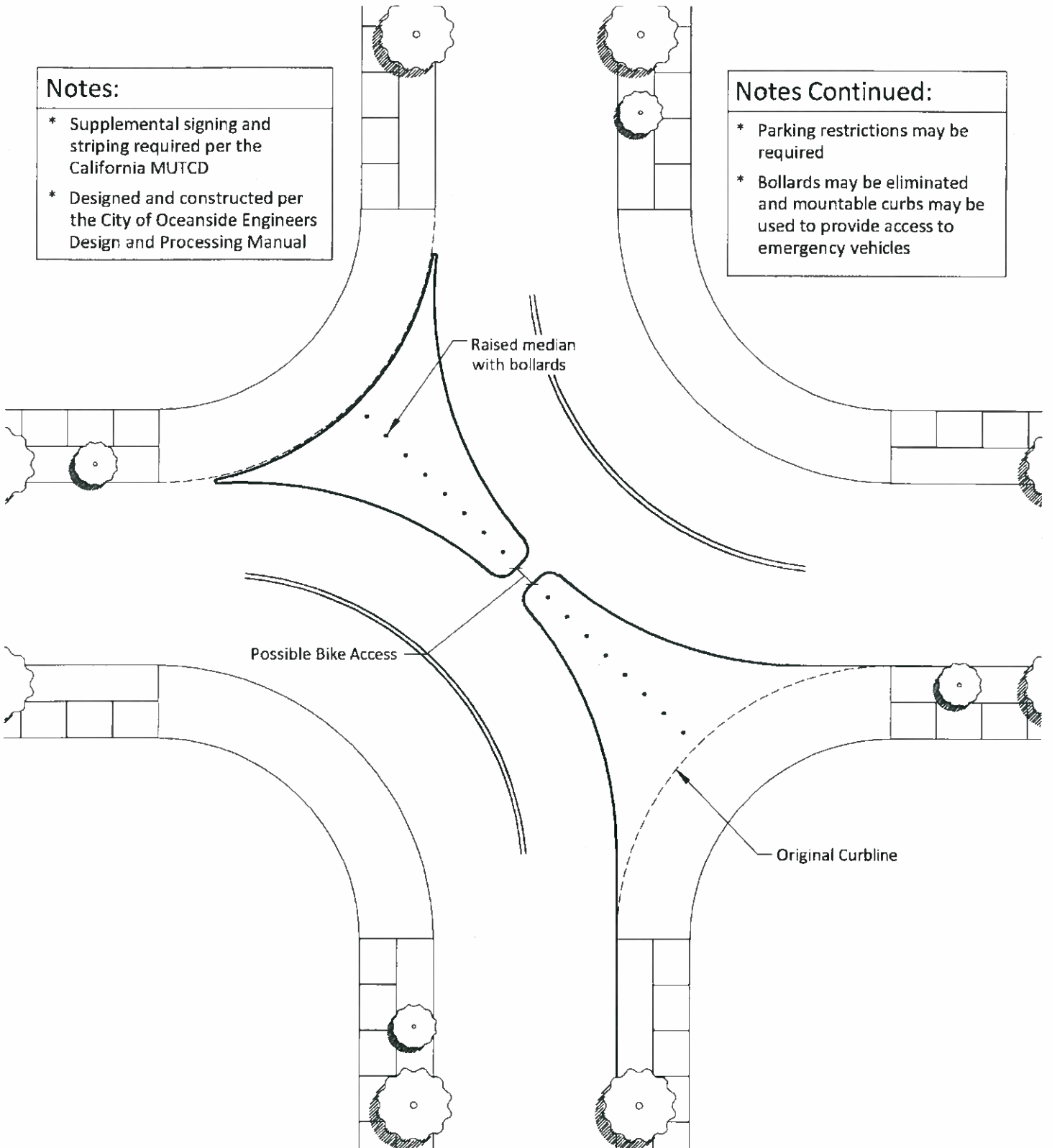
# Diagonal Diverter

### Notes:

- \* Supplemental signing and striping required per the California MUTCD
- \* Designed and constructed per the City of Oceanside Engineers Design and Processing Manual

### Notes Continued:

- \* Parking restrictions may be required
- \* Bollards may be eliminated and mountable curbs may be used to provide access to emergency vehicles





## City of Oceanside Neighborhood Traffic Calming Program

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**City of Oceanside Neighborhood  
Traffic Calming Program**

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**ATTACHMENT A:**

**Resident Request Form and Neighborhood Petition**



## City of Oceanside Neighborhood Traffic Calming Program

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# City of Oceanside Neighborhood Traffic Calming Program

## RESIDENT REQUEST FORM AND NEIGHBORHOOD PETITION

We, the undersigned, request the City of Oceanside to undertake a traffic engineering study to develop preliminary recommendations to mitigate existing traffic problems occurring on (enter street name) \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

### Existing traffic problems include the following:

- Excessive travel speeds
- High volumes of non-local traffic
- Demonstrated accident history
- Other: \_\_\_\_\_
- Vehicle noise
- Pedestrian Safety
- Bicycle Safety

Name (please print)	Address (please print)	Telephone	Date	Signature

Petition Spokesperson: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_



## **City of Oceanside Neighborhood Traffic Calming Program**

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**City of Oceanside Neighborhood  
Traffic Calming Program**

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**ATTACHMENT B:**

**Traffic Calming Criteria Worksheet**



## City of Oceanside Neighborhood Traffic Calming Program

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## TRAFFIC CALMING CRITERIA SHEET (Local Streets)



Street Name: \_\_\_\_\_

Street Limits: From: \_\_\_\_\_

To: \_\_\_\_\_

**A. Complete this section to determine if street is eligible for Traffic Calming Program. All criteria must be met to be eligible.**

Primary Criteria	Yes	No
Is there a signed petition? (Signature and letter from the originator of the traffic request in addition to 5 other residents signatures?)		
Street is classified as a local street in the California Road Systems (CRS) maps?		
Is the critical speed (85th percentile) 30 mph or more?		
Is the curb to curb width 40 feet or less?		
Is there one lane in each direction?		

Does this segment of roadway meet the minimum traffic calming requirements?  Yes  No

If Section A is satisfied as meeting the minimum traffic calming requirements then proceed to Section B.

Traffic Engineering: \_\_\_\_\_ Date: \_\_\_\_\_

**B. Complete this section to determine if there is a likeliness of traffic diversion. (If there is then this is no longer a localized situation but a neighborhood situation)**

Supplemental Criteria	Yes	No
Is there a likeliness of traffic diversion?		

**C. Complete this section when street is determined to meet all traffic calming minimum criteria. Use the following criteria for ranking projects and in understanding the operational characteristics of the road segment.**

Traffic Calming Ranking Criteria	Points
<b>Daily Traffic Volume</b>	
less than 200 vehicles per day	0 points
200 - 500 vehicles per day	1 point
500 - 1,000 vehicles per day	2 points
1,000 - 1,500 vehicles per day	3 points
more than 1,500 vehicles per day	4 points
<b>Street Segment Length (Uninterrupted)</b>	
less than 600 feet	0 points
greater than 600 feet	1 point
<b>Cul-de-Sac (800 feet or less)</b>	
On a cul-de-sac	0 points
Not on a cul-de-sac	1 point
<b>Accident History</b>	
1 point for each accident (within 3 years)	up to 5 pts
<b>Near High Pedestrian Generator</b>	
street fronts or provides access to school	3 points
street is in CBD	1 point
street has high transit activity, near church or other civic facility	1 point
<b>Sidewalk</b>	
No sidewalk or on one-side of street only	1 point
<b>TOTAL POINTS</b>	

**D. To be completed by the Fire Marshall.**

Emergency Response	Yes	No
Is this street a designated emergency response route?		

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Fire Marshall Signature: \_\_\_\_\_ Date: \_\_\_\_\_



## City of Oceanside Neighborhood Traffic Calming Program

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**City of Oceanside Neighborhood  
Traffic Calming Program**

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**ATTACHMENT C:**

**Sample Traffic Calming Survey**



## City of Oceanside Neighborhood Traffic Calming Program

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# (Street Name) Traffic Calming Plan

## City of Oceanside Neighborhood Traffic Calming Program

### DEAR NEIGHBORS,

This letter is from the (Street Name) Traffic Calming Committee. We are a group of volunteer residents that have been working with City staff over the past few months to improve the traffic conditions on our street by addressing speeding (or volume) issues along (Street Name). We are seeking your support for the (Street Name) Traffic Calming Plan.

### The City of Oceanside Traffic Calming Program

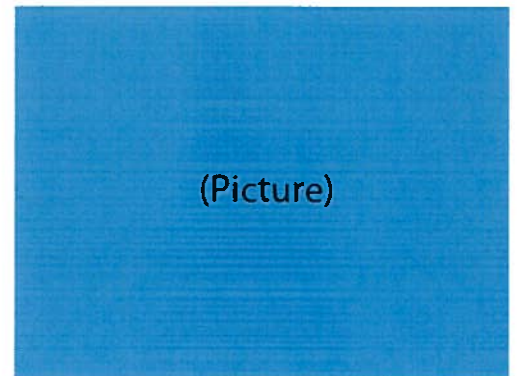
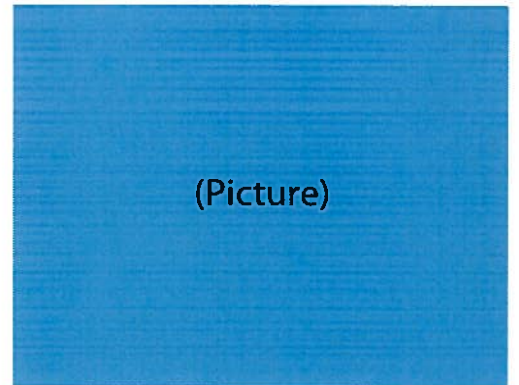
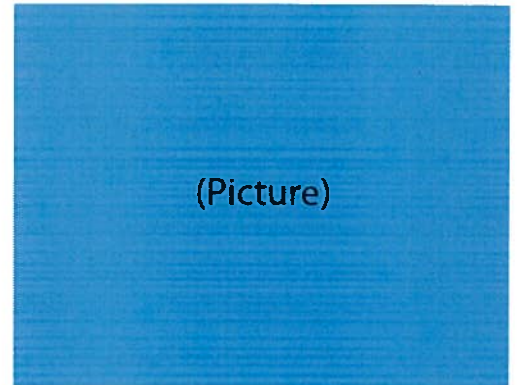
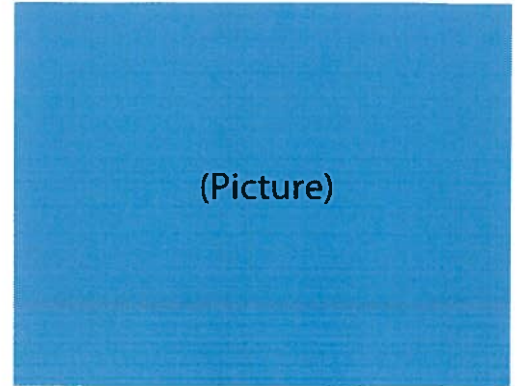
The City of Oceanside Neighborhood Traffic Calming Program is a resource for residents to refer to when there is an inquiry on how to have traffic calming installed on a street. The program explains the process of how to acquire traffic calming on a street or within a neighborhood if the necessary steps are taken and criteria is met. For more detailed information on the program, you can view the program document on the City's website: [www.oceanside.ca.us](http://www.oceanside.ca.us).

### What is the Process?

Residents were notified by mail and invited to a neighborhood workshop in (Date). At the workshop, participants discussed the areas of concern in the neighborhood. Participants learned about traffic calming tools and were provided with an opportunity to suggest improvements along (Street Name). The Resident Task Force was established at the first workshop. The task force then worked with City staff to discuss potential solutions to concerns. Ultimately, (state number of devices) traffic calming features were developed that collectively represent the Traffic Calming Plan for (Street Name). With your support, we now have the opportunity to take the Traffic Calming Plan forward to the City Council and initiate its implementation. It is envisioned that this plan will be implemented in stages with the most cost efficient and effective elements installed first. Alternate traffic calming devices may need to be installed on an intermediate basis until sufficient funds are available.

### How Do I Participate?

The proposed traffic calming plan must be approved by a majority of the residents along (Street Name) before it can be brought to City Council for approval. Therefore, your input is critical to this effort. Please fill out the enclosed survey form and indicate whether or not you support the proposed Traffic Calming Plan. The pre-paid, pre-addressed survey forms must be mailed in by **(DUE DATE)**.



## What is the Traffic Calming Plan?

(Summary of each element and proposed locations in the traffic calming plan)

(Street Name) Traffic Calming Plan - Figure 1

(INSERT MAP OF  
TRAFFIC CALMING PLAN)



If you would like more information regarding any particular feature and its potential impact on adjacent properties, contact (Project Manager's name and phone number).



## CITY OF OCEANSIDE NEIGHBORHOOD TRAFFIC CALMING RESIDENT SURVEY FORM

As a resident of this neighborhood, whether you are a property owner or tenant, indicate your support or opposition to the traffic calming plan by checking a box below and signing here. Please use the comment line to express any opinion you have of specific concepts. Please mail this pre-paid, pre-addressed survey form in by \_\_\_\_\_.

I, \_\_\_\_\_, live at \_\_\_\_\_  
(PRINT NAME) (PRINT ADDRESS)

CHECK ONE:  Support the Plan  
 Oppose the Plan

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sign Here \_\_\_\_\_



## City of Oceanside Neighborhood Traffic Calming Program

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**City of Oceanside Neighborhood  
Traffic Calming Program**

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**ATTACHMENT D:**

**Petition for Removal of Traffic Calming Device(s)**



## City of Oceanside Neighborhood Traffic Calming Program

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# City of Oceanside Neighborhood Traffic Calming Program

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## PETITION FOR REMOVAL OF TRAFFIC CALMING DEVICE(S)

We, the undersigned, request the City of Oceanside remove the (enter device)  
\_\_\_\_\_ traffic calming device(s) on (enter street name)  
\_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

**Please specify the reason for the request for removal:**

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**80% of the residences must support the removal of the traffic calming device(s)**

Name (please print)	Address (please print)	Telephone	Date	Signature

Petition Spokesperson: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

