Recommendations
Recommendations Overview

This chapter presents and discusses the projects recommended to improve bicycling and walking in El Centro. This chapter begins with a discussion of the different kinds of facilities found throughout California and the country, followed by how projects were developed and assessed for feasibility. The recommended project list includes both short term and long term improvements. The list is meant to serve as a guide for the City to use when funds become available through various sources.

It is important to note that the success of recommended projects is closely tied to programs and adopted standards, codes, and policies. Education, Encouragement, Enforcement and Evaluation and Planning programs can be used to leverage investments in these projects. Similarly, the effectiveness of bicycle programs is maximized by actual project implementation. Likewise, changes to City standards, codes and policies may be needed to implement bicycling and walking facilities, and project implementation may, in turn, facilitate changes to City standards, codes, and policies.

Bicycle and Pedestrian Treatments

While not universally applied, in general, pedestrian travel in urban areas has long tended to be accommodated with features like sidewalks, crosswalks, dedicated signals, curb extensions, as well as newer innovations like pedestrian scrambles and modified signal timing. However, providing for safer, less stressful bicycle travel has occurred much more recently. Especially over the past five years, the state of practice for bicycle travel in the United States has undergone a significant transformation. Much of this may be attributed to bicycling’s changing role in the overall transportation system. No longer viewed as an “alternative” mode, it is increasingly considered as legitimate transportation that should be actively promoted as a means of achieving community environmental, social and economic goals.

While connectivity and convenience remain essential bicycle travel quality indicators, recent research indicates the increased acceptance and practice of daily bicycling will require “low-stress” bicycle routes, which are typically understood to be those that provide bicyclists with separation from high volume and high speed vehicular traffic. The route types recommended by this plan, and described in the following section, are consistent with this evolving state of practice.
Conventional Bicycle Facility Types

There are four conventional bicycle facilities types in California. These facilities are recognized by the CA Department of Transportation and details of their design, wayfinding and pavement markings can be found in the CA MUTCD and CA Highway Design Manual.

**Class 1: Multi-Use Paths**

Class 1 multi-use paths (frequently referred to as “bicycle paths”) are physically separated from motor vehicle routes, with exclusive rights-of-way for non-motorized users like bicyclists and pedestrians.

**Class 2: Bicycle Lanes**

Bicycle lanes are one-way facilities that carry bicycle traffic in the same direction as the adjacent motor vehicle traffic. They are typically located along the right side of the street, between the adjacent travel lane and curb, road edge or parking lane.

**Class 3: Bicycle Routes**

A bicycle route is a suggested bicycle route marked by signs designating a preferred route between destinations. They are recommended where traffic volumes and roadway speeds are fairly low (35 mph or less).

**Class 4: Separated Bikeways**

A separated bikeway is an exclusive bicycle facility that combines the user experience of an off-street path with the on-street infrastructure of a conventional bicycle lane. They can be either one-way or two-way depending on the street network, available right-of-way and adjacent land use. A separated bikeway is physically separated from motor traffic and distinct from the sidewalk. There are a variety of physical protection measures that range from reflective bollards to parked vehicles.
Enhanced Bicycle Facility Types

While the conventional bicycle facility types can be found throughout the country, there has been a shift towards enhancing these facilities. The CA MUTCD has approved the installation of buffered bicycle lanes, while Shared Lane Markings or “Sharrows” have been in use since 2008.

These enhancements are low cost, easy to install, and provide additional awareness about the likely presence of bicyclists. In many instances, installation of these bicycle facility enhancements can be coordinated with street resurfacing projects. The use of green paint has also become a simple and effective way to communicate the presence of bicyclists.

Buffered Bicycle Lanes

Buffered bicycle lanes are additional space between the bicycle lane and traffic lane, parking lane or both, and provide a more protected and comfortable space for cyclists than a conventional bicycle lane.

Shared Lane Markings (“Sharrows”)

The shared lane marking is commonly used where vehicle parking is allowed adjacent to the travel lane. It is now common practice to center them within the typical vehicular travel route in the rightmost travel lane to ensure adequate separation between bicyclists and parked vehicles.

Bike Boxes

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe way to get ahead of queuing traffic during the red signal phase that also enhances safety by positioning them in clear view of drivers waiting at the signal.
Low Stress Bicycle Facility Types

In many cases, conventional bicycle facilities may not meet bicyclists’ safety perceptions. There are a number of other non-conventional facilities that the City may find useful in specific situations. Protected bicycle lanes, low-stress streets, and bicycle prioritized routes are an ever-evolving, ever-improving state of practice. The facilities in this section have been implemented in other cities with great success. For example, bicycle boulevards can be found throughout California because they are proven to improve bicycling safety and increase bicycle mode share.

Details of these facilities and other treatments can be found in the NACTO Urban Bikeway Design Guide or AASHTO Guide of the Development of Bicycle Facilities.

Bicycle Boulevards (Neighborhood Greenways)

Bicycle boulevards provide a convenient, low-stress bicycling environment for people of all ages and abilities. They are installed on streets with low vehicular volumes and speeds and often parallel higher volume, higher speed arterials as an alternative. Bicycle boulevard treatments can be a combination of signs, pavement markings, and traffic calming measures to discourage through trips by vehicle drivers, such as vehicle traffic diverters and mini traffic circles. User activated signals can also be employed to create safe, convenient bicycle crossings of busy arterial streets. These elements are described under the following “Traffic Calming” section.

Colored Bicycle Facilities

Colored pavement increases bicycle facility visibility, identifies potential areas of conflict, and reinforces bicyclist priority in these areas. Colored pavement can be used as a corridor treatment, along the length of a bicycle lane or protected bikeway. Additionally, it can be used as a spot treatment, such as crossing markings at particularly complex intersections where the bicycle path may be unclear. Consistent application of color throughout a bikeway corridor is important to promote clear understanding for all users.
Green Intersection Transition Striping

Intersection crossing markings indicate the intended path of bicyclists. Colored striping should be used to highlight transition areas between bicycle lanes and vehicle turn lanes, especially where bicycle lanes merge across motor vehicle turn lanes, or where existing vehicle lanes for cross bicyclist through movements.

Protected Intersections

Protected intersections maintain the integrity (low-stress experience) of their adjoining separated bicycle lanes by fully separating bicyclists from motor vehicles. Hallmark features of these protected intersections include two-stage crossings supported by advance queuing spaces, protective concrete islands, special bicycle-cross markings (paralleling the crosswalks), and special signal phasing.

Two-Stage Turn Queue Box

Two-stage turn queue boxes can provide a more comfortable crossing for many bicyclists since they entail two simple crossings, rather than one complex one. They also provide a degree of separation from vehicular traffic, since they do not require merging with traffic to make left turns.

Bicycle Signals

This category includes all types of traffic signals that are directed at bicyclists. These can include traffic style green, yellow, and red lightings with signage indicating what the light controls are, or special bikeway icons displayed in the signage light itself. Near-side bicycle signals may incorporate a “countdown to green” display, as well as a “countdown to red.”

Bicycle Detection

Bicycle detection is used at intersections with traffic signals to alert the signal controller that a bicycle crossing event has been requested. Bicycle detection occurs either through the use of push buttons or by automated means.

Signage and Wayfinding

The purpose to signage and wayfinding on bicycle facilities is to identify routes to both bicyclists and drivers, provide destination information, branding and inform about changes in road conditions and users of the street.
Traffic Calming

Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes. The intent of traffic calming is to alter motorist behavior and for street safety, livability, and other public purposes. Other techniques consist of operational measures such as police enforcement and speed displays.

The following examples identify traffic calming measures that may apply to El Centro.

Traffic Circle

Traffic circles are an example of a traffic calming measure on bicycle boulevards. They slow traffic on each approach and reduce right-of-way conflicts, and tend not to divert traffic to nearby streets. They are appropriate for usage on low volume local residential streets with alternative access points.

Signals and Warning Devices

Pedestrian Hybrid Beacons (PHB) and Rectangular Rapid Flashing Beacons (RRFB) are a special signals and warning devices used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. These devices should be installed at locations that experience high pedestrian volumes and that connect people to popular destinations such as schools, parks, and retail.

Signals and warning devices should be paired with additional pedestrian improvements, where appropriate, such as curb extensions, enhanced crosswalk marking, lighting, median refuge islands, and signage.

Speed Tables/Raised Crosswalk

Speed tables are flat-topped road humps, often constructed with textured surfacing on the flat section. Speed tables and raised crosswalks reduce vehicle speeds and enhance pedestrian safety.
Speed Displays

Speed displays contribute to increased traffic safety. Speed displays measure speed of approaching vehicles by radar and inform drivers of their speeds using a LED display. They are particularly effective in reducing the vehicular speeds traveling ten or more miles-per-hour over the speed limit.

Chicanes

Chicanes are a series of narrowing or curb extensions that alternate from one side of the street to the other forming S-shaped curves.

On-Street Edge Friction

Edge friction is a traffic engineering term describing the combination of vertical elements along a roadway, such as on-street parking, bicycle facilities, chicanes, site furnishings, street trees and other landscaping, that together perceptually reduce the apparent width of the street.

Traffic Diverters

A traffic diverter is a roadway feature placed upon a street to prohibit vehicular drivers from entering into, or exiting from, or both, a street. Such diverters may also allow bicycle access, such as within bicycle boulevards, or neighborhood greenways.
Pedestrian Facility Enhancements

With relatively flat terrain, El Centro has the framework for a bicycle and pedestrian-friendly environment. While many of the intersections are signalized and crosswalks exist, there are some long blocks with significant distances between places to cross. Providing crossing treatments will help reduce jaywalking and mid-block crossings.

Curb Extension

Also called bulb-outs or neck-downs, curb extensions extend the line of the curb into the travel way, reducing the width of the street. Typically occurring at intersections, they reduce the length a pedestrian has to cross.

Mid-block Crossing

Mid-block crossings provide convenient locations for pedestrians to cross urban thoroughfares in areas with infrequent intersection crossings or where the nearest intersection crossing requires substantial out-of-direction travel.

Pedestrian Refuge

Refuge islands provide pedestrians and bicyclists an area within intersections and mid-block crossings to wait when they can not complete their crossing.

Senior Zones

An area identified as a senior zone can be enhanced with street signage, increased crossing times at traffic signals, benches, bus stops with shelters, and pedestrian lighting.
Placemaking

The inclusion of urban elements such as parklets and community gardens encourage walking and provide usable space for all ages. In many cities, these urban elements have helped transform downtowns into world-class destinations. Coordinating with local businesses and organizations already present in El Centro can provide collaborative design and funding efforts between the City, its businesses, and residents.

Parklets

Parklets are small, outdoor seating areas that take over one or two parking spots, temporarily or permanently reclaiming the space for pedestrians and improving the streetscape and urban environment aesthetics.

Furnishings and Public Art

Transit shelters, bicycle racks, seating and public art provide important amenities for functionality, design and vitality of the urban environment. They announce that the street is a safe and comfortable place to be and provide visual detail and interest.

Community Gardens

Community gardens provide fresh produce, plants and inherently assist in neighborhood improvement, sense of community and connection to the environment. They are typically managed by local governments or non-profit associations.
Green Infrastructure

Green infrastructure treats stormwater at its source while delivering environmental, social, and economic benefits. These multi-purpose spaces provide cleaner air and water, wildlife habitat and flood control.

Bioswales

Bioswales are linear landscape elements that capture, slow, and clean water before it percolates back into the ground.

Urban Tree Canopy

Street trees are essential for a comfortable walking environment and healthy urban ecosystem. They provide shade, habitat, buffer rainfall impacts, and clean the air.

Curb Openings

Curb openings allow stormwater runoff to enter rain gardens and bioswales instead of draining directly into a sewer, slowing down and filtering water.

Rain Gardens

Rain gardens capture and clean water, allowing it to slowly infiltrate into the ground. They are often integrated with curb extensions along streets or are found in parks.
Active Transportation Recommendations

This section specifically addresses the physical improvements component of a comprehensive suite of recommendations to help improve El Centro’s bicycling and walking environment. These recommendations include many of the treatment types referenced in the “BICYCLE AND PEDESTRIAN TREATMENTS” section at the beginning of this chapter, as well as more detailed recommendations for areas around schools. To round out this plan’s overall recommendations, subsequent sections address associated programs.

Figure 5-1 depicts the proposed projects, labeled according to facility type. Table 5-1 lists the proposed bicycle and pedestrian projects including information such as location, route type, extent, and notes. The notes that are included in Table 5-1 provide additional information such as ROW constraints, parking removal, potential road diets, etc. These notes serve as a reminder that for project implementation, additional design and engineering will be needed to fully assess feasibility.

The numbering used to identify projects in the following section does not necessarily imply which route should be built first. Route implementation has no specific timeline, since the availability of funds for implementation is variable and tied to the priorities of the City’s capital projects. If there is desire, recommended projects can be implemented at whatever interval best fits funding cycles or to take into consideration the availability of new information, new funding sources, updated collision statistics, updated CIP lists, etc.

Appendix A contains a list of prioritized projects developed through a data-driven analysis with additional City input. Some projects that initially scored low were moved up due to knowledge of deficiency and need based on community feedback. This list provides additional guidance when funding opportunities are identified in the future.
Figure 5-1: City-wide Recommended Projects Map
<table>
<thead>
<tr>
<th>#</th>
<th>TYPE</th>
<th>SEGMENT</th>
<th>FROM (N/W)</th>
<th>TO (S/E)</th>
<th>FACILITY</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bike</td>
<td>Plank Dr</td>
<td>Orange Ave</td>
<td>Ocotillo Dr</td>
<td>Class 2</td>
<td>Requires ROW to accommodate turn lane serving school drop off area.</td>
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<tr>
<td>2</td>
<td>Bike</td>
<td>Lotus Ave</td>
<td>Adams Ave</td>
<td>Main St</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Bike</td>
<td>Waterman Ave</td>
<td>Bradshaw Rd</td>
<td>Lincoln Ave</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bike</td>
<td>Waterman Ave</td>
<td>Lincoln Ave</td>
<td>Villa Way</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Bike</td>
<td>Waterman Ave</td>
<td>Main St</td>
<td>Orange Ave</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bike</td>
<td>Imperial Ave &amp; Frontage Rd</td>
<td>Pico Ave</td>
<td>Ocotillo Dr</td>
<td>Class 2</td>
<td>Would require removal of parking lanes and improving RR crossing.</td>
</tr>
<tr>
<td>7</td>
<td>Bike</td>
<td>12th St</td>
<td>Bradshaw Ave</td>
<td>Villa Ave</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Bike</td>
<td>12th St</td>
<td>Hamilton Ave</td>
<td>Ross Ave</td>
<td>Class 3</td>
<td>Conflicts with existing curb extensions.</td>
</tr>
<tr>
<td>9</td>
<td>Bike</td>
<td>10th St</td>
<td>Cruickshank Dr</td>
<td>Bradshaw Ave</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Bike/Ped</td>
<td>Railroad ROW</td>
<td>El Dorado Ave</td>
<td>Villa Ave</td>
<td>Class 1</td>
<td>Verify/coordinate with RR.</td>
</tr>
<tr>
<td>11</td>
<td>Bike</td>
<td>8th St</td>
<td>El Dorado Ave</td>
<td>Southern City Limit</td>
<td>Class 2/2b</td>
<td>Would eliminate parking OR require road diet.</td>
</tr>
<tr>
<td>12</td>
<td>Bike/Ped</td>
<td>6th St</td>
<td>Pico Ave</td>
<td>Southwind Dr</td>
<td>Bike Blvd</td>
<td></td>
</tr>
<tr>
<td>13</td>
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<td>3rd St</td>
<td>Ross Ave</td>
<td>Aurora Dr</td>
<td>Class 2</td>
<td></td>
</tr>
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<td>14</td>
<td>Bike</td>
<td>Hope St</td>
<td>Hamilton Ave</td>
<td>Ross Ave</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Bike</td>
<td>Bradshaw Ave</td>
<td>La Brucherie Rd</td>
<td>12th St</td>
<td>Class 2b /4</td>
<td></td>
</tr>
<tr>
<td>16</td>
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<td>12th St</td>
<td>8th St</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Bike/Ped</td>
<td>Villa Ave &amp; Date Canal</td>
<td>La Brucherie Rd</td>
<td>Imperial Ave</td>
<td>Class 1</td>
<td>Verify/coordinate with IID.</td>
</tr>
<tr>
<td>18</td>
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<td>Villa Ave</td>
<td>8th St</td>
<td>6th St</td>
<td>Class 1</td>
<td></td>
</tr>
<tr>
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<td>Railroad ROW</td>
<td>La Brucherie Rd</td>
<td>Danenberg Dr</td>
<td>Class 1</td>
<td>Verify/coordinate with RR.</td>
</tr>
<tr>
<td>20</td>
<td>Bike</td>
<td>Adams Ave / SR86</td>
<td>Western City Limit</td>
<td>5th St</td>
<td>Class 2b / 4</td>
<td>Would eliminate parking OR require road diet.</td>
</tr>
<tr>
<td>21</td>
<td>Bike</td>
<td>Main St</td>
<td>La Brucherie Rd</td>
<td>8th St</td>
<td>Class 2</td>
<td>Would eliminate parking OR require road diet.</td>
</tr>
<tr>
<td>22</td>
<td>Bike</td>
<td>Main St</td>
<td>4th St</td>
<td>New St</td>
<td>Class 2b /2b</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Bike/Ped</td>
<td>Orange Ave</td>
<td>Western City Limit</td>
<td>Lotus Canal</td>
<td>Class 1</td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>TYPE</td>
<td>SEGMENT</td>
<td>FROM (N/W)</td>
<td>TO (S/E)</td>
<td>FACILITY</td>
<td>NOTES</td>
</tr>
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<td>24</td>
<td>Bike</td>
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<td>Waterman Ave</td>
<td>Class 2</td>
<td></td>
</tr>
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<td>25</td>
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<td>Waterman Ave</td>
<td>Imperial Ave</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Bike</td>
<td>Orange Ave</td>
<td>10th St</td>
<td>Dogwood Ave</td>
<td>Bike Blvd</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Bike</td>
<td>Ross Ave</td>
<td>Lotus Canal</td>
<td>Imperial Ave</td>
<td>Class 2</td>
<td>May require parking removal OR road diet.</td>
</tr>
<tr>
<td>28</td>
<td>Bike</td>
<td>Ross Ave</td>
<td>Imperial Ave</td>
<td>4th St</td>
<td>Class 3</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Bike</td>
<td>Ross Ave</td>
<td>4th St</td>
<td>Dogwood Ave</td>
<td>Class 2</td>
<td>Would eliminate parking OR require road diet in some segments.</td>
</tr>
<tr>
<td>30</td>
<td>Bike</td>
<td>Ocotillo Dr</td>
<td>Plank Dr</td>
<td>Imperial Ave</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Bike</td>
<td>Aurora Dr</td>
<td>Imperial Ave</td>
<td>4th St</td>
<td>Class 2b</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Bike</td>
<td>Wake Ave</td>
<td>Lotus Canal</td>
<td>2nd St</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Bike</td>
<td>Danenberg Dr</td>
<td>Lotus Canal</td>
<td>La Brucherie Rd</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Bike</td>
<td>Valleyview Ave</td>
<td>Lotus Canal</td>
<td>4th St</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Bike</td>
<td>Countryside Dr / Jackrabbit Dr</td>
<td>4th St</td>
<td>Farnsworth Ln</td>
<td>Class 1</td>
<td>Verify/coordinate with IID.</td>
</tr>
<tr>
<td>36</td>
<td>Bike/Ped</td>
<td>Lotus Canal</td>
<td>Wake Ave</td>
<td>Danenberg Dr</td>
<td>Class 1</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Bike/Ped</td>
<td>La Brucherie Rd</td>
<td>Ocotillo Dr</td>
<td>Valleyview Ave</td>
<td>Class 1</td>
<td>Coordinate with Caltrans on new overpass.</td>
</tr>
<tr>
<td>38</td>
<td>Bike/Ped</td>
<td>Imperial Ave</td>
<td>I-8 Freeway</td>
<td>Southern City Limit</td>
<td>Class 1</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Bike</td>
<td>Farnsworth Ln</td>
<td>Danenberg Dr</td>
<td>Southern City Limit</td>
<td>Class 2</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Ped</td>
<td>Lincoln Ave</td>
<td>Waterman Ave</td>
<td>Imperial Ave</td>
<td>Class 2</td>
<td>Mid-block crossing.</td>
</tr>
<tr>
<td>41</td>
<td>Ped</td>
<td>Imperial Ave</td>
<td>Adams Ave</td>
<td></td>
<td>Class 2</td>
<td>Assess free-right turns removal.</td>
</tr>
<tr>
<td>42</td>
<td>Ped</td>
<td>Main St</td>
<td>Waterman Ave</td>
<td>Imperial Ave</td>
<td>Class 2</td>
<td>Install three stop signs with crosswalks.</td>
</tr>
<tr>
<td>43</td>
<td>Ped</td>
<td>Imperial Ave</td>
<td>I-8 Freeway</td>
<td></td>
<td>Class 2</td>
<td>Caltrans will provide enough ROW for Bike/Ped facility with new overpass.</td>
</tr>
<tr>
<td>44</td>
<td>Ped</td>
<td>8th St</td>
<td>I-8 Freeway</td>
<td></td>
<td>Class 2</td>
<td>Coordinate with Caltrans on existing overpass.</td>
</tr>
</tbody>
</table>
SRTS Recommendations Overview

Safe Routes to School planning is one of the primary principles used for pedestrian and bicycle improvements in this plan. As described in the previous chapters, an in-depth GIS analysis of the existing conditions and a robust public outreach were used to determine existing concerns and issues regarding the safety and comfort of walking and bicycling in the City. In turn, the recommendations in this chapter use those results, as well as professional judgment and feedback from the City.

A GIS-based methodology was used to define Safe Routes to School (SRTS) Zones, quarter-mile walkable zones (walksheds) based on the schools’ entrances and the street network, where walking and bicycling improvements can be prioritized. The zones were used to ensure that recommendations of the highest level for safety and comfort (lowest stress) were made where they would provide the most benefit. The zones are shown in the following pages’ maps as a highlighted polygon around each school.

The following pages contain the recommendations for each of the schools identified in this plan. Each school is supported by a summary of the recommendations, both unique to each school and in general for the zone, as well as a detailed map with the locations of the proposed recommendations. Note that several maps include more than one school due to their proximity to one another. Additional traffic calming measures and pedestrian improvements may be needed when reviewing specific corridors and/or intersections in further detail. Context-sensitive improvements may include curb extensions, median refuges, pedestrian-scale lighting, and green infrastructure, to name a few.

1 Central Union High School  
2 Wilson Junior High School  
3 De Anza Magnet School  
4 Desert Garden Elementary School  
5 Desert Oasis High School  
6 Harding Elementary School  
7 Lincoln Elementary School  
8 Margaret Hedrick Elementary School  
9 St. Mary’s Catholic School  
10 McKinley Elementary School  
11 Kennedy Middle School  
12 MLK Elementary School  
13 Southwest High School  
14 Sunflower Elementary School  
15 Washington Elementary School  
16 ICOE Valley Academy
Figure 5-2: SRTS Key Map
Central Union High & Wilson Junior High

Central Union High School and Wilson Jr. High School are located in central El Centro in a residential and commercial neighborhood. The schools are bordered to the west by Imperial Avenue, one of the most important corridors in the City that was previously identified as having speeding issues and multi-modal challenges. These two schools serve a large population of the City, making SRTS improvements extremely important.

**Recommendations**

1. Install bicycle lanes along Imperial Avenue
2. Enhance Orange Avenue to a bicycle boulevard through traffic calming measures
3. Enhance bicycle routes along 12th Street and Hamilton Avenue
4. Install stop signs with high-visibility crosswalks at key intersections
5. Install high-visibility crosswalks at all controlled intersections
6. Install missing curb ramps and repair/update curb ramps
7. Install missing sidewalks and repair broken/uneven sidewalks
8. Install pedestrian flashing beacons at State and 10th Streets
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-3: Central Union HS and Wilson Jr. HS SRTS Map
De Anza Magnet School

De Anza Magnet School is located in southwest El Centro in a residential neighborhood. The nearby medical plaza and commercial center located on Imperial Avenue just west of the school is a local destination. This school serves the neighborhood immediately adjacent as well as a neighborhood south of Interstate 8, so multi-modal improvements should reflect issues identified throughout this region.

Recommendations

1. Install previously proposed multi-use path on La Brucherie Road
2. Install bicycle lanes on Imperial Avenue, Ross Avenue, and Ocotillo Drive
3. Install a PHB with high-visibility crosswalks at Imperial Avenue and Pepper Drive
4. Install stop sign with high-visibility crosswalks at the intersection of Pepper Drive and Cottonwood Drive
5. Install high-visibility crosswalks at all controlled intersections and near school entrances
6. Install missing curb ramps and repair/update curb ramps
7. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-4: De Anza Magnet SRTS Map
Desert Garden Elementary School

Desert Garden Elementary School is located in south El Centro in a residential neighborhood. The school’s proximity to Bucklin Park, the largest park in El Centro and a major local attraction for recreation needs, makes this area a busy destination for the community throughout the year.

Recommendations

1. Upgrade standard bicycle lanes on Aurora Drive to buffered bicycle lanes using excess right-of-way
2. Install bicycle lanes on 8th Street
3. Enhance 6th Street and Ross Avenue to a bicycle boulevard through traffic calming measures
4. Install traffic signal at the intersection of Aurora Drive and 8th Street
5. Install stop signs and high-visibility crosswalks at key intersections
6. Install high-visibility crosswalks at all controlled intersections
7. Install missing curb ramps and repair/update curb ramps
8. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
  - Crossing Maintenance
  - Curb Ramp Maintenance
  - Sidewalk Maintenance
  - Missing Sidewalk

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

City Boundary

School

Figure 5-5: Desert Garden ES SRTS Map
Desert Oasis High School

Desert Oasis High School is located in central-east El Centro. The high school is surrounded by residential uses to the east and south, while commercial uses can be found to the west and warehouses to the north. The school is located on Ross Avenue, a major east-west arterial thoroughfare, which provides opportunities for traffic calming, increased safety, and pedestrian and bicycle infrastructure improvements.

Recommendations

1. Install bicycle lanes on Ross Avenue and 3rd Street
2. Install multi-use path along railroad right-of-way with controlled crossing at Ross Avenue
3. Install a rectangular rapid flashing beacon at the western intersection of Ross Avenue at 3rd Street
4. Install stop signs and high-visibility crosswalks at the eastern intersection of Ross Avenue at 3rd Street
5. Install speed table with stop signs and high-visibility crosswalks at the intersection of Yucca Drive and 3rd Street
6. Install high-visibility crosswalks at all controlled intersections
7. Install missing curb ramps and repair/update curb ramps
8. Install missing sidewalks and repair broken/uneven sidewalks
**Proposed Pedestrian Facility Improvements**

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls

**Existing Bikeways**

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

**Proposed Bikeways**

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

**Figure 5-6: Desert Oasis HS SRTS Map**
Harding Elementary School

Harding Elementary School is located in central El Centro in a primarily residential neighborhood. The school is located on 8th Street, a north-south arterial thoroughfare that provides opportunities for traffic calming and improvements to bicycle and pedestrian infrastructure. Bucklin Park, the largest park in El Centro and a major local destination, lies three blocks south of the school. This creates a unique opportunity to better connect the school with the park, which would benefit both students and visitors.

Recommendations

1. Install buffered bicycle lanes on 8th Street
2. Enhance 6th Street and Ross Avenue to a bicycle boulevard through traffic calming measures
3. Install stop signs and high-visibility crosswalks at key intersections
4. Install high-visibility crosswalks at all controlled intersections
5. Install missing curb ramps and repair/update curb ramps
6. Install missing sidewalks and repair broken/uneven sidewalks
Figure 5-7: Harding ES SRTS Map

Proposed Pedestrian Facility Improvements
- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

City Boundary
School
Lincoln Elementary School

Lincoln Elementary School is located in central El Centro in a residential and commercial neighborhood. The school is bordered to the west by Imperial Avenue and Adams Avenue to the north, two important, high volume key corridors that were previously identified as having speeding issues and multi-modal challenges. Its proximity to one of the City’s primary commercial zones argues for special attention to the walking and bicycling infrastructure within and near the school zone.

Recommendations

1. Install buffered bicycle lanes, separated bikeways, and bicycle lanes on important corridors such as Adams Avenue, 8th Street, Imperial Avenue, Main Street, and State Street
2. Install traffic signal and high-visibility crosswalks at key intersections along Adams Avenue and 12th Street
3. Remove the free-right turns located on the northern sections at the intersection of Imperial Avenue and Adams Avenue. Reclaimed space can be repurposed
4. Install a pedestrian flashing beacon at the intersection of 8th Street and Commercial Avenue and State Street at 10th Street
5. Install high-visibility crosswalks at all controlled intersections
6. Install missing curb ramps and repair/update curb ramps
7. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements
- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-8: Lincoln ES SRTS Map
Margaret Hedrick Elementary School and St. Mary’s School

Margaret Hedrick Elementary School and St. Mary’s School are located in central-west El Centro in a primarily residential neighborhood. Their location on major corridors with previously proposed improvements, such as La Brucherie Road and Imperial Avenue, create several traffic calming and safety opportunities.

Recommendations

1. Install previously proposed multi-use path on La Brucherie Road with controlled crossings
2. Install bicycle lanes and bicycle routes on Orange Avenue, and extend the bicycle route on Waterman Avenue northward
3. Install traffic signals at the intersections of La Brucherie Road and Orange Avenue, and at La Brucherie Road and Hamilton Avenue
4. Install PHB at Holt Avenue and Waterman Avenue.
5. Install high-visibility crosswalks at all controlled intersections
6. Install missing curb ramps and repair/update curb ramps
7. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements
- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-9: Margaret Hedrick ES and St. Mary's School SRTS Map
McKinley Elementary School and Kennedy Middle School

McKinley Elementary School and Kennedy Middle School are located in northeast El Centro in a residential neighborhood. 8th Street and Adams Avenue are major multi-modal corridors within the ¼ mile radius of the schools. The school’s location along the Date Canal and the expansive railroad right-of-way provide for unique linear infrastructure opportunities that can serve the schools and the community.

**Recommendations**

1. Install multi-use path along railroad right-of-way with controlled crossings at 6th Street and 8th Street; pedestrian flashing beacons dependent on multi-use paths
2. Install multi-use path on Villa Way between 8th Street and 6th Street
3. Install bicycle lanes/buffered bicycle lanes on 8th Street
4. Improve and maintain walkway located south of the school boundaries between 8th Street and 6th Street (denoted as “A”); install pedestrian lighting
5. Install stop sign and high-visibility crosswalk at southeast corner of school at 6th Street
6. Install high-visibility crosswalks at all controlled intersections
7. Install missing curb ramps and repair/update curb ramps
8. Install missing sidewalks and repair broken/uneven sidewalks, especially at railroad crossings
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
  - Crossing Maintenance
  - Curb Ramp Maintenance
  - Sidewalk Maintenance
- Install Intersection Controls

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

City Boundary
School

Figure 5-10: McKinley ES and Kennedy MS SRTS Map
MLK Elementary School

MLK Elementary School is located in northwest El Centro in a low-density residential neighborhood at the City’s boundary. The school’s location along the Date Canal and the proposed multi-use path along La Brucherie Road provide for unique linear infrastructure opportunities that can serve the school and the community. In addition, the school is within a half mile of a major commercial destination and the El Centro Public Library, making enhanced multi-modal access and safety a top priority.

Recommendations

1. Install multi-use path along Date Canal/Villa Avenue and the previously proposed multi-use path on La Brucherie Road with controlled crossings
2. Install bicycle lanes and bicycle routes on Waterman Avenue
3. Install pedestrian flashing beacon with high-visibility crosswalk at the intersection of Villa Avenue and 18th Street
4. Install stop sign and high-visibility crosswalk at key intersections
5. Install high-visibility crosswalks at all controlled intersections
6. Install missing curb ramps and repair/update curb ramps
7. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

City Boundary

School

Figure 5-11: MLK ES SRTS Map
Southwest High School

Southwest High School is located in southwest El Centro in a primarily residential neighborhood at the City’s boundary. The school has limited access points and multi-modal circulation due to Interstate 8 being its southern boundary, and undeveloped land immediately west of the school. Another important point to note is that immediately to the east, La Brucherie Road is one of the three Interstate 8 overpasses, serving the residential neighborhoods south of the freeway.

Recommendations

1. Install previously proposed multi-use path on La Brucherie Road
2. Install bicycle lanes on Ocotillo Drive and Ross Avenue
3. Install high-visibility crosswalks at all controlled intersections
4. Install missing curb ramps and repair/update curb ramps
5. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route
- City Boundary
- School

Figure 5-12: Southwest HS SRTS Map
Sunflower Elementary School

Sunflower Elementary School is located in northwest El Centro in a primarily low-density residential neighborhood at the City’s boundary. The roads that provide direct access to the school have been identified with excess right-of-way, which provides opportunities for traffic calming, increased safety and comfort, and enhanced bicycle facilities. In addition, Sunflower Park is located immediately southwest of the school, creating a local destination for the community.

Recommendations

1. Install buffered bicycle lanes or separated bikeway on Adams Avenue
2. Install bicycle lanes on Lotus Avenue, Main Street, and Orange Avenue
3. Install pedestrian flashing beacon and high-visibility crosswalks at the intersection of Main Street and 23rd Street
4. Install high-visibility crosswalks at all controlled intersections
5. Install missing curb ramps and repair/update curb ramps
6. Install missing sidewalks and repair broken/uneven sidewalks
Proposed Pedestrian Facility Improvements
- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways
- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-13: Sunflower ES SRTS Map
Washington Elementary School

Washington Elementary School is located in east El Centro in a residential and industrial neighborhood. The school’s main entrance is located on 1st Street, a local street that also provides access to the El Centro Community Center, Adult School, McGee Park, and several churches. Washington Elementary is one of two schools located east of the railroad.

Recommendations

1. Install bicycle lanes on Main Street
2. Upgrade Orange Avenue to a bicycle boulevard through traffic calming measures
3. Install stop signs with high-visibility crosswalks at key intersections
4. Install high-visibility crosswalks at all controlled intersections
5. Install missing curb ramps and repair/update curb ramps
6. Install missing sidewalks and repair broken/uneven sidewalks
Figure 5-14: Washington ES SRTS Map
ICOE Valley Academy

ICOE Valley Academy is located in east El Centro in a mostly undeveloped, industrial neighborhood. The school’s main entrance is located on Ross Avenue, an arterials street that provides east-west access throughout the entire City. ICOE Valley Academy is one of two schools located east of the railroad.

Recommendations

1. Install bicycle lanes on Ross Avenue and upgrade bicycle route to bicycle lanes on Dogwood Avenue
2. Extend bicycle route on Hope Street southward towards Ross Avenue
3. Install a pedestrian flashing beacon with high-visibility crosswalks at the intersection of Ross Avenue and Hope Street; additional improvements to consider include curb extensions and a median refuge island.
4. Install missing curb ramps and repair/update curb ramps
5. Install missing sidewalks and repair broken/uneven sidewalks
Recommendations

Proposed Pedestrian Facility Improvements

- Install Curb Ramps
- Install High-visibility Crosswalk
- Install Traffic Signal
- Install Pedestrian Hybrid Beacon (PHB)
- Install Pedestrian Flash Beacon (PFB)
- Install Intersection Controls
- Crossing Maintenance
- Curb Ramp Maintenance
- Sidewalk Maintenance
- Missing Sidewalk

Proposed Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class II - Buffered Bike Lane
- Class III - Bike Route
- Class III - Bike Blvd

Existing Bikeways

- Class I - Multi-use Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 5-15: ICOE Valley Academy SRTS Map
Signage and Wayfinding

Wayfinding is a fundamental part of a functional and comprehensive active transportation network. Effective wayfinding systems create well-structured pathways that help travelers to:

1. Identify their location
2. Assure that they are traveling in the desired direction
3. Navigate junctions and other decision-making points
4. Identify their destination upon arrival

The following guidelines closely follow the San Diego Association of Governments (SANDAG) “Best Practices in Developing and Implementing Bicycle Wayfinding Signage” (October 2014) and “Wayfinding Design Guidelines” (October 2015). Although these two documents are intended primarily for bicycle wayfinding, the principles discussed can be applied to create a successful wayfinding signage program for both pedestrians and bicyclists. SANDAG’s guidelines can be used as an effective starting point for El Centro as the City prepares their own unique signage and wayfinding program.

These guidelines address how wayfinding signage can improve the experience for people already riding and walking, as well as to help encourage people to begin bicycling and walking altogether. Wayfinding signage design is intended to readily orient users to their location within the overall system by employing system-wide key maps on all backbone trail signs. Wayfinding signage would occur along the City’s existing and proposed routes.

Destination Driven

Wayfinding guides users through the destinations along a route. Destinations noted on wayfinding signage should be immediately recognizable and meaningful to the majority of users. As users approach a given sign, it presents a set of destinations accessible from that point. A user may be attempting to reach one of the destinations shown on the signage, and should direct the person directly to their destination. However, destinations also serve a broader role by painting a general picture of the route, the areas they serve and the terminus. Signs provide useful orientation information even for people who are not going to the destination. Users can use the signage to approximate their path to their own destination. This is supported by system-wide key maps on all backbone trail wayfinding signs.

Destination Hierarchy

Destinations should be assigned a hierarchal level based on their regional significance. Major destinations, such as cities, should be listed in the highest level while local destinations, such as parks and community centers, should be in the lowest levels.

**Tier I: Up to five miles**
- Cities

**Tier II: Up to two miles**
- Airports, colleges, neighborhoods/districts, transit centers, regional landmarks, etc.

**Tier III: Up to one mile**
- Major bikeways, high schools, regional parks, hospitals, etc.

**Tier IV: Up to one-half mile**
- Community centers, elementary/middle schools, local parks, public facilities, etc.
Naming Routes

Naming routes simplifies navigation and can provide a sense of place. Routes such as bikeways that follow only one street can be named after the street, but corridors with multiple turns often require a broader name.

Information Hierarchy

Because our culture tends to scan information from top to bottom and left to right, wayfinding signs should be arranged as a hierarchical information flow that takes this into account. This means that the most important information should be near the top and left and displayed in the largest size. Information of lesser importance is placed below that and in smaller sizes, located toward the right and bottom portions of the sign.

The Four D’s

In the context of a route wayfinding signage system, fundamental information is designation, destination, direction, and duration. Each individual sign should first designate itself as a piece of route wayfinding information, typically with a recurring and prominent icon or text. This information is displayed prominently at the top of the sign. The sign should indicate the route name, color, or logo.

People using a sign first need to identify the destination most relevant to them before they proceed to direction or distance information. Destination information is generally presented along the left side of the sign. Direction and distance information are shown on the same line as the destination. Directional arrows should be prominent.

Sign Types

There are four basic route wayfinding sign types: confirmation, decision, turn, and off-route. Each type has a unique purpose, location, and message. The first three sign types move users along a designated route network. The fourth sign type, off-route, directs them onto the route network from adjacent streets.

Confirmation:

1. Indicate to users which designated route they are on. This may include the City’s existing signage due to limited space.
2. Include destinations, distance, and time without arrows.
3. May be stand-alone or combined with decision signs.

Decision:

1. Marks junctions of three or more routes.
2. Inform users of designated route to access desired destinations.
3. Display both destinations and arrows.
4. Intended to be used in sets or combined with confirmation signs.
5. When combined, confirmation signs should be mounted above decision signs. Decision signs should be mounted in order of distance from destinations listed, with the closest first.

Turn:

1. Indicates where a route turns, either from one street onto another street or through a difficult or confusing area. This may include the existing route markers.

Off-route:

1. Inform users that are currently not on a designated trail that one exists nearby

A key map that displays all routes in the network can also be implemented. The map can be combined with “You Are Here” labels to help users orient themselves or help them decide on a new destination. These maps can be located at major intersections, where two or more routes meet, or at popular local destinations such as community centers and parks.

On streets, wayfinding signs are placed in both directions since pedestrians may travel in the opposite direction than the vehicle traffic flow. Typically, a mile of route will include four to five wayfinding signs in each direction.
City of El Centro Active Transportation & Safe Routes to School Plan

**Signage Placement - Traditional Grid**

- **Confirmation** (C)
- **Decision** (D)
- **Turn** (T)

**Bicycle Route**

- School
- High School
- Park

**Signage Placement - “T” Intersection**
Predictability and Redundancy

Consistently repeating signs’ position, shape, color and font helps users to anticipate where signs will be placed and the messages the signs will convey. The City’s branding could consistently be applied across the network’s signage system.

Sign Mounting and Placement

As a general rule, signs should be mounted in consistent, conspicuous locations. Clear sightlines, free of vegetation and other obstructions, need to be maintained between the path of travel and the signs. Along roadways, best practice is to mount wayfinding signs on their own poles. It is recommended that there be a minimum seven foot clearance between the ground and the bottom of the sign. Signs should not be mounted to traffic signals, lighting, utility, or transit stop poles.

The Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9B should be consulted for shared-use path signage placement guidance. For consistency, signage on other facilities, such as natural surface trails, should also generally follow these guidelines.

Designing for Human Scale

Signs need to be designed for immediate legibility from the perspective of a person riding a bicycle or walking. Factors like a bicyclist’s intended lane position or height can inform sign design. However, the main design consideration is speed. Based on guidance from Portland, Oregon, people riding bicycles should be able to see an upcoming sign from about 100 feet away. Bicyclists should not have to stop to read a sign, so signs must clearly convey their message, ideally within a seven second envelope. The following principles help to achieve this goal:

Text

» Signs should be visible from roughly 100 feet away, so capital letters should be 2 to 2.5 inches tall

» Signs should be mixed-case rather than upper case

» Minimize the number of lines of text (five maximum recommended)

Contrast and Proximity

» There should be high contrast between text and background colors

» Related pieces of information should be grouped and assigned similar sizes and shapes.

Consistency and Repetition

» Maintain a consistent color, font and iconographic scheme

» Strive to position signs at consistent heights and locations on standard mounting devices

Simplicity and Legibility

» Use the shortest, most concise phrasing whenever possible

» Consider using icons to supplement text for people not fluent in English

Distance Measurements

» Confirmation, decision and off-route signs should convey distances measured spatially (miles) or temporally (minutes), or both.

Sign Design and Color

The MUTCD establishes standards for traffic signs and related traffic control devices and MUTCD-compliant signs are familiar to nearly all roadway users. The MUTCD should therefore govern sign design and placement technical aspects, such as dimensions, font size, and ground clearance. However, signs do not have to be austere to accomplish this goal. Route wayfinding signs often include some aesthetic cues and place a stronger emphasis on graphic design.
Sign Implementation

1. Define the network to be signed, including trunk and connecting routes, as well as route names (if desired).
2. Establish a master list of destinations and assign each to a hierarchical level, if needed.
3. Establish signage design and placement guidelines.
4. Display destinations and route network together on maps.
5. Divide the routes into segments bookended by major destinations. These destinations will be used as control locations (termini) when creating signs.
6. Identify junctions, turns and other decision points where turn or decision signs will be necessary.
7. Prepare signage plan, including placement and content of individual signs. Ideally, create a GIS database to manage content and location details for each sign, and to support future system management.
8. Prioritize implementation.
9. Implement signs.
Programs

This section includes a diverse list of programs intended to support the bicycle and pedestrian projects recommended in this plan. Due to a long history of routine accommodation for pedestrians (i.e. sidewalks, crosswalks, dedicated signals, etc.), programs targeting walking are relatively uncommon. Conversely, the historic lack of routine accommodation for bicyclists has fostered confusion about the role of bicyclists in the overall transportation system and has necessitated a diverse list of bicycle-related programs.

Evolving State of Practice in Bicycle Programs

There has been a shift away from the traditionally compartmentalized “Five Es” approach developed by the League of American Bicyclists (Engineering, Education, Encouragement, Enforcement and Evaluation and Planning), and instead toward a fully integrated and complementary menu of initiatives. By offering such a menu, rather than a prescriptive list, active transportation programming can more accurately address the existing conditions and desired outcomes of a given context.

In addition to changes in the content and organization of active transportation programs, there has also been a shift in implementation strategies. Programs are increasingly targeted at specific project areas, in conjunction with the construction of bicycle and pedestrian projects. The implementation of a capital project represents a unique opportunity to promote a city’s active transportation system, bicycling, and walking as attractive transportation options. Projects or “Engineering” represent the most visible and perhaps most tangible evidence of a great place for bicycling. The same can be said for walking. A new bicycle route attracts the attention of bicyclists and non-bicyclists alike. As such, it represents a great opportunity to reach out to the “interested, but concerned” within the neighborhood. Impact to this target group will be strongest by directly linking route improvements and supportive programs. In this way, bundling bicycle programs with projects represents a much higher return on investment for both.

The programs recommended for the City of El Centro are organized as a menu of initiatives, each listed under a broad category to the right:

These categories are not definitive. They are merely intended to offer some level of organization to the program initiatives, most which fall into at least one category.
Existing Programs

The City of El Centro and Imperial County have not yet developed a robust set of programs designed to encourage, educate, and enforce active transportation. This ATP-SRTS plan encourages the City to establish partnerships, seek funds, and create programs that will motivate their residents to use multi-modal means of getting to and from their destinations.

The following section highlights programs that have been successful in other Southern California towns and cities that can be implemented in El Centro.

Education/Encouragement/Marketing

Community Bicycle Programs - Bike Kitchens

Community bicycle programs, also known as Bike Kitchens, are commonly formed as grass roots initiatives by community members to provide bicycles, helmets, maintenance, and safety instruction to people as a means of expanding their transportation options and providing people better access to work and services.

El Centro could support the creation of a Bike Kitchen within its city boundaries and leverage its resources in coordination with the bicycle route types prioritized in this plan. This combination will help encourage an increase in bicycling mode share, serve as a missing link in the public transit system, reduce GHG emissions and provide additional “green” jobs related to system management and maintenance.

Street Smarts Classes & Bicycle Ambassadors

This initiative promotes safe bicycling through community-based outreach, which helps bridge the gap between people who want to start riding and the availability of opportunities to help people learn to bicycle safely. These classes would be taught by LCI certified residents or City personnel.

Participate in Walk and Bike to School Day

This one-day October event in more than 40 countries celebrates the many benefits of safely walking and bicycling to school. Walking and rolling to school embodies the two main goals of former First Lady Michelle Obama’s Let’s Move! Campaign: to increase children’s physical activity and to empower parents to make these kinds of healthy choices.

Participate in National Bike Month

Since 1956, communities from all over the country have celebrated National Bike Month to showcase the many benefits of bicycling, as well as to encourage people of all ages and backgrounds to bicycle more often. The biggest event during National Bike Month is Bike to Work day. Local business, nonprofits, and entire city agencies participate by either hosting pit stops where bicyclists can stop to gather healthy food and drinks, or by simply bicycling to work. El Centro can participate in National Bike Month and maintain it as a tradition to motivate its community members to bicycle to their destinations.
Host a Ciclovia, Open Streets, and Other Signature Events

A Ciclovia (also ciclovia or cyclovia in English) is Spanish for “bicycle path” and is used to describe a temporary event where a street(s) is closed to vehicles for use by people and non-motorized transportation. Ciclovias and open streets events are celebrations of livable streets and communities, encouraging citizens and businesses to get out in the street and enjoy their city through active participation. Ciclovias have gained considerable popularity in the United States in the past five years.

While all open streets events are alike in their creation of a people-oriented, car-free space, they are otherwise unique. In some cities, the event occurs once or twice a year, while in others it occurs every Saturday or Sunday throughout the entire summer. Some cities reuse routes, while others, like San Diego, host the events in different locations around the city. Some routes form a circuitous route, while others are linear. Most include parks or other open public spaces, music, performances, games, and other family-friendly activities. Open streets events often have a theme of health, exercise, and active transportation, and include groups promoting free, healthy activities stationed along the route. The routes can incorporate and highlight new bikeways and preferred routes, encouraging their use and maximizing investment.
Education/Enforcement

Educate Police Department Staff Regarding Bicycle and Pedestrian Issues and Concerns

If the aim is to promote bicycling as a legitimate form of transportation, all officers should receive some form of bicycle training and should be offered LCI training, if possible. Appropriate training regarding pedestrian issues and solutions should be provided as well.

Designate a Law Enforcement Liaison Responsible for Bicycling Issues and Concerns

This liaison would be the main contact for El Centro residents concerning bicycle and pedestrian related incidents. This liaison would perform the important role of communicating between the law enforcement agency and bicyclists and pedestrians. The liaison would oversee the supplemental education of law enforcement officers regarding bicycle and pedestrian rules, etiquette and behavior. The liaison could also ride a bicycle while on duty and participate in the Regional Safe Routes to School Task Force. Allocate funding for the training and support of this duty, as well as for necessary bicycle equipment.

Targeted Enforcement

Many law enforcement departments employ targeted enforcement to educate drivers, bicyclists and pedestrians about applicable traffic laws and the need to share the road. These efforts are an effective way to expand mobility education. Targeted enforcement should warn and educate drivers, bicyclists and pedestrians about laws, rules of the road and safe procedures. This could be in the form of a brochure or tip card explaining each user’s rights and responsibilities. Targeted enforcement may help mitigate the following traffic safety problems:

- Speeding in school zones
- Illegal passing of school buses
- Parking violations – bus zone, crosswalks, residential driveways, time zones
- Lack of safety patrol/crossing guard operations
- Unsafe bicycling and pedestrian practices
- Other school zone traffic law violations

This approach has been successful in Los Angeles where four officers, one for each Police Department Traffic Division, have been dedicated solely to bicycle safety and outreach.

Implement a Bicycle Diversion Program

A Bicycle Diversion Program permits adult bicyclists who commit traffic violations to receive reduced fines in exchange for taking a bicycle education class. Assembly Bill 902 allows the creation of such a program. This legislation has been touted as a boost for both equity and encouragement in bicycling. It is expected to promote equity because, in reducing fines, it effectively makes bicycling more affordable. It is expected to encourage bicycling by treating violations as opportunities to educate people and impart confidence and skills. AB 902 went into effect January 1, 2016, but it will be up to each city and its law enforcement department to adopt diversion programs.

Distribute Bicycle Helmets and Lights

If law enforcement officers observe a bicyclist riding at night without the proper reflectors or lights, they may give the bicyclist a light along with a note or friendly reminder about the light requirement and its importance. This provides a positive and educational interaction rather than a punitive one. This program could be funded through a safety-oriented grant. Many cities have targeted the end of daylight savings as an ideal time to perform this function.

Helmet giveaway programs are another opportunity for positive education and interaction. Law enforcement departments have conducted public events to hand out helmets, as well as distributing them in the community during patrol when an officer sees a child riding helmetless.
Law Enforcement Referral Process

Design a communication process that encourages students and parents to notify the school and police of the occurrence of a crash or near-miss during school commute trips involving auto, bus, pedestrian or bicycle transportation. Include not only the Police Department, but also the Planning Department and SRTS stakeholders in this reporting system to help better use data generated. Enlist the help of law enforcement with many traffic safety duties.

Los Angeles has a successful program called the LA Bike Map that allows bicyclists to submit incidents, see them displayed instantly, and study the overall pattern, dynamically, in one place.

Enforcement of Traffic and Parking Laws Through Citations and Warnings

Coordinate targeted enforcement of problem areas should be an intensive, focused effort during the first two weeks of school, as well as a strategy for the rest of the year.

Participation in Traffic Safety Programs: Traffic Garden, SRTS Task Force, etc.

The City could support the creation of a traffic garden, also referred to as a traffic park or safety village. A traffic garden is a specially designed park or schoolyard where children can learn traffic laws and how to safely navigate streets as either pedestrians, bicyclists, or drivers. Children that participate in traffic gardens can use bicycles or pedal-powered cars to navigate the mock streets. Teachers, parents, and instructors alike provide guidance on how to safely cross the street, how to interact with bicyclists and pedestrians, and how to navigate a traffic circle. EL Centro's could partner with a school district to create a traffic garden at a park or in an elementary and middle schoolyard.

Creating a Safe Routes to School (SRTS) task force would aid in developing programs and projects that foster the want and need for safely and comfortably bicycling and walking to and from school. The task force can be comprised of parent champions, school members, City staff, or local advocates. Their primary mission would be to work alongside the community, appropriate city officials, and school districts to implement SRTS programs and projects.
Tracking and Monitoring Pedestrian and Bicycle Travel

Bicycle Friendly Application Update

Bicycle Friendly Community/Neighborhood Designation is part of an official program offered by the League of American Bicyclists intended to provide communities with guidance on becoming more bicycle friendly and to offer recognition for their achievements. Like the report card described in the last section of this chapter, applying for Bicycle Friendly Community designation provides a standard by which El Centro can measure its progress. From the LAB’s own website:

“The Bicycle Friendly Community (BFC) program provides a roadmap to improve conditions for bicycling and the guidance to make your distinct vision for a better, bikeable community a reality. A community recognized by the League as Bicycle Friendly welcomes bicyclists by providing safe accommodation for bicycling and encouraging people to bicycle for transportation and recreation.”

Create City Staff Active Transportation Coordinator Position

The creation of an Active Transportation Coordinator position would demonstrate the City’s commitment to bicycling, walking and creating “complete streets.” An active transportation coordinator can help coordinate between City departments to ensure projects planning consistency and cooperation. A coordinator would manage programs and implement projects listed in this active transportation master plan, and would be responsible for updating the plan in a timely manner.

Conduct Bicycle and Pedestrian Counts and Review Collision Data

Conduct regular bicyclist and pedestrian counts throughout the City to determine baseline mode share and subsequent changes. Conducting counts allows the City to collect information on where the most bicycling and walking occurs. This assists in prioritizing

Bicycle Pedestrian Advisory Committee

An Active Transportation Advisory Committee (ATAC) assists the City with implementation of plan projects, policies and programs. The ATAC allows City staff, volunteers, and advocates to continue efforts to improve bicycling throughout the City. This group acts as a community liaison and addresses issues concerning local bicycling and walking. The ATAC can review the implementation and regularly evaluate the progress of improvements in the Active Transportation Master Plan. City support is imperative for creating the committee, budgeting time and resources for City staff and elected officials to attend and to support these meetings. Some cities have developed bicycle and pedestrian or active transportation advisory committees.
and justifying projects when funding is solicited and received. Counts can also be used to study bicycling and walking trends throughout the City. Analysis that could be conducted includes:

- Changes in volumes before and after projects have been implemented
- Prioritization of local and regional projects
- Research on air quality with increased bicycling and walking

Counts should be conducted at the same locations and at the same times every year. Conducting counts during different seasons within the year may be beneficial to understanding the differences in bicycle and pedestrian traffic volumes based on weather. In addition, bicycle and pedestrian counts should be collected as part of any existing traffic counts. Results should be regularly recorded for inclusion in the bicycle and pedestrian report card described in the next section.

The El Centro Police Department should collect and track collision data. Regular reports of traffic collisions should be presented at the Active Transportation Advisory Committee. Traffic collisions involving bicyclists and pedestrians should be reviewed and analyzed regularly to develop plans to reduce their frequency and severity. Any such plans should include Police Department involvement and should be monitored to determine their effectiveness. Results of the number of collisions should be recorded in the bicycle and pedestrian report card.

**Develop a Bicycle Report Card**

The City could develop a bicycle and pedestrian report card, a checklist used to measure the success of plan implementation, as well as effort made, within the City. The report card could be used to identify the magnitude of accomplishments in the previous year and general trends. The report card could include, but not be limited to, keeping track of system completion, travel by bicycle or on foot (counts) and safety.

The City can use the report card to track trends, placing more value on relative than absolute gains (in system completion, mode share and safety). For example, an upward trend in travel by bicycle or on foot would be viewed as a success, regardless of the specific increase in the number of bicyclists or walkers. Safety should be considered relative to the increase in bicyclists and walkers. Sometimes crash numbers go up simply because bicycling and walking increases, at least initially. Instead, measure crashes as a percentage of an estimated overall mode share count.

A major portion of the report card would be an evaluation of system completion. An upward trend would indicate that the City is progressing in its efforts to complete the bicycle and pedestrian network identified in this document. The report card could be developed to utilize information collected as part of annual and ongoing evaluations, as discussed in the previous sections. The report card is not intended to be an additional task for City staff, but rather a means of documenting and publicizing the City’s efforts related to bicycle and pedestrian planning. If a Active Transportation Advisory Committee is appointed, it can be a task of the committee to review the report cards and adjust future plans and goals accordingly.

In addition to quantifying accomplishments related to the bicycle plan, the City should strive to quantify its efforts. These may be quantified as money spent, staff hours devoted or other in-kind contributions. The quantified effort should be submitted as a component of the bicycle and pedestrian report card. Some cities publish their report cards online.