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Pocket Greenhaven Transportation Plan

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Statement of Protection of Data from Discovery and Admissions

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.



The analysis and recommendations in this report are conceptual in nature based upon limited information, and before implementing any changes, or using any of its information for design or construction, a more detailed analysis should be conducted to make sure that the design or construction documents reflect specific, detailed, local and field conditions.

The scope of this work, including study locations, time frame, and topics, was determined by the City of Sacramento. While it is possible that some locations or issues were not addressed in this report, nothing should be inferred by their omission.

Pocket Greenhaven Transportation Plan

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This plan presents recommended transportation improvements for the Pocket Greenhaven neighborhood to make travel by all modes, including walking, bicycling, riding a bus, and driving, more comfortable, more convenient, and safer.

The Pocket Greenhaven neighborhood was developed in a suburban style, with a clear hierarchy of streets, separation of land uses, and residences built along cul de sacs and other streets with clear separation from busy arterials.

In the neighborhood, houses usually face streets with low traffic and shared use paths provide access to the river, parks, and other destinations.

While this style of development has many advantages, it typically results in longer trip distances than a traditional gridded network. Separation of uses means that residents often drive to schools, shopping, work, and other destinations. Walking and bicycling paths and other facilities are sometimes poorly connected to where people want to go. Speeding drivers can also make walking and bicycling stressful and discourage those means of travel.

This plan was developed with the objective to alleviate these issues by creating safer, more comfortable, and more convenient transportation networks for all people.

This plan includes:

- An overview of existing transportation conditions in the neighborhood
- A discussion of how the needs and solutions were developed with the community
- A toolbox of strategies to address the needs
- Recommended improvements across the neighborhood
- Conceptual designs for ten corridors and areas in the neighborhood
- · A discussion of how the plan will be implemented

The Pocket Greenhaven Transportation Plan community vision:

- Slower drivers and calmer traffic
- Safer and more comfortable access and mobility for people who walk
- Safer and more comfortable access and mobility for people who bicycle
- · More convenient, more comfortable and safer street crossings
- · Convenient and comfortable access to bus stops



Richard Marriott Park





This chapter describes the current state of mobility in the Pocket Greenhaven neighborhood, including key findings from existing conditions data and community feedback.

About 36,500 people live in the neighborhood, in about 16,500 homes, and about 5,800 people work in the neighborhood. Over 94 percent of people living in the neighborhood who travel to work do so by car.

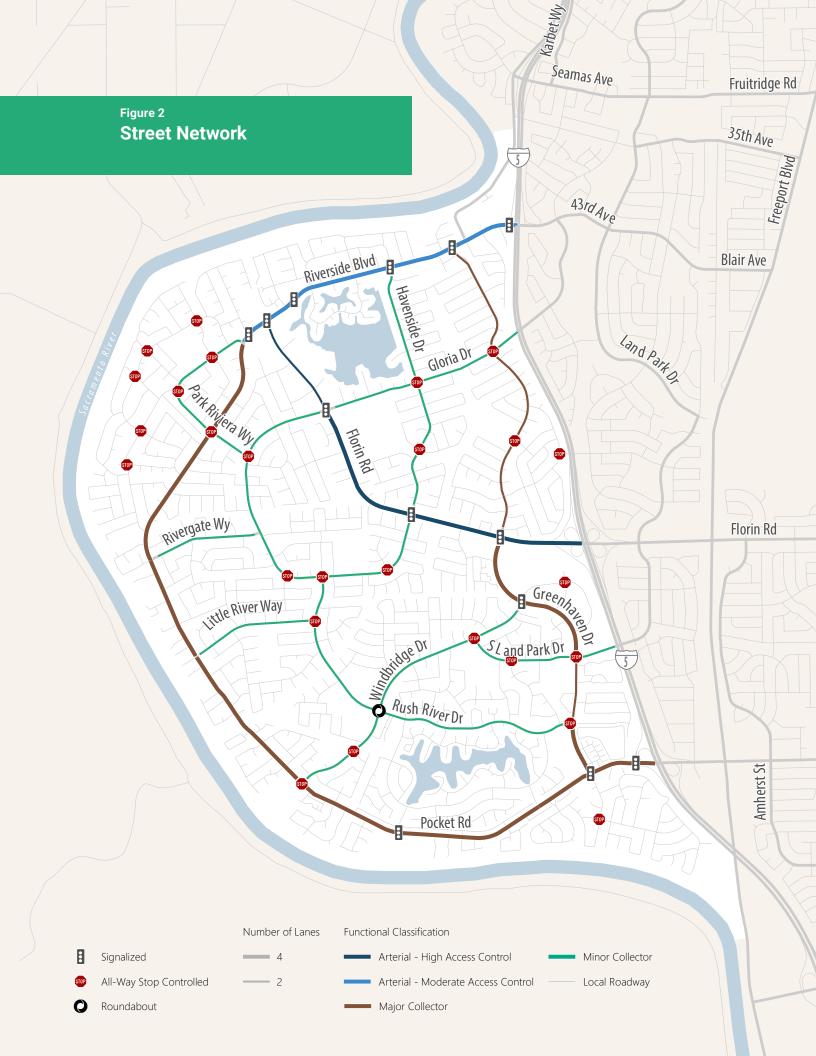
Much of the vehicle travel in the neighborhood is concentrated on a few arterial streets. Figure 1 shows that the busiest streets in the neighborhood are near the I-5 ramps at 43rd Avenue, Florin Road, and Pocket Road

However, some of the streets in other parts of the neighborhood are much larger than necessary to accommodate the traffic that exists today or expected in the future. Figure 2 shows the number of lanes on each street. Much of Pocket Road/ Riverside Boulevard, for example, has fewer than 10,000 vehicles per day on four-lane streets that can accommodate more than 20,000 vehicles per day.

Level of service, a measure of vehicle delay, meets standards during peak hours at all intersections except for three (Gloria Drive and Greenhaven Drive, Gloria Drive and Havenside Drive, and Woodbridge Drive and S. Land Park Drive) that do not meet the standard during the morning peak hour

Some neighborhood streets are much larger than necessary to accommodate the volume of vehicles that travel them daily.





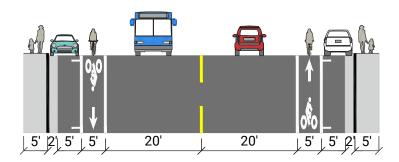
Furthermore, many of these lanes are wider than necessary. In most areas of the neighborhood, 11-foot-wide lanes are sufficient according to City standards. Figure 3 shows two examples of neighborhood streets with much wider lanes. Portions of Greenhaven Drive have lanes that are 14, 15, or 20 feet wide. Portions of Florin Road, Rush River Drive, and Windbridge Drive also have lanes 13 to 15 feet wide.

Figure 2 also shows that some of these streets have long distances between traffic controls (signals and stop signs). The longest street segment without a signal or stop sign is Riverside Boulevard/Pocket Road, 1.9 miles long between Park Riviera Way and Windbridge Drive.

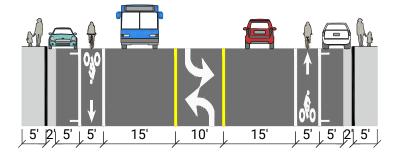
These three factors (low volume four-lane streets, wide lanes, and long distances between traffic controls) provide many drivers the opportunity to drive at high speeds along these streets, especially if speed limits are disregarded.

Figure 3
Street Cross Section Examples

Greenhaven Drive between 43rd Avenue and Gloria Drive



Rush River Drive between Gloria Drive and Greenhaven Drive



The neighborhood has an extensive system of walking facilities, bikeways, and shared use paths, as shown in Figure 4 and Figure 5.

Walking facilities include sidewalks, crosswalks, pedestrian rectangular rapid flashing beacons (RRFBs), and pedestrian hybrid beacons (PHBs). RRFBs are a flashing lights activated by a person crossing the street, with additional signage to alert motorists of the crosswalk. PHBs are buttonactivated lights used at unsignalized intersections or mid-block crosswalks to notify oncoming drivers to stop with a series of red and yellow lights. Unlike a traffic signal, a PHB rests in dark until activated by a person walking across the street.

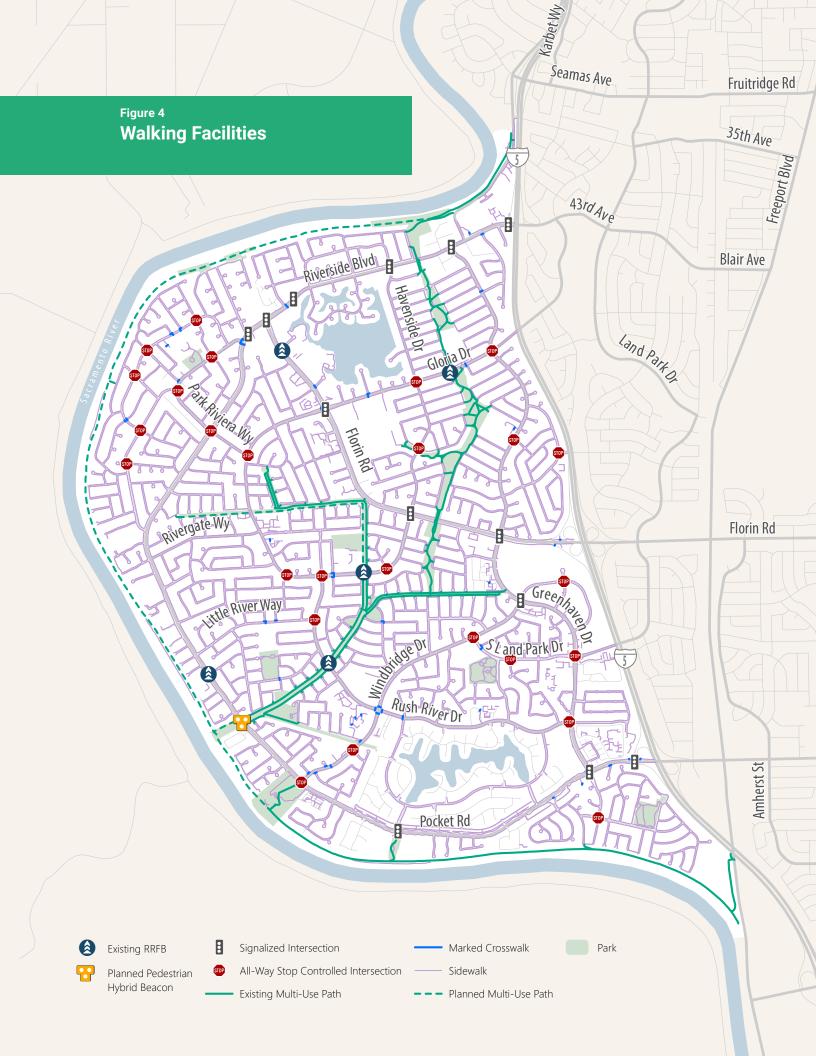
There are few gaps in the sidewalk network; however, the distance between marked crosswalks on many streets for those who are walking is often long. The longest street segment without a marked crosswalk is four-lane Riverside Boulevard/Pocket Road, 1.25 miles long between Park Riviera Way and Nasca Way.

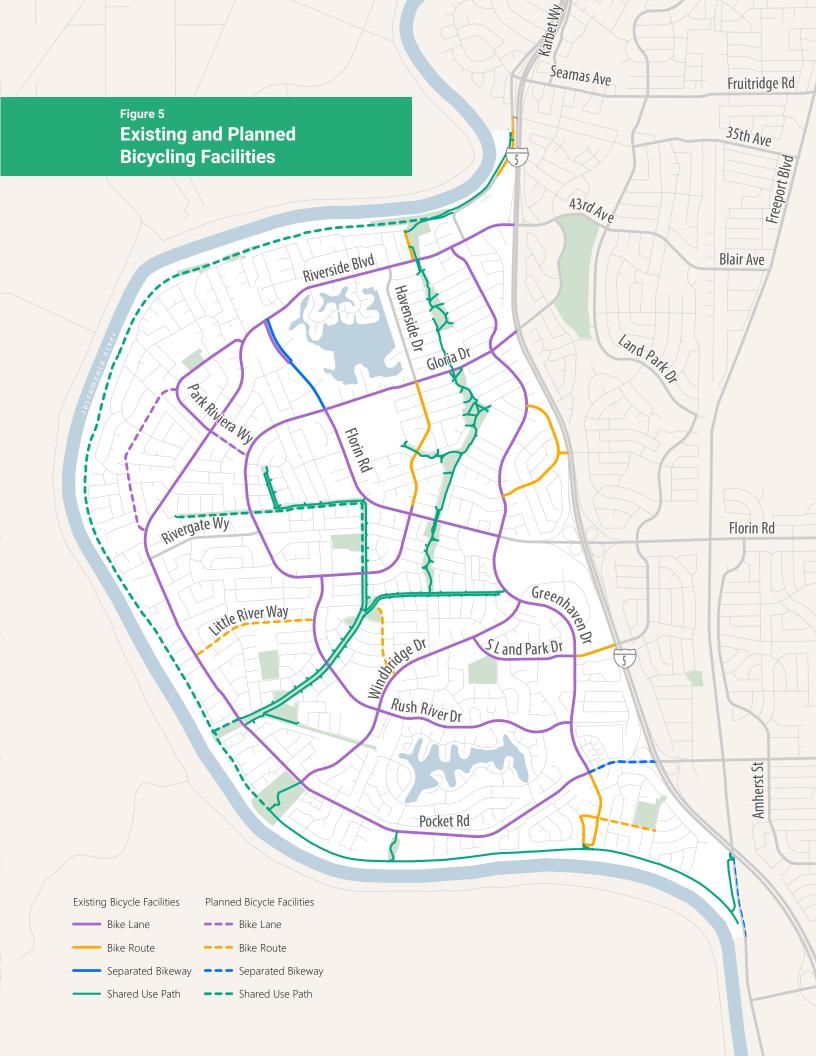
Additionally, the network of shared use paths does not currently extend along the entire bank of the Sacramento River or along the banks of some of the canals in the neighborhood.

> The neighborhood contains several RRFBs, like the one on Rush River Drive at the Pocket Canal Parkway shown here. The neighborhood does not have any PHBs yet, but some are located elsewhere in the City, Including this one in Oak Park.







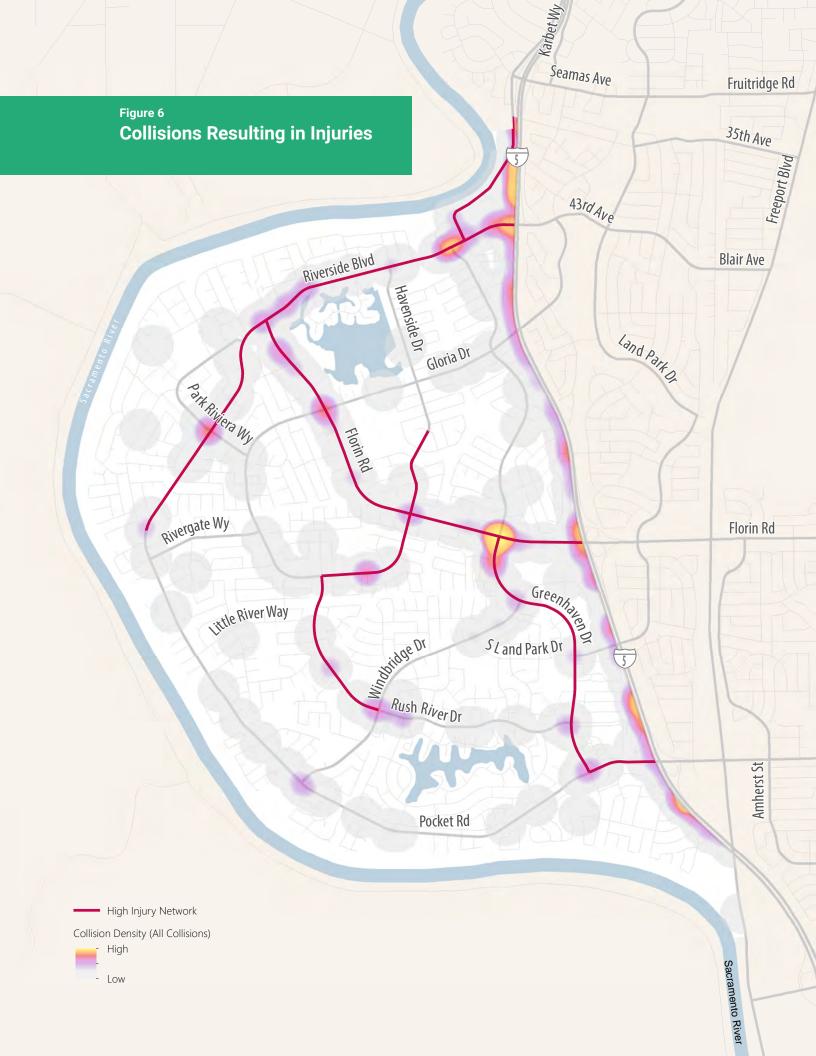


The locations with the highest concentration of vehicle collisions generally fall on the City's high injury network, as shown in Figure 6. Most were on the busy arterials and major collectors with speed limits of 35 or 40 miles per hour. The location with the highest concentration of collisions is the intersection of Florin Road and Greenhaven Drive.

The most frequently observed violations varied depending on the type of collision:

- Unsafe speed was the most frequent violation reported for vehicle collisions, followed by automobile right-of-way.
- For collisions involving a person bicycling, the most frequent violation was wrong side of road, all by the person who was bicycling. The second most frequent was automobile right-of-way, or failure of one person to yield to another, of which 60 percent were a person who was bicycling failing to yield right-of-way to a person who was driving and 40 percent were a person who was driving failing to yield right-of-way to a person who was bicycling.
- For collisions involving a person who was walking, the most frequent violation was a person who was driving failing to yield right-ofway to a person who was walking. The second most frequent was a person who was walking failing to yield to a person who was driving; of these, 83 percent were reported to be related to crossing a street outside of a crosswalk, marked or unmarked.
- For collisions in which someone was killed or seriously injured, for all modes, the most common violation was driving under the influence of alcohol or drugs. The second most common violation was unsafe speed.

Unsafe speed is the most common cause of collisions. Most collisions in the neighborhood fall on the high injury network and on higherspeed streets, those with 35- or 45-mile-per-hour posted speed limits.



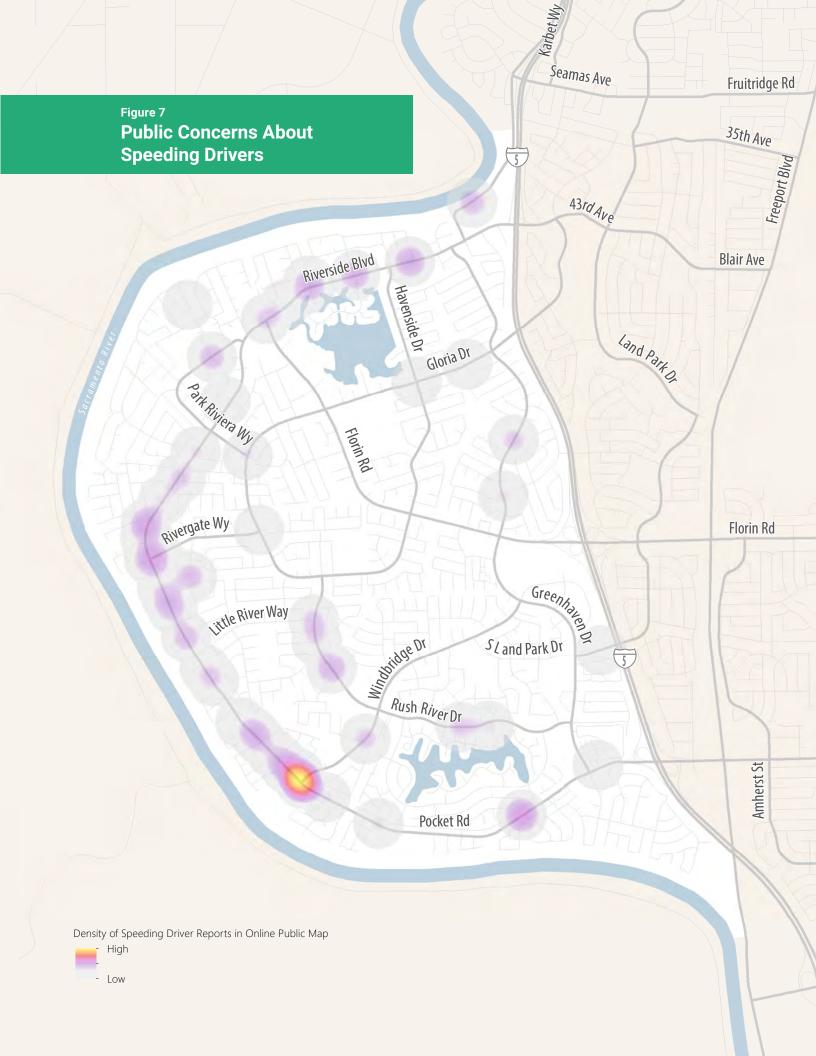
Community input was collected throughout the development of the plan, in collaboration with the Pocket Greenhaven Community Association, through virtual listening sessions and the use of an interactive, online mapping exercise. Community engagement and visioning is described further in Chapter 3.

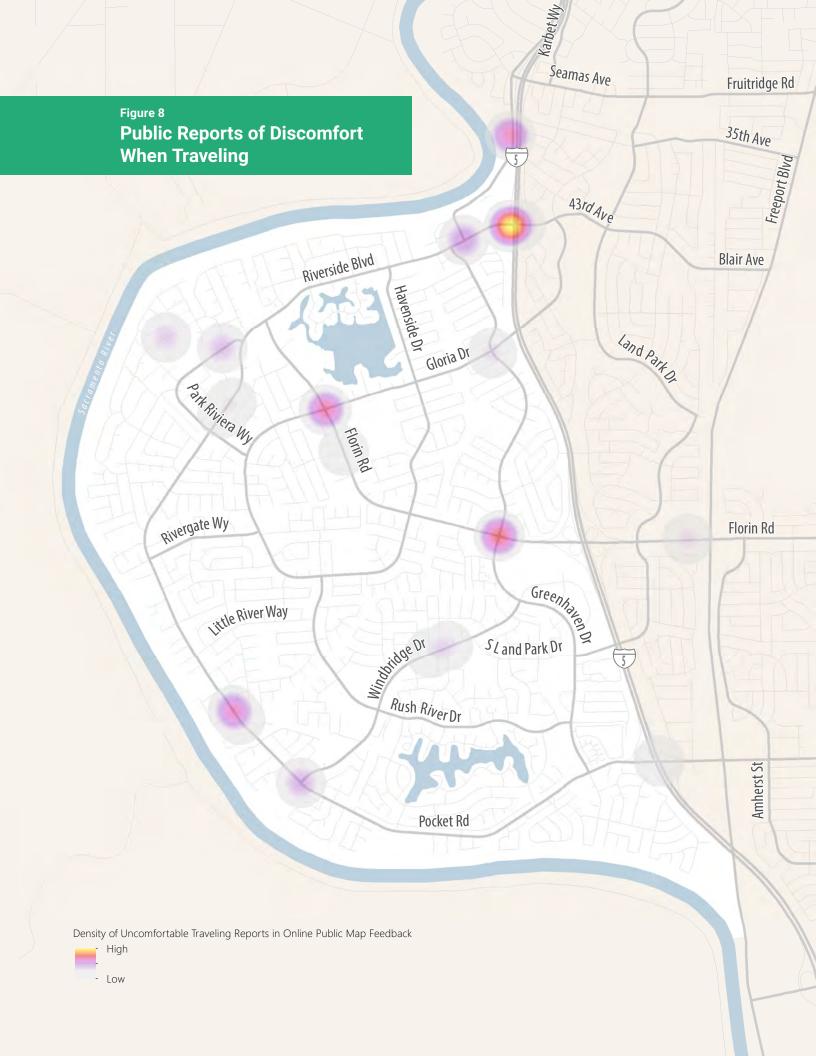
Key messages heard included the following:

Speeding and behavior by people who are driving

- Concerns about a high prevalence of speeding drivers. Figure 7 depicts where concerns were expressed most often in the interactive web map.
- Feelings of discomfort or lack of safety due to behavior by people who are driving. In addition to speeding, these concerns included running through stop signs and red lights, failing to yield to people walking in crosswalks, passing other people driving unsafely and illegally, and lack of comfortable sight distance in many locations where these issues occur. Figure 8 depicts where these feelings were expressed most often in the interactive web map.

The most frequent concerns about speeding were along Pocket Road/Riverside Boulevard.

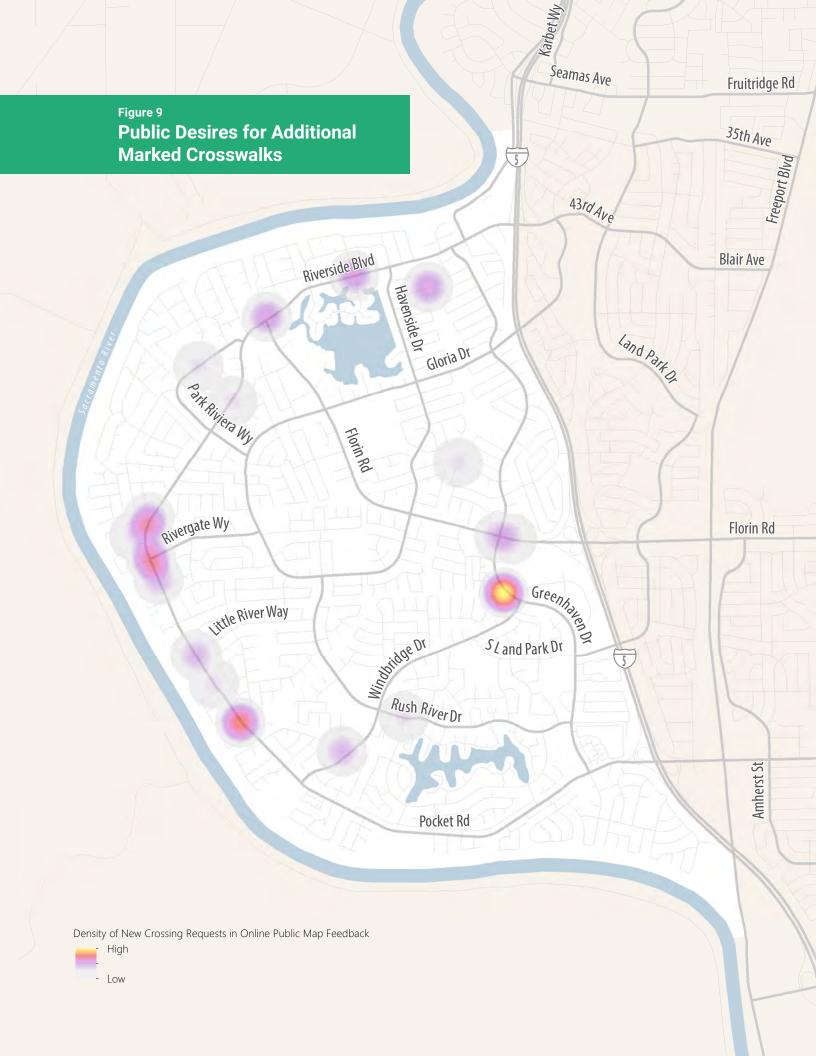




Other key messages heard included:

Walking and bicycling

- · Desire for safer, more comfortable crosswalks, especially along streets where marked crosswalks were far apart or speeding drivers were prevalent. Figure 9 depicts locations where marked crosswalks were requested.
- Feeling unsafe while riding in bike lanes on major streets, and a desire for protected bike lanes on these streets.
- · Some residents are comfortable using roundabouts, such as at Windbridge Drive and Rush River Drive, but others do not feel safe walking or driving through them.
- Concerns about congestion and safety near schools for people walking and bicycling at pickup and drop-off times.
- Some parents drive their children to school because they do not feel it is safe for them to walk or bike.
- Appreciation of the neighborhood's parks, shared use paths, and river access, with the desires to complete the Sacramento River Parkway shared use path, add shared use paths to canals where access is currently prohibited, and add more access points to existing shared use paths. Figure 10 depicts the shared use paths and access points which were requested in the interactive web map.









The vision for transportation in the Pocket Greenhaven neighborhood was created based on collaboration with the community.

Three virtual community listening sessions were held on May 21, September 16, and September 19, 2020, to engage residents and community members in the area: due to the COVID-19 pandemic, in-person sessions could not be held. The May session was held with representatives from neighborhood associations, schools, senior facilities, and other stakeholder groups in the Pocket Greenhaven neighborhood and the September sessions were held with the community-at-large. Each listening session served to introduce the project and obtain community input about existing conditions such as transportation challenges and opportunities. Approximately 50 participants provided input and ideas for how to improve transportation, especially walking and bicycling, in the Pocket Greenhaven community. Additional details of these meetings are provided in Section 2 and Appendices A and B.

During this same time period, an online map was used to allow the community to add their concerns about and desires for transportation in the neighborhood. Over 200 inputs, with more than 500 votes, were received. A summary of this input is provided in Chapter 2 and Appendix A.

Using the existing conditions analysis and community input, a menu of improvement strategies was developed and presented to the community in two online community workshops held on March 24 and 25, 2021. Summaries of these workshops are included in Appendix B.

The feedback obtained during these workshops, as well as from email and other communications. was used to focus these strategies on those most supported by the neighborhood. For example, reconfiguration of some low-traffic streets from four lanes to two lanes was originally proposed as a strategy to slow vehicles. Although some

residents supported use of this strategy, many did not, and thus it was removed from consideration.

After considering public input, a toolbox of improvement strategies was developed. These tools were applied at locations throughout the neighborhood. These strategies are described in detail in Chapter 4.

Ten focus areas in the neighborhood were selected for more detailed design. These corridors were selected with particular consideration of:

- Level of public concern
- History of collisions
- · Proximity to facilities for seniors
- · Access to schools
- Access to parks

Details, including conceptual drawings and cost estimates for each of these priority areas, are presented in Chapter 6.

The toolbox and focus areas were presented in a public draft plan, which was made available on the project web page on the City website. Comments on the plan were received during a public workshop held on June 2, 2022, and via the project web page. All comments were reviewed for incorporation into the final plan.

Virtual listening sessions were held with the community to obtain input about neighborhood needs and proposed improvement strategies. A final in-person workshop was held to present the draft plan.

Session #1 Live Poll Results

1. Do you live in the Pocket Greenhaven neighborhood? Yes (8) 73% No, but I travel to it frequently (1) 9% No, but I visit occasionally (2) 18%

2. What destinations do you frequently travel to in the neighborhood?(Multiple Choice)

Home	(8/11) 73%
Work	(4/11) 36%
School	(2/11) 18%
Shopping	(10/11) 91%
Parks	(10/11) 91%
Trails	(7/11) 64%
Other	(1/11) 9%

3. How do you currently travel in the neighborhood?(Multiple Choice)

Walk	(9/11) 82%
Bike	(4/11) 36%
Take the bus	(0/11) 0%
Drive	(11/11) 100%
Scooter	(0/11) 0%

4. How would you like to travel in the neighborhood, but don't today? (Multiple Choice)

(2/11) 18%
(7/11) 64%
(3/11) 27%
(1/11) 9%
(1/11) 9%

Session #1 Group Photo



Session #2 Group Photo



Session #3 Group Photo







The toolbox of improvements presented in this chapter is the menu of solutions that were considered for application to address the transportation needs of the neighborhood.

Each strategy has unique benefits and is appropriate for use under certain conditions but not others. Treatments were applied to each street based on its particular characteristics and location.

For crosswalks, the City's Pedestrian Crossing Guidelines and Pedestrian Crossing Guidelines Treatment Applications Guide (April 2021) were used to inform application decisions.

The strategies in this toolbox each support one or more objectives of the plan:

- Speed reduction and traffic calming
- Safety and comfort for people who are walking
- Safety and comfort for people who are bicycling
- Crosswalk convenience and comfort
- Transit access

Table 1 shows how each strategy supports these objectives.

Lane reductions were considered as a strategy but not included in the toolbox. On some streets that have four lanes - two in each direction but low volumes of traffic, reducing the number of lanes to one in each direction can be used to slow speeding drivers. Although some members of the public who provided comments during the two workshops held in March supported use of this strategy, many more did not, and thus it was removed from consideration.

Speed safety cameras, which record speeding drivers as evidence for citations, were also considered for the plan. However, such cameras are currently prohibited in California, and no changes to the law are pending. If the law changes in the future, these cameras could be implemented in areas where speeding is a particular issue, such as near schools or other areas with the strongest speeding concerns where speed feedback signs are proposed.

Table 1 **Improvement Strategies and Plan Objectives Supported**

	Objectives				
Strategy	Speed Reduction	Walking Safety	Bicycling Safety	Crosswalk Improvement	Transit Access
Advanced yield/stop markings		•		•	
Bike conflict zone marking			•		
Buffered bike lane	•		•		
Close sidewalk gap		•			
Co-locate bus stops and marked crosswalks		•		•	•
Countdown pedestrian signal head		•		•	
Curb extension	•	•		•	
Curb ramp		•		•	
Extend bike lane to intersection			•		
Extended signal clearance time			•	•	
Hardened centerline/lane line	•	•		•	
High-visibility crosswalk		•		•	
Improved bus stop					•
In-street crosswalk signs	•	•		•	
Leading pedestrian interval		•		•	
Narrow lanes	•				
New all-way stop control	•	•		•	
New traffic signal	•	•		•	
Pedestrian hybrid beacon		•		•	
Pedestrian refuge island	•	•		•	
Pedestrian signal		•		•	
Raised crosswalk	•	•		•	
Rectangular rapid flashing beacon		•		•	
Roundabout	•	•	•	•	
Separated bikeway	•		•		
Speed feedback sign	•				
Speed lump	•				

Source: Fehr & Peers, 2021

Improvement Strategies A-Co



Advanced Yield/Stop Markings

Crosswalk improvement, Pedestrian Safety

A stop bar placed ahead of the crosswalk at stop signs and signals reduces instances of vehicles encroaching on the crosswalk. Similarly, advanced yield markings placed 20 to 50 feet in advance of crosswalks increase visibility of people who are walking. Beneficial at multi-lane crosswalks to reduce the likelihood of a multiple-threat crash.



Bike Conflict Zone Marking

Bicyclist Safety

Green pavement within a bike lane to increase visibility of people who are bicycling and to reinforce bike priority. Green pavement is used as a spot treatment in conflict areas such as driveways.



Buffered Bike Lane

Bicyclist Safety, Speed

Dedicated street space for people who are bicycling with designated lane markings, pavement legends, and signage. Includes pavement markings between the bike lane and vehicle lane to provide additional space between bikes and vehicles and/or between the bike lane and parking to denote door zone of parked vehicles. Creates a street-narrowing effect that reduces vehicle speeds.



Close Sidewalk Gap

Pedestrian Safety

Continuous sidewalks for people who are walking provide a separated facility for people to walk along the street and can help minimize crashes with people who are walking in the street.



Co-locate Bus Stops and Marked Crosswalks

Crosswalk Improvement, Pedestrian Safety, Transit Access

Placement of bus stops and crosswalks in close proximity to allow people riding the bus to cross the street more conveniently and more safely.



Countdown Pedestrian Signal Head

Crosswalk Improvement, Pedestrian Safety

Display of "countdown" of seconds remaining on the pedestrian signal. Countdown indications improve safety for all street users, and are required for all newly installed traffic signals where pedestrian signals are installed.

Improvement Strategies Cu-H



Curb Extension

Crosswalk Improvement, Pedestrian Safety, Speed

Curb extensions or bulbouts are raised devices, usually constructed from concrete, landscaping, or paint and plastic materials, that narrow the street to reduce speeds of turning vehicles, improve sight lines, and shorten crosswalk lengths.



Extend Signal Clearance Time

Crosswalk Improvement, Bicyclist Safety

Extending yellow and all-red time allows people who are driving and bicycling to more safely cross through a signalized intersection before conflicting traffic movements are permitted to enter the intersection.



Curb Ramp

Crosswalk Improvement, Pedestrian Safety

Curb ramps provide access to those using wheelchairs and also ease access for people using other assistive devices or wheeled devices such as strollers. New ramps must also incorporate tactile warning devices detectable to visually impaired people.



Hardened Centerline/Lane Line

Crosswalk Improvement, Bicycling Safety, Speed

Centerline hardening encourages people who are driving to make left turns at slower speeds. Lane line hardening also make lanes feel smaller and encourages drivers to stay in their lane and proceed more slowly. Typically, plastic delineators and/or curbing are placed along the line striping to provide a vertical separation between lanes.



Extend Bike Lane to Intersection

Bicyclist Safety

In locations where a bike lane is dropped due to the addition of a right-turn pocket, the intersection approach may be restriped to allow for people who are bicycling to move to the left side of right-turning vehicles prior to reaching the intersection.



High-Visibility Crosswalk

Crosswalk Improvement, Pedestrian Safety

A crosswalk designed to be more visible to approaching people who are driving, striped with ladder markings using high-visibility material such as thermoplastic tape instead of paint.

Improvement Strategies I-N



Improved Bus Stop

Transit Access

Adding benches and shelters improves the comfort of people who are waiting for a bus.



Narrow Lanes

Speed

A reduction in lane width, to 11 feet, produces a traffic calming effect by encouraging people who are driving to travel at slower speeds, lowering the risk of crashing with people walking and bicycling and other people who are driving.



In-Street Crosswalk Signs

Crosswalk Improvement, Pedestrian Safety, Speed

Yield-to-pedestrians signs alert people who are driving about the presence of people crossing the street. These signs can be placed on the centerline in the street with advanced yield markings.



New All-Way Stop Control

Crosswalk Improvement, Pedestrian Safety, Speed

Requires all vehicles to stop before crossing the intersection. Removes the need for people walking, bicycling, and driving on a side-street stopcontrolled intersection to cross free-flowing lanes of traffic, which reduces the risk of collision. Can have a traffic calming effect on long straightaways.



Leading Pedestrian Interval

Crosswalk Improvement, Pedestrian Safety

Traffic signals timed to allow people walking across the intersection a short head start to minimize conflicts with turning vehicles and improve visibility of people walking across the street.



New Traffic Signal

Crosswalk Improvement, Pedestrian Safety, Speed

New traffic signals help organize travel of all modes at an intersection, limiting interactions between people walking, bicycling, and driving in conflicting movements. New signals can have a traffic calming effect on long, high-speed straightaways.

Improvement Strategies P-R



Pedestrian Hybrid Beacon

Crosswalk Improvement, Pedestrian Safety

Pedestrian hybrid beacons (PHBs) are buttonactivated lights used at unsignalized intersections or mid-block crosswalks to notify oncoming drivers to stop with a series of red and yellow lights. Unlike a traffic signal, the PHB rests in dark until activated by a person walking across the street.



Pedestrian Refuge Island

Crosswalk Improvement, Pedestrian Safety, Speed

Pedestrian refuge islands provide a protected area for people walking across the street at the center of the street. They reduce the exposure time for people walking across the intersection and simplify crossing the street by allowing people walking across the street to focus on one direction of traffic at a time.



Pedestrian Signal

Crosswalk Improvement, Pedestrian Safety

Pedestrian signals are button-activated traffic signals used at mid-block crosswalks to notify oncoming motorists to stop. These signals operate similarly to traffic signals at intersections.



Raised Crosswalk

Crosswalk Improvement, Pedestrian Safety, Speed

A raised crosswalk is typically elevated 3-6 inches above the street or at sidewalk level and ensures that people who are driving traverse the crosswalk slowly. Similar to speed lumps and other vertical speed control elements, it reinforces slow speeds and encourages motorists to yield to people walking at the crosswalk.



Rectangular Rapid Flashing Beacon

Crosswalk Improvement, Pedestrian Safety

A rectangular rapid flashing beacon (RRFB) is a flashing light activated by a person crossing the street with additional signage to alert motorists of the crosswalk. Improves safety by increasing the visibility of marked crosswalks and provides motorists a cue to slow down and yield to people walking across the street.



Roundabout

Bicyclist Safety, Crosswalk Improvement, Pedestrian Safety, Speed

Circular intersection with a raised central island and yield control, which direct flow in a continuous circular direction around the intersection. Can reduce the number of conflict points compared to an uncontrolled intersection and decrease vehicle speeds due to intersection geometry.

Improvement Strategies S-Sp



Separated Bikeway

Bicyclist Safety, Speed

Designated bike lanes, separated from vehicle traffic by a physical barrier, usually bollards, landscaping, or parked cars. These facilities can increase safety by decreasing opportunities for crashing with overtaking drivers and reducing the risk of dooring.



Speed Feedback Sign

Speed

A speed feedback sign notifies people who are driving of their current speed, with a reminder of the posted speed limit. Improves safety by providing a cue for people who are driving to check their speed and slow down, if necessary.



Speed Lump

Speed

Speed lumps and humps use vertical deflection to raise the entire wheelbase of a vehicle and encourage motorists to travel at slower speeds to avoid discomfort or damage to the undercarriage of the vehicle.

Costs

Unit costs for each of these strategies are shown in Table 2. For focus corridors, more detailed cost estimates are provided in Chapter 6 and Appendix E.

Unit cost estimates were based recent construction bid unit costs. Actual project costs will be determined by surveyed base mapping,

geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a capital improvement project to revalidate and update the assumptions in this study as necessary.

Table 2 **Unit Costs of Improvement Strategies**

Strategy	Unit	Unit Cost
Advanced yield/stop markings	square feet	\$5
Bike conflict zone marking	square feet	\$5
Buffered bike lane	linear feet	\$2
Close sidewalk gap	linear feet	\$130
Co-locate bus stops and marked crosswalks	each	\$1,500
Countdown pedestrian signal head	each	\$800
Curb extension	square feet	\$12
Curb ramp	each	\$8,000
Extend bike lane to intersection	linear feet	\$1
Extended signal clearance time	each	(Note 1)
Hardened centerline/lane line	each	\$825
High-visibility crosswalk	square feet	\$1
Improved bus stop	each	\$7,500
In-street crosswalk signs	each	\$500
Leading pedestrian interval	each	(Note 1)
Narrow lanes	linear feet	\$3
New all-way stop control	each	\$5,000
New traffic signal	each	\$550,000
Pedestrian hybrid beacon	each	\$230,100
Pedestrian refuge island	each	\$10,000
Pedestrian signal	each	\$230,100
Raised crosswalk	each	\$10,000
Rectangular rapid flashing beacon	each	\$122,230
Roundabout	each	\$1,200,000
Separated bikeway	linear feet	\$20
Speed feedback sign	each	\$16,275
Speed lump	each	\$2,500

¹Cost is labor to program signal controllers.

Source: City of Sacramento, Mark Thomas, and Fehr & Peers, 2022

Community Programs

In addition to the toolbox of improvements, other community-wide projects and programs can help meet the transportation needs and desires of neighborhood residents and support the successful implementation of the strategies in the toolbox.

Enforcement

Targeted enforcement can help reduce red light, stop sign, and speeding violations. However, the City of Sacramento Police Department currently has only a small motor unit available for traffic enforcement throughout the entire city. Therefore, while some targeted enforcement may be possible, a consistent police presence for traffic enforcement is not viable today with staffing limitations

Shared Use Path Etiquette

Education programs encourage good behavior by all users and support infrastructure improvements. These programs can include topics such as appropriate speeds for bicycling and managing dogs. Programs can include outreach through signs, local media, and volunteer interactions. As the neighborhood network of shared use paths is expanded and becomes more popular, an etiquette program can support harmony among all users.

Walk and Bike to School

Walk and bike to school events, often included as part of Safe Routes to Schools programs, are a great way to encourage students and their parents to walk and bike to neighborhood schools. Group

events demonstrate walking and bicycling, and these behaviors can carry over after the events.

Bike Repair Programs

Hands-on programs to teach students and the community how to repair bikes are another way to encourage people to bike. These lessons also teach mechanical skills useful in other aspects of daily life. Learners may repair their own bikes or fix other bikes for donation to others who might not be able to afford their own

Wayfinding

Wayfinding signage can be used on facilities for people who are walking and bicvcling to direct users to connecting facilities and key destinations. Good wayfinding signs can also encourage people who are walking and bicycling to visit local businesses. These signs provide the most value at path junctions and at intersections of key bicycling and walking routes. For example, wayfinding to guide people to the Sacramento River Parkway and to lower stress walking and bicycling connections over and under I-5 would benefit those traversing this barrier. Development of a system of wayfınding signs in accordance with the City's Wayfinding Signage Process is recommended for the neighborhood.

Programs that encourage more safe and more courteous walking and bicycling can help increase walking and bicycling in the neighborhood and reduce conflicts among different users on shared use paths.



Atlanta BeltLine "Southern Charm" campaign



Sign from Bol Park in Palo Alto







Each of the infrastructure improvements in the improvement strategy toolbox will be used in specific locations across the neighborhood where they will be most effective.

The maps in this chapter depict the plan for applying each strategy.

Slowing Vehicles

The primary improvements that will be applied to slow vehicles are new traffic signals, new all-way stops, roundabouts, lane narrowing, speed feedback signs, and speed lumps. (Some crosswalk improvements, discussed later in this chapter, will also help slow vehicles.)

Signals and All-Way Stops

New signals and all-way stops are proposed to break up long stretches of straight streets, as shown in Figure 11.

Eight new signals are proposed, all on four-lane streets. Not all of these locations have conditions that meet signal warrants (details provided in Appendix C); however, the benefit of slowing vehicles and improving comfort and safety for those who are walking across streets justifies their inclusion.

For lower vehicle-volume two-lane streets, three all-way stop intersections are proposed,

Roundabouts

New roundabouts are proposed, in two groups of three, to slow vehicles on two residential streets (Figure 11). These groups of roundabouts also break up long stretches of streets and require people who are driving to slow to enter the roundabout.



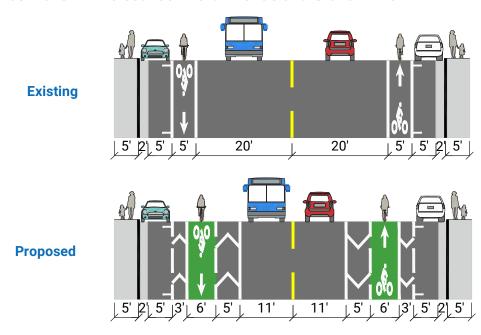
Narrow Lanes

Many streets across the neighborhood are proposed to have 11-foot wide traffic lanes; today, some of these lanes are as wide as 20 feet. The space freed by narrowing the traffic lanes will be applied to bike lanes, in most cases, or wider painted buffers, in some cases.

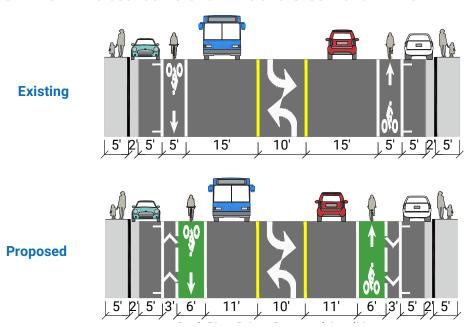
Figure 12 includes street cross sections of two proposed improvements, both before and after traffic lanes are narrowed. Appendix D includes cross sections for all proposed narrowings.

Figure 12 Street Cross Sections Before and After Lane Narrowing

Greenhaven Drive between 43rd Avenue and Gloria Drive



Rush River Drive between Gloria Drive and Greenhaven Drive



Speed Feedback Signs

Speed feedback signs are proposed for several segments in the neighborhood where incidence of speeding is high or where there is a reduction in the speed limit of 10 or more miles per hour (Figure

Speed Lumps

Speed lumps are proposed near schools and other locations near major streets to reduce cut-through traffic on local streets (Figure 13). They are also proposed on local streets with speeding issues in accordance with the City Speed Lump Program.

Final installation of speed lumps will be determined after completion of speed surveys and updated traffic volumes as required by the City program.

Speed Limit Changes

State guidelines require surveys of current speeds to be used as the basis for speed limit setting. While continuing to operate within State guidance, the City has some tools to ensure that speed limits on the City's high injury network are context sensitive and prioritize the safety and comfort of all road users.

California Assembly Bill 43, signed into law in 2021, will allow local agencies additional flexibility to consider the safety of vulnerable users when setting speed limits. Caltrans will be making updates to its guidance to incorporate these changes in speed limit setting. The City is monitoring this process as these changes are implemented.



New and Improved Crosswalks

New marked crosswalks, and improvements to existing marked crosswalks, are proposed for the locations shown in Figure 14. Specific improvements at each location were developed with consideration of the City of Sacramento Pedestrian Crossing Guidelines, which provide guidance on treatments based on speed limits, daily traffic volumes, and number of travel lanes.

Pedestrian Hybrid Beacons

Pedestrian hybrid beacons (PHBs) are proposed at several locations in the neighborhood. The recommended locations were developed based on the City's Pedestrian Crossing Guidelines and the California Manual on Uniform Traffic Control Devices (MUTCD). These locations are generally busier streets near schools, senior housing, or path crossings, where greater numbers of people walking are expected.

Rectangular Rapid Flashing Beacons

In some locations, the City's Pedestrian Crossing Guidelines recommend use of either PHBs or rectangular rapid flashing beacons (RRFBs). For locations which do not meet MUTCD conditions for PHBs, RRFBs are proposed.

Pedestrian Signals

Pedestrian signals are an alternative to PHBs. They are often used instead of PHBs at intersections where a PHB on the main street could cause confusion to drivers approaching the intersection from a side street.

Traffic Signal Improvements

Changes at several existing traffic signals are proposed to make crossing the street safer and more comfortable for people who are walking:

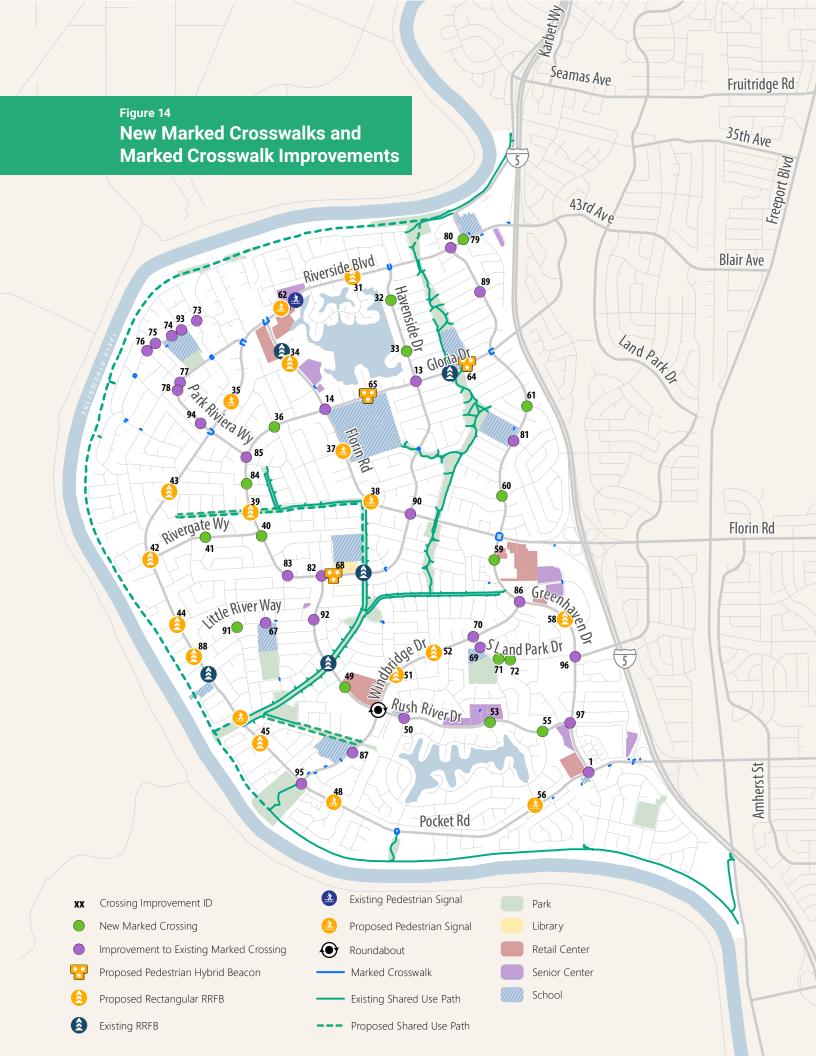
- Countdown pedestrian signal heads
- Leading pedestrian intervals

These features will also be included in new traffic signals.

Other Crosswalk Treatments

The following treatments will also be used at crosswalks in the neighborhood, considering the City's Pedestrian Crossing Guidelines and conditions at each location:

- Advanced yield/stop markings
- Curb extensions
- Hardened centerlines/lane lines
- · High-visibility crosswalks
- In-street crosswalk signs
- Pedestrian refuge islands
- Raised crosswalks



Other Walking Improvements

Nearly all the streets in the neighborhood have sidewalks along each side. However, there are a few gaps in the sidewalk network, and there are some locations where curb ramps are missing, especially where the shared use path through Frank Seymour Park connects to adjacent neighborhoods. Figure 15 depicts where these gaps will be closed and curb ramps added. Curb ramps in the neighborhood were not evaluated for Americans with Disability Act (ADA) compliance; the City's ADA transition planning process should be referenced for compliance processes.

Figure 15 also shows where new shared use paths, for use by people walking and bicycling, are proposed. These new paths extend along the entire river levee and every canal bank. The City is working on expansion of the Sacramento River Parkway, and this plan supports that development. Access points to the Sacramento River Parkway will be determined as that plan is developed. When the locations of those access points are finalized, connections to the walking and biking networks should be reviewed and realigned if necessary.

Similarly, many of the canals within the neighborhood have paths along their banks. This plan also supports extension of those paths along most of the banks which are currently closed.



Comfortable Bicycling

Narrowing vehicle travel lanes frees space that can be used to improve conditions for people who are bicycling.

Buffered Bike Lanes

Many bike lanes in the neighborhood are proposed to be upgraded to buffered bike lanes. Figure 16 shows the location of each of these new buffered bike lanes. Figure 12 depicts two examples, and Appendix D. shows the cross-sections for these streets, including bike lane and buffers widths.

Separated Bikeways

New separated bikeways are proposed in three locations, all of which are crossings over I-5 (Figure 16). A separated bikeway from Pocket Road from Greenhaven Drive across I-5 to Freeport Boulevard is included in the City 2018 Bicycle Master Plan. The Pocket Greenhaven Transportation Plan adds a similar separated bikeway on Florin Road across I-5 to S. Land Park Drive. These two separated bikeways, with separation created by plastic posts, will improve safety and comfort for people who are bicycling navigating vehicle traffic entering and exiting I-5 ramps.

An additional separated bikeway is proposed on S. Land Park Drive from Greenhaven Drive across the I-5 overpass to Willow Lake Way. This section of the street, currently a bike route with sharrows, has 19-foot wide lanes and no driveways.

The parking-separated bikeways on Florin Road between Riverside Boulevard and Gloria Drive were installed in late 2020. As part of this plan, the City may review operation of these bikeways and make adjustments to improve usability for both people who are bicycling and people who are driving.

Bicycle Routes

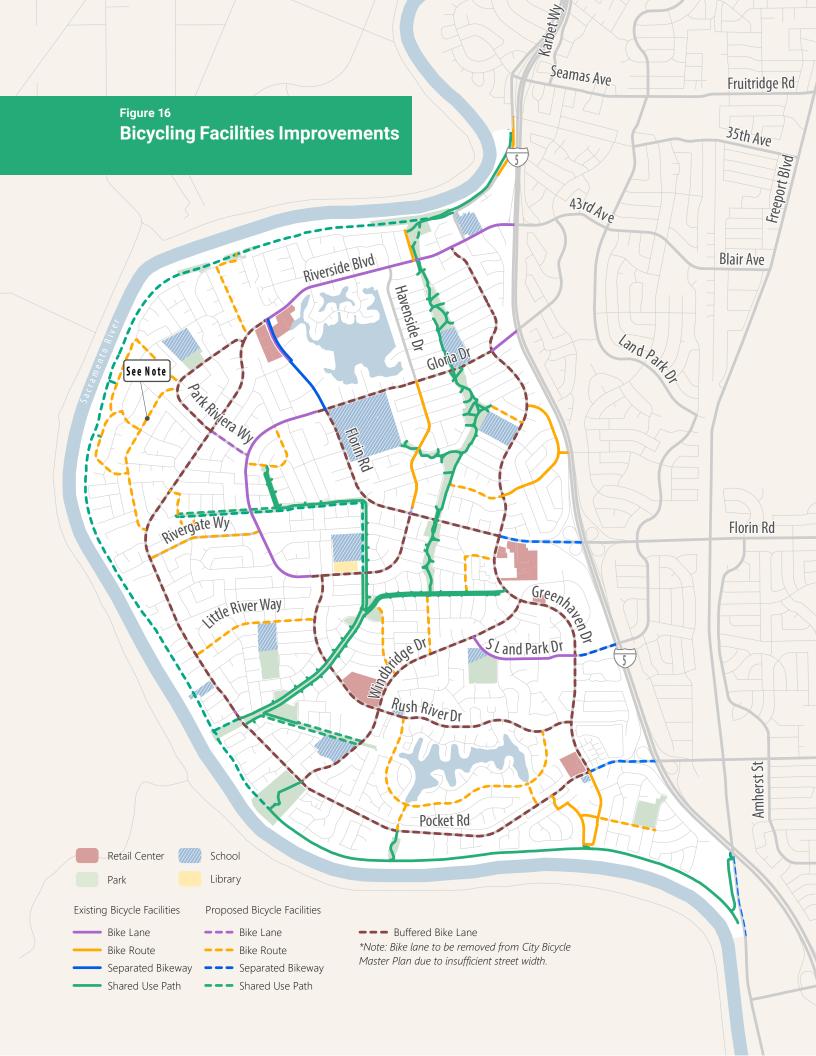
Several new bike routes are proposed to connect destinations such as parks and paths to the network of bike lanes.

Pocket Road between Park Riviera Way and Riverside Boulevard was planned for bike lanes in the Bicvcle Master Plan. However, this low-volume residential street, with parking along both sides, has insufficient width for bike lanes. Thus, a bike route is now proposed for this street segment.

Intersection Improvements

Other improvement strategies will be applied where useful along bikeways throughout the neighborhood:

At several intersections, bike lanes will be extended through the intersection as space allows, and bike conflict zone markings will be added where bike lanes cross vehicle lanes. Signal clearance times will also be extended.



Bicycle Parking

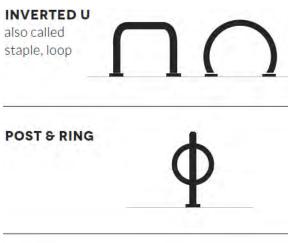
Secure and convenient bicycle parking allows bicycle riders to lock their bicycles near their destinations, Although a few destinations have such bicycle parking, many have bicycle parking that is unsecured or difficult to use. Other destinations have no bicycle parking at all. This plan supports installation of new bicycle parking and upgrades of inadequate bicycle parking to meet City of Sacramento Bike Rack Design and Placement Standards.

Bicycle parking improvements are proposed at parks, shopping centers, and the library (Figure 17).

These improvements include both new parking, at locations which have none today, and upgrades to existing bicycle parking, where current bicycle parking is unsecured or difficult to use and does not meet City bike rack design standards.

The City has a program to install parking on City property near businesses and other destinations. As described in that program, bicycle parking improvements on private property, such as retail centers, will require cooperation from the facility managers.

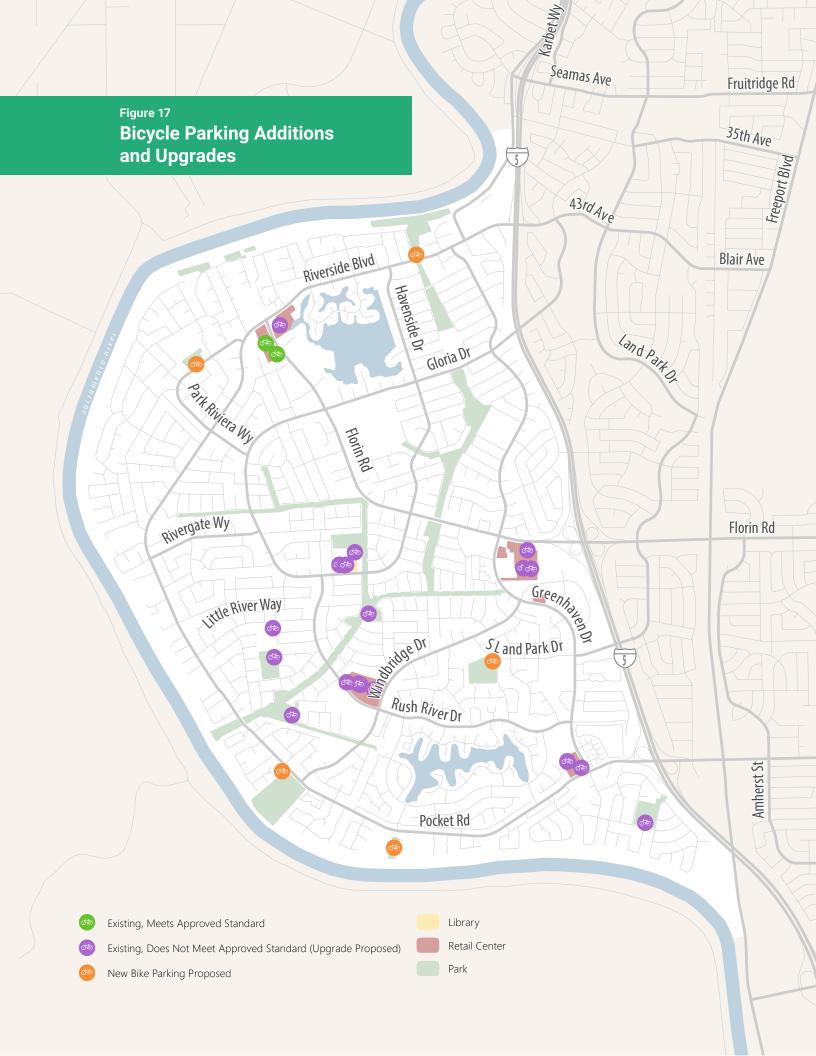






Source: Association of Pedestrian and Bicycle Professionals

The Pocket Greenhaven neighborhood has some good bike parking (left) but much more bike parking that is neither secure nor easy to use. New bicycle parking should meet City standards (right).



Improved Bus Stops

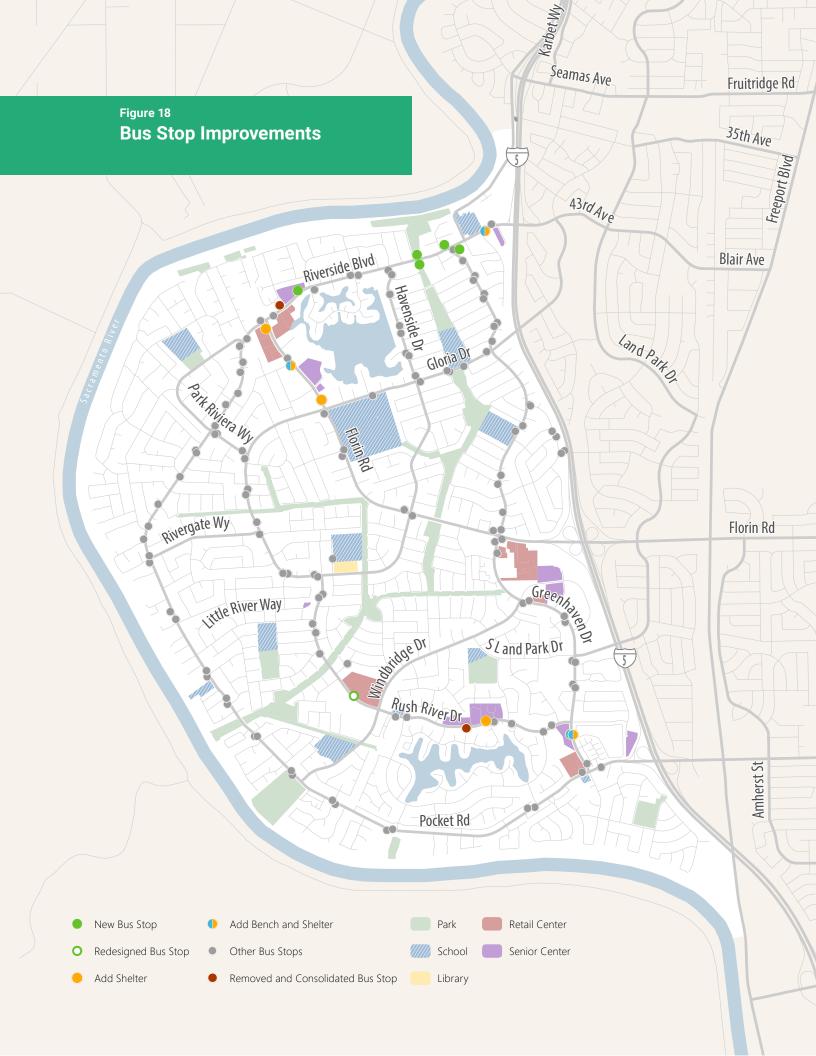
Bus stops in the neighborhood are maintained by the Sacramento Regional Transit District, who were consulted during development of this plan. Improvements are recommended at several bus stops, as shown in Figure 18.

The busiest bus stop in the neighborhood, on Rush River Drive at the Promenade Shopping Center, is not well connected to the shopping center or nearby marked crosswalks. Improvements to this stop are recommended, including a larger waiting area that connects pedestrians more directly to the shopping center, an upgraded and enlarged shelter, new pedestrian-scale lighting, and bike racks. A new crosswalk is also recommended at the western driveway of the shopping center to decrease the distance between crossings and to connect pedestrians on the south side of Rush River Drive more directly to the bus stop.

Many of the other busy stops in the neighborhood lack shelter, benches, or both. New shelters and benches are proposed at stops with 50 or more boardings and alightings each day and at stops that serve senior facilities

New stops are proposed at the intersections of Riverside Boulevard and Clipper Way, and Riverside Boulevard and Greenhaven Drive, to increase access for people to ride the bus.

Consolidation of the eastbound stop on Rush River Drive 450 feet east of Still River Way with the stop at Still Breeze Way is proposed. A new marked crosswalk is proposed at the Still Breeze Way intersection as part of the roundabout proposed for this intersection.







Conceptual designs and cost estimates were developed for 10 focus areas in the neighborhood.

These focus areas, shown in Figure 19, were selected considering issues identified during review of existing conditions, concerns expressed by the public, and land uses (such as schools and senior facilities) served by each.

- Riverside Boulevard from Florin Road to north of Pocket Road
- Pocket Road from Riverside Boulevard to west of Collins Isle Lane
- Pocket Road from Collins Isle Lane to Greenhaven Drive
- Gloria Drive from west of Florin Road to Rush River Drive
- · Rush River Drive from Windbridge Drive to west of Greenhaven Drive
- Florin Road from Gloria Drive to I-5
- Greenhaven Drive from 43rd Avenue to north of Florin Road
- Greenhaven Drive from south of Florin Road to north of Pocket Road
- · Genevieve Didion Elementary School area
- Martin Luther King, Jr. K-8 School area

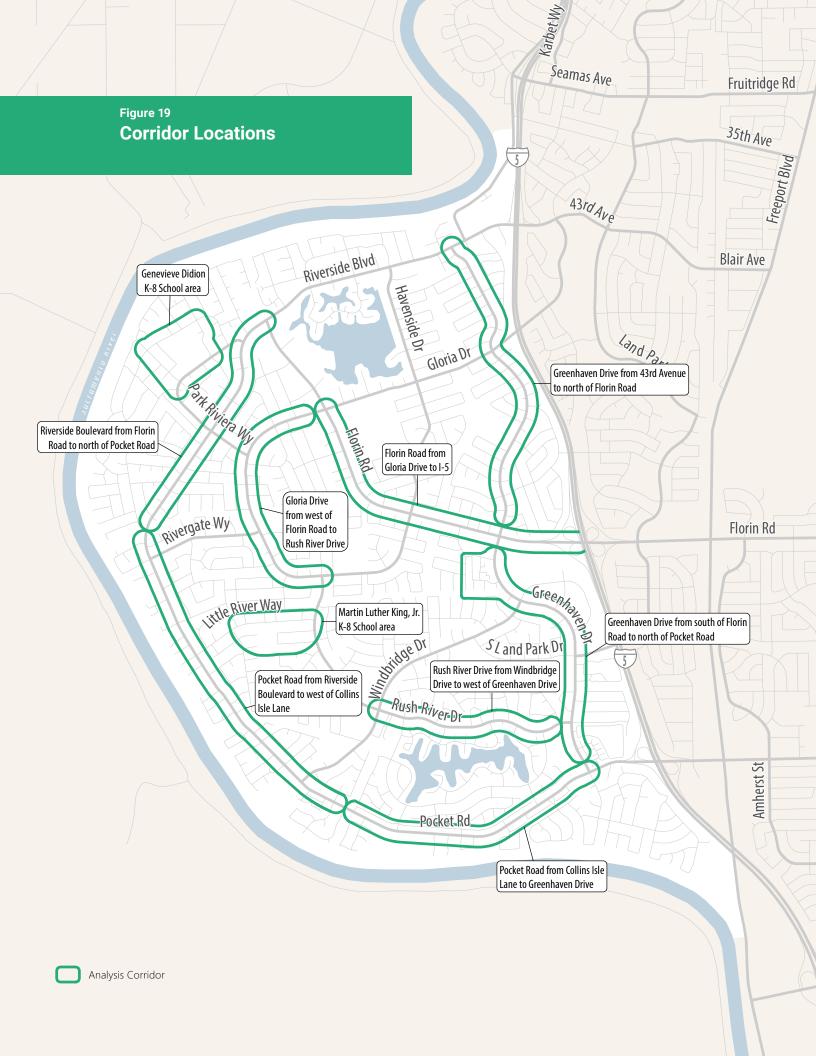
For each focus area, this chapter provides detailed existing conditions information, conceptual drawings of proposed changes highlighting improvement strategies, and planning-level cost estimates of improvements.

The Gloria Drive corridor does not include the frontage of John F. Kennedy High School. The school recently completed improvements to the parking lot along this corridor that will affect student pickup, drop-off, and parking. As the effects of the COVID-19 pandemic on traffic subside, traffic patterns in the vicinity of the school will be reevaluated to determine if additional improvements are appropriate.

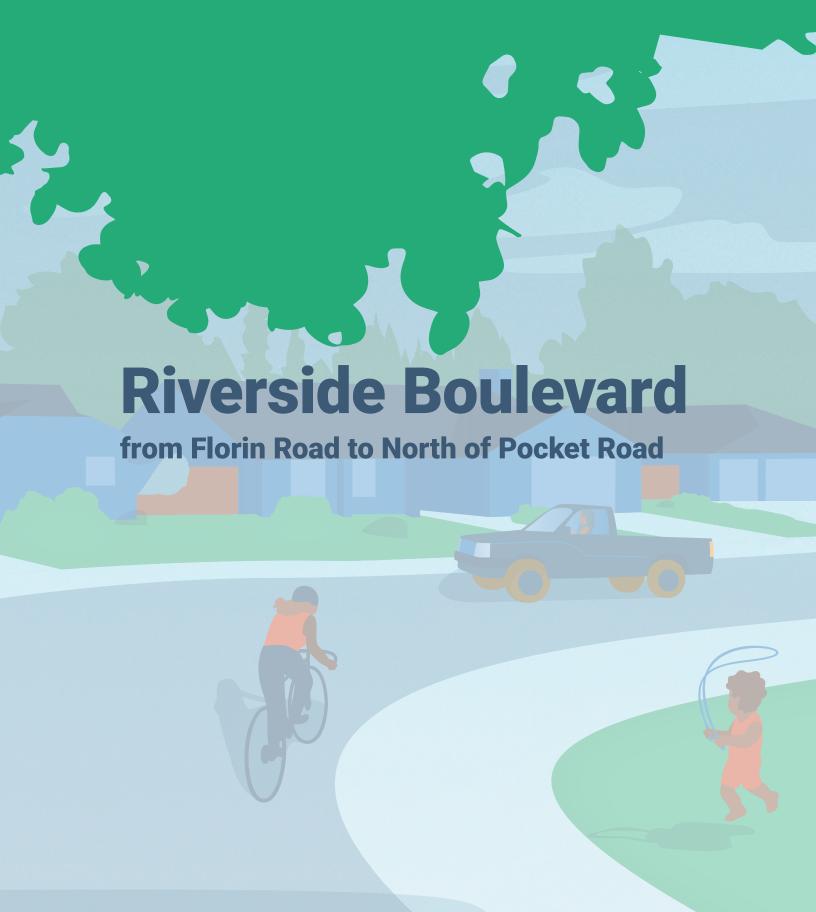
Changes to I-5 interchanges, including ramp intersections, are controlled by Caltrans and will require long-term coordination and approval.

Planning-level cost estimates are based on costs of comparable local projects at the time the plan was developed. Estimates may increase over time and are dependent on market rates at the time of project implementation. Detailed concept plans and unit costs are provided in Appendices D and E, respectively.

Average observed speeds reported for each segment were based on connected vehicle data collected in October 2019







Riverside Boulevard from Florin Road to North of Pocket Road

Description

Land use transitions from retail, a church, and other non-residential destinations at the north end to single-family residences directly accessing the street to the south. Traffic is heaviest at the north end, which is most near to I-5 and other destinations, and decreases to the south.

Key Issues

- Speeding drivers especially along curving street sections
- · Long distances between marked crosswalks

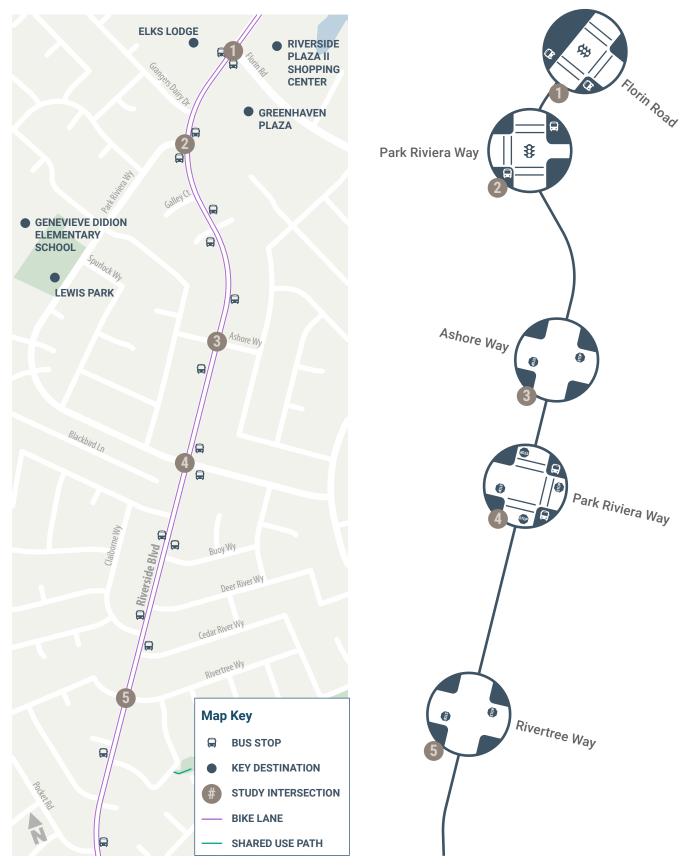
Destinations Along the Corridor

Parks	Schools	Retail Centers	Houses of Worship	Community Centers
• Lewis Park	Genevieve Didion Elementary School	Greenhaven PlazaRiverside Plaza II Shopping Center	River's Edge Church	• Elks Lodge

Key Statistics

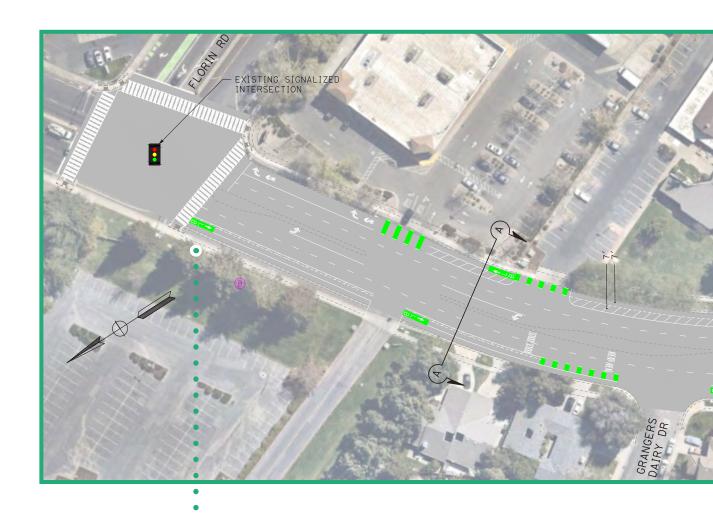
Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
25	26-38	9,700 - 14,500	11	4
mph	mph		feet	with raised median
Longest Distance	Bikeway	Number of Bus	Weekday Time	Number of School
Between Marked		Routes	Between Buses	Bus Routes
Crosswalks				

Existing Conditions



Conceptual Design for Riverside Boulevard from Florin Road to North of Pocket Road





Maintain existing co-located bus stops and marked crosswalks



Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes

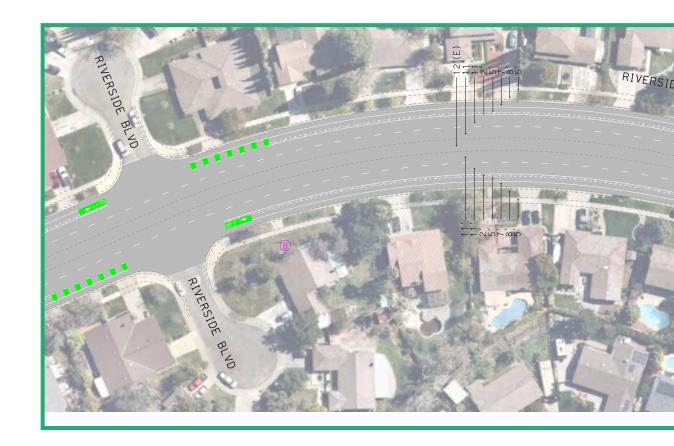
Location-Specific Recommendations



Maintain existing co-located bus stops and marked crosswalks

Conceptual Design for Riverside Boulevard from Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



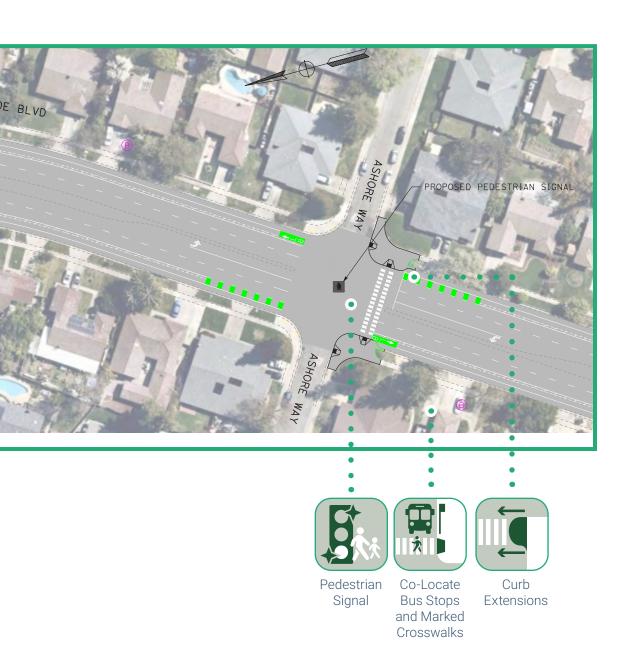
High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Pocket Greenhaven Transportation Plan

Conceptual Design for Riverside Boulevard from Florin Road to North of Pocket Road





Maintain existing co-located bus stops and marked crosswalks



Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



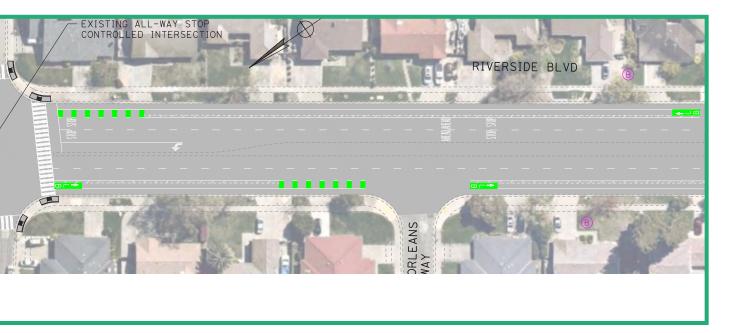
High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Conceptual Design for Riverside Boulevard from Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



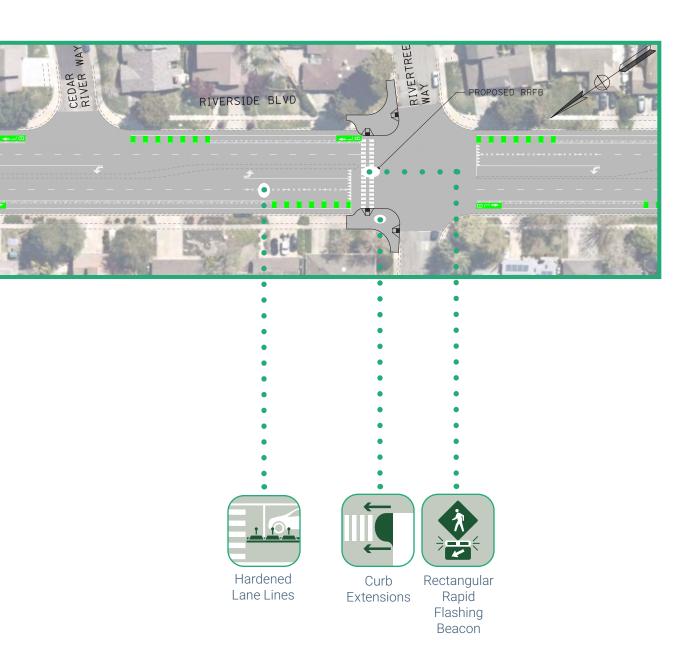
High-Visibility Crosswalk



Leading Pedestrian Interval

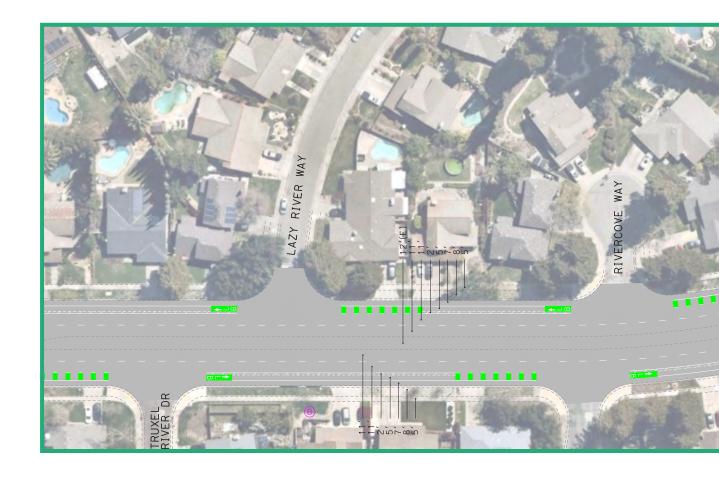


Narrow Lanes



Conceptual Design for Riverside Boulevard from Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Speed Feedback Sign

Cost Estimate for Riverside Boulevard from Florin Road to North of Pocket Road

\$6,300,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.



Pocket Road from Riverside Boulevard to West of Collins Isle Lane

Description

Corridor land use is primarily residential, with driveways connecting directly to Pocket Road and relatively low traffic volumes. Garcia Bend Park, near the south end of the corridor, is a popular recreational destination with access to the Sacramento River Parkway and boat ramp access to the river.

Key Issues

- Speeding drivers
- Long distances between marked crosswalks

Destinations Along the Corridor

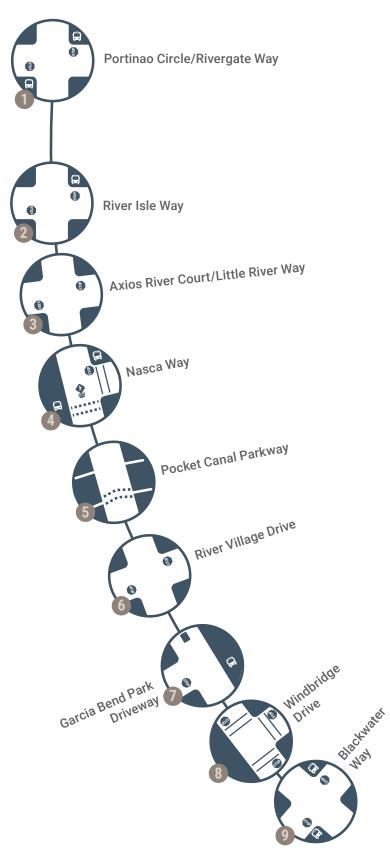
Parks	Schools	Shared Use Paths
 Garcia Bend Park Reginald Renfree Park Charter Pointe Park 	 Camellia Waldorf School Martin Luther King, Jr. K-8 School Matsuyama Elementary School 	 Pocket Canal Parkway Sacramento River Parkway

Key Statistics

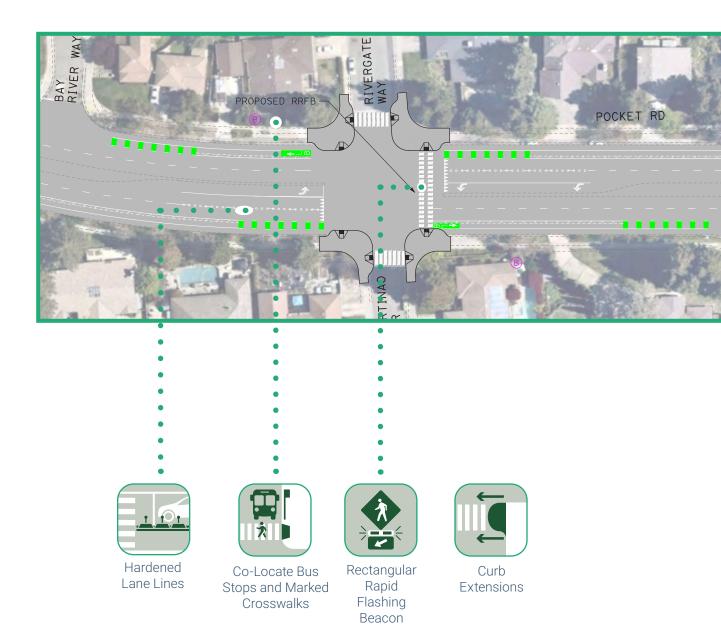
Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
40	35-42	7,000 to 7,200	11	4
mph	mph		feet	with raised median
Longest Distance	Bikeway	Number of Bus	Weekday Time	Number of School
Between Marked		Routes	Between Buses	Bus Routes
Crosswalks		Noutes	Detween Duses	Dus Routes

Existing Conditions











Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



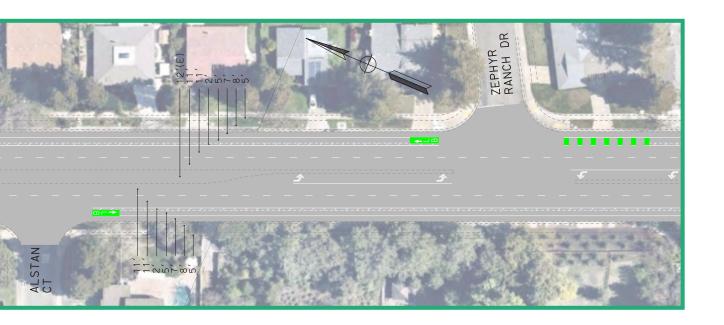
High-Visibility Crosswalk



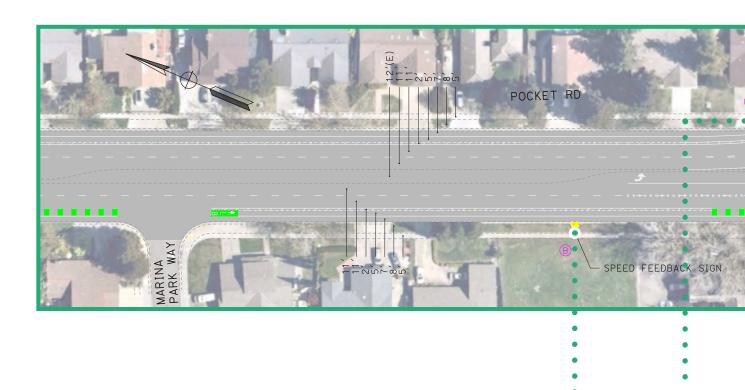
Leading Pedestrian Interval



Narrow Lanes









Speed Feedback Sign



Co-Locate Bus Stops and Marked Crosswalks



Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



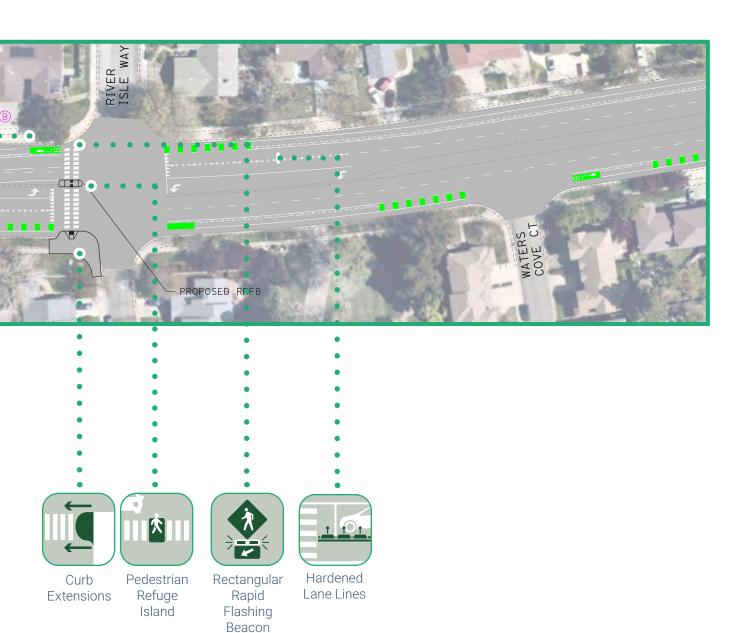
High-Visibility Crosswalk



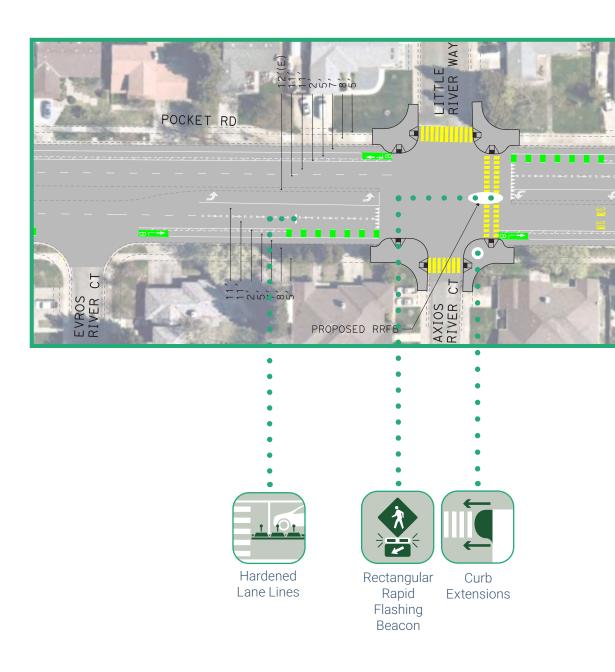
Leading Pedestrian Interval



Narrow Lanes









Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes

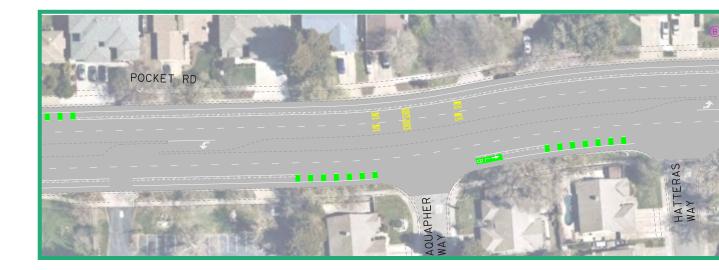
Location-Specific Recommendations



Maintain co-located bus stops and marked crosswalks

Maintain
existing
rectangular
rapid flashing
beacon







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



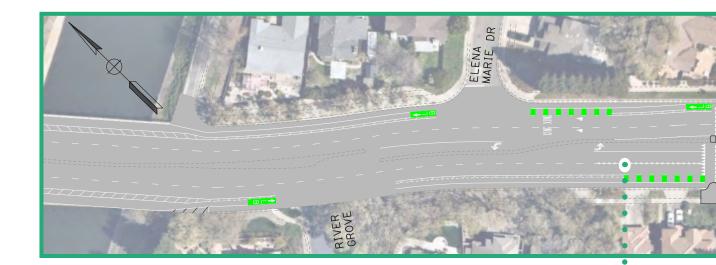


Speed Feedback Sign



Pedestrian Signal







Lane Lines



Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



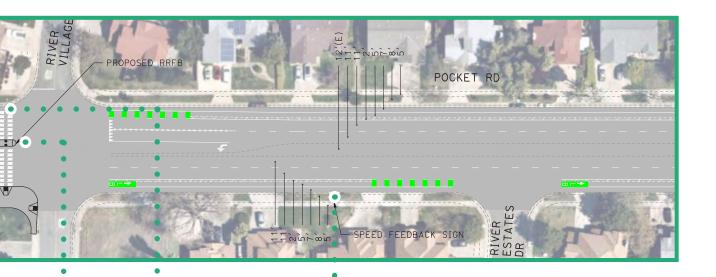
High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Pedestrian Refuge Island



Rectangular Rapid Flashing Beacon



Speed Feedback Sign







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



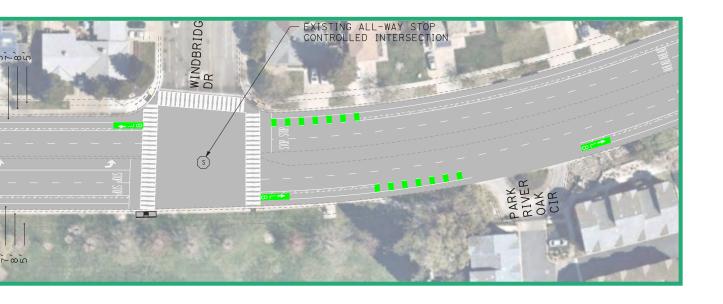
High-Visibility Crosswalk



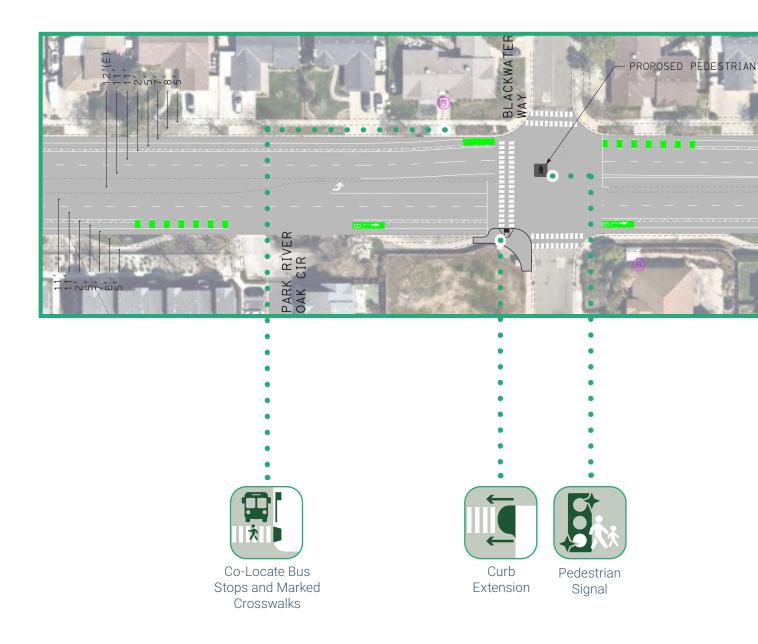
Leading Pedestrian Interval



Narrow Lanes









Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Speed Feedback Sign

Cost Estimate for Pocket Road from Riverside Boulevard to West of Collins Isle Lane

\$10,050,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.

Pocket Road from Collins Isle Lane to West of **Greenhaven Drive**

Pocket Greenhaven Transportation Plan 101

Pocket Road from Collins Isle Lane to West of Greenhaven Drive

Description

Corridor land use is primarily residential, with a shopping center and school at the east end. Residential driveways connect to Pocket Road indirectly through side streets. Shore Park provides access to the Sacramento River Parkway. Traffic volumes increase from west to east along the corridor.

Key Issues

- Speeding drivers
- · Long distances between marked crosswalks
- · Vehicle queuing at E. Lake Shore Drive

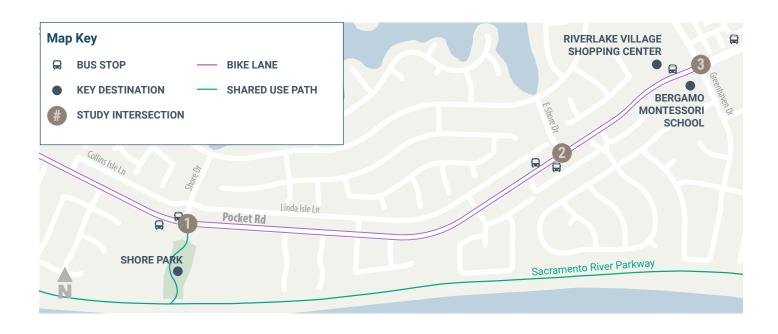
Destinations Along the Corridor

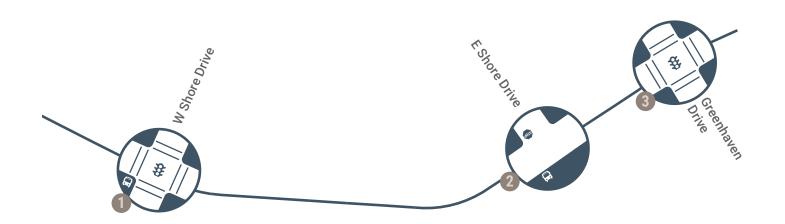
Parks	Schools	Retail Centers	Shared Use Paths	
Shore Park	Bergamo Montessori School	 Riverlake Village Shopping Center 	Sacramento River Parkway	

Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
40	33-40	7,900 to 12,600	13	4
mph	mph		feet	with raised median
Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
4,860	Bike lane	1	15	1
feet		#103	minutes	#226

Existing Conditions





Conceptual Design for Pocket Road from Collins Isle Lane to West of Greenhaven Drive







Bike Conflict Zone Marking



Bike Lane



Pedestrian Signal Head



Extended Signal Clearance Time



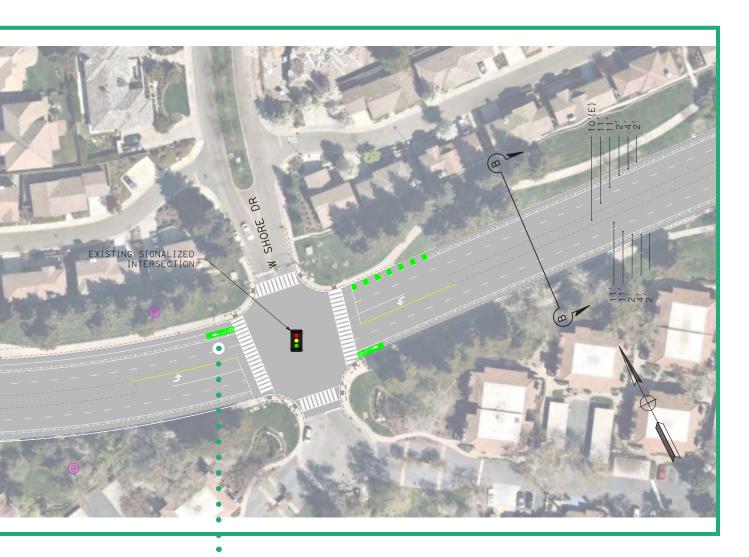
High-Visibility Crosswalk



Leading Pedestrian Interval



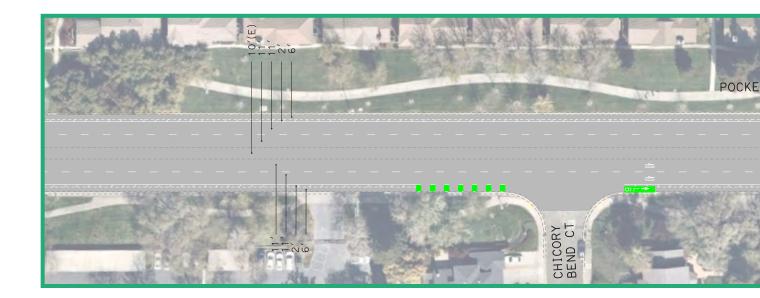
Lanes



Maintain colocated bus stops and marked crosswalks

Conceptual Design for Pocket Road from Collins Isle Lane to West of Greenhaven Drive







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



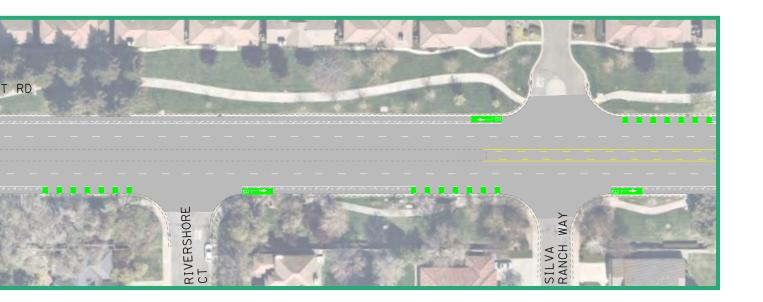
High-Visibility Crosswalk



Leading Pedestrian Interval

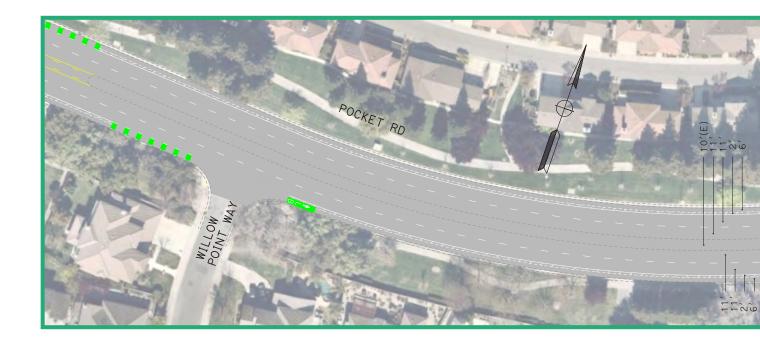


Narrow Lanes



Conceptual Design for Pocket Road from Collins Isle Lane to West of Greenhaven Drive







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



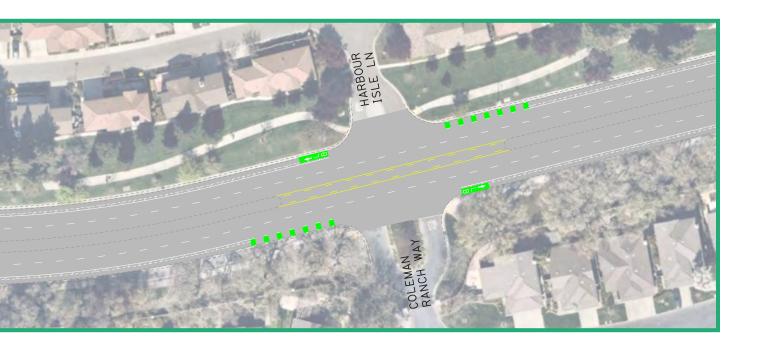
High-Visibility Crosswalk



Leading Pedestrian Interval

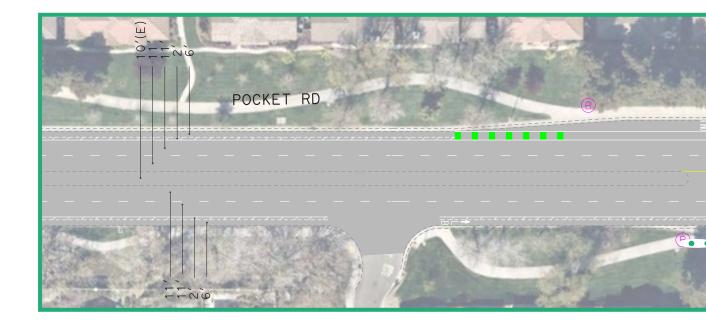


Lanes



Conceptual Design for Pocket Road from Collins Isle Lane to West of Greenhaven Drive







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



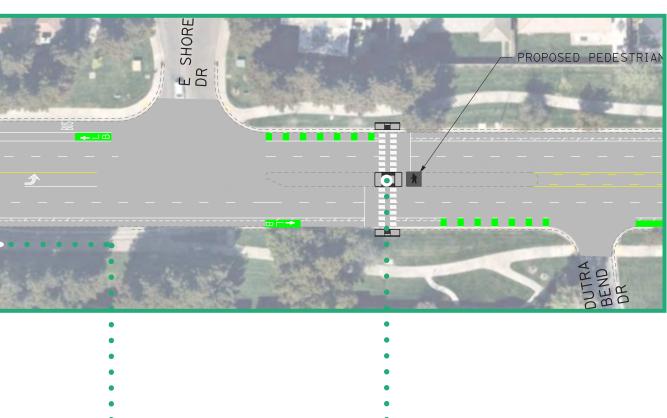
High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Co-Locate Bus Stops and Marked Crosswalks



Pedestrian Signal

Conceptual Design for Pocket Road from Collins Isle Lane to West of Greenhaven Drive







Bike Conflict Zone Marking



Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk

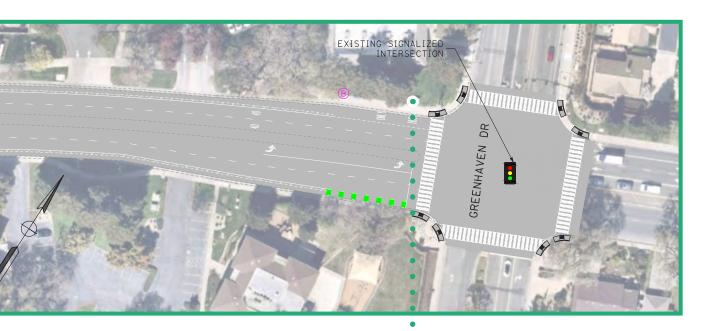


Leading Pedestrian Interval



Narrow Lanes

Location-Specific Recommendations



Maintain colocated bus stops and marked crosswalks

Cost Estimate for Pocket Road from Collins Isle Lane to West of Greenhaven Drive

\$5,250,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.



Gloria Drive from West of Florin Road to Rush River Drive

Description

Corridor land use is all residential, with driveways accessing the street directly. The School of Engineering and Sciences, Robbie Waters Pocket-Greenhaven Library, and Sojourner Truth Park are located 250 feet east of the intersection of Gloria Drive and Rush River Drive, just east of the corridor.

Key Issues

- Speeding drivers especially along curving segments
- Long distances between marked crosswalks
- Student safety

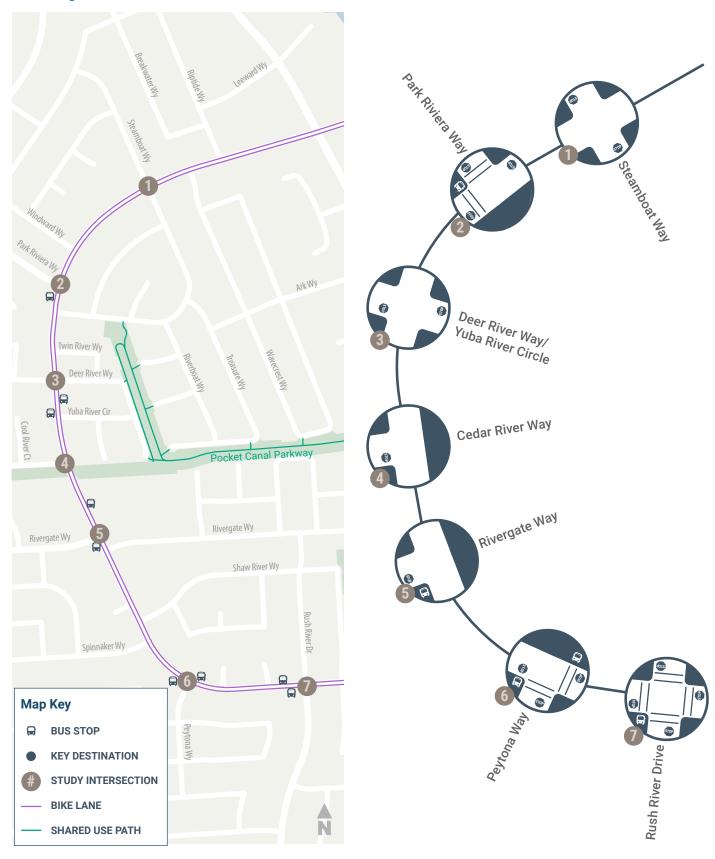
Destinations Along the Corridor

Parks	Schools	Community Centers	Shared Use Paths
Sojourner Truth Park (250 feet east)	School of Engineering and Sciences (250 feet east)	Robbie Waters Pocket-Greenhaven Library (250 feet east)	Pocket Canal Parkway

Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
35 mph	23-29 mph	4,000 to 4,100	13 feet	2
Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes

Existing Conditions



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive





Extended Signal Clearance Time



Countdown Pedestrian Signal Head



Leading Pedestrian Interval







Bike Conflict Zone Marking



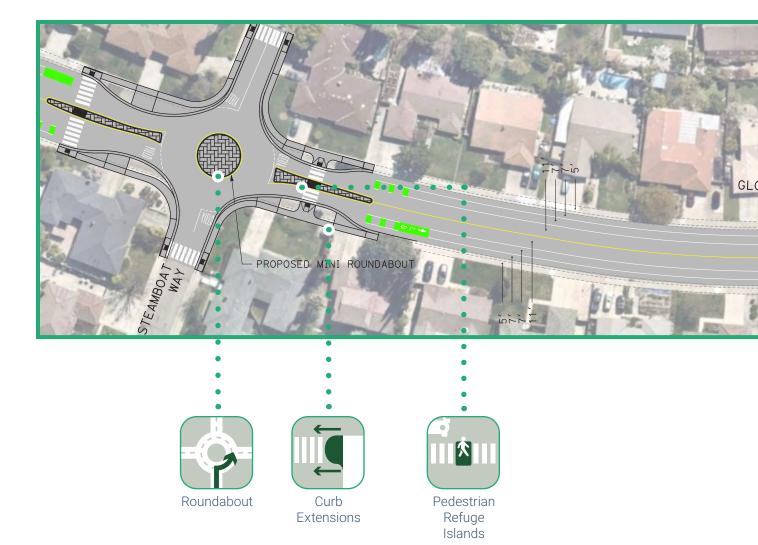
High-Visibility Crosswalk



Lanes



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive









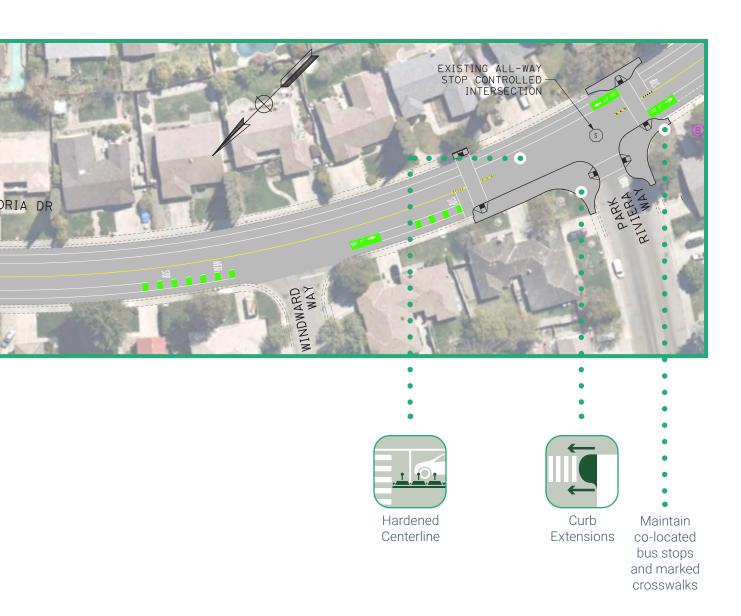
Bike Conflict Zone Marking



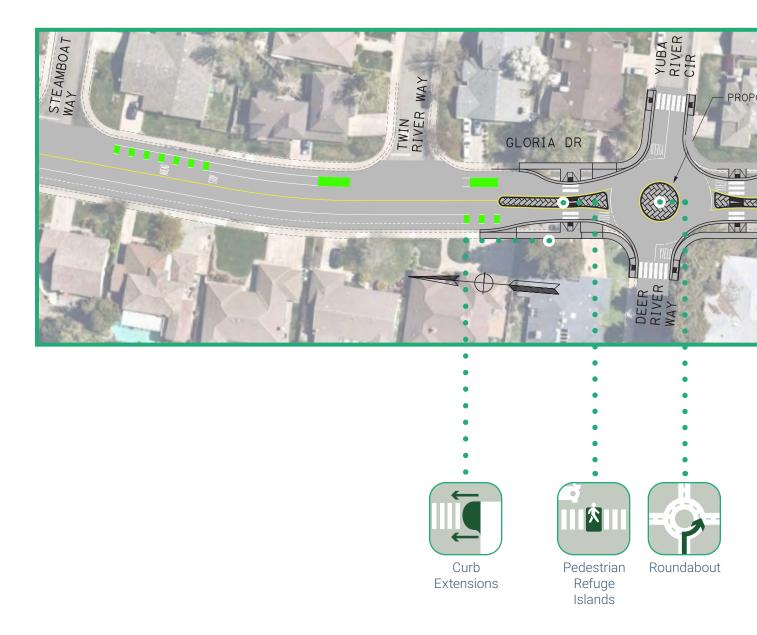
High-Visibility Crosswalk



Lanes



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive





Advanced Yield/ Stop Markings



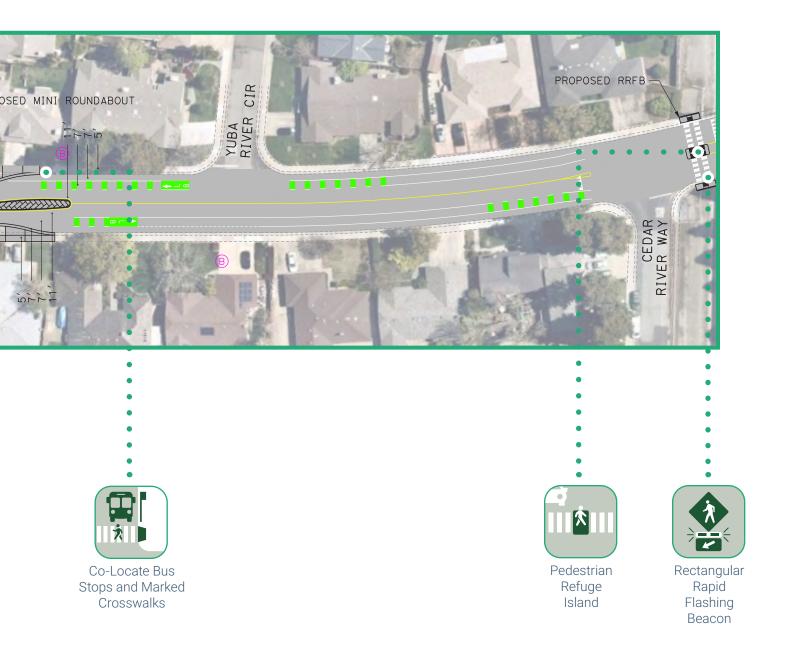
Bike Conflict Zone Marking



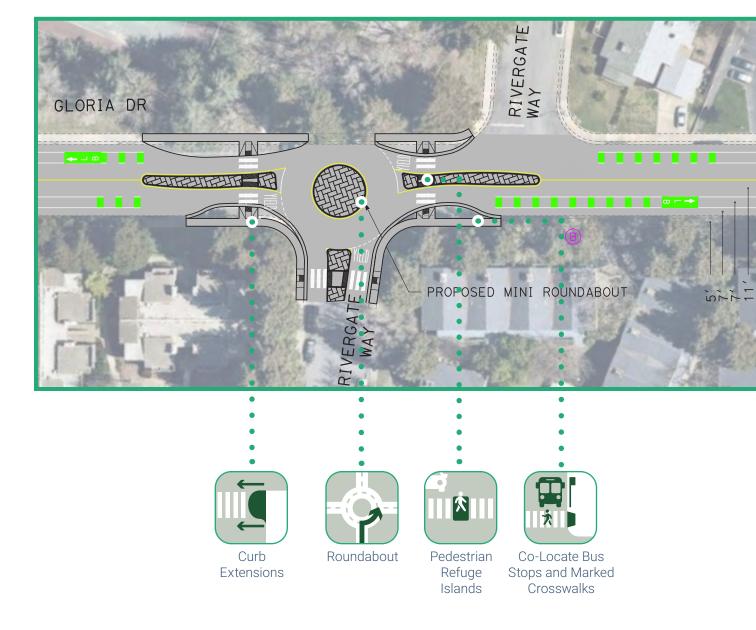
High-Visibility Crosswalk



Lanes



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive









Bike Conflict Zone Marking



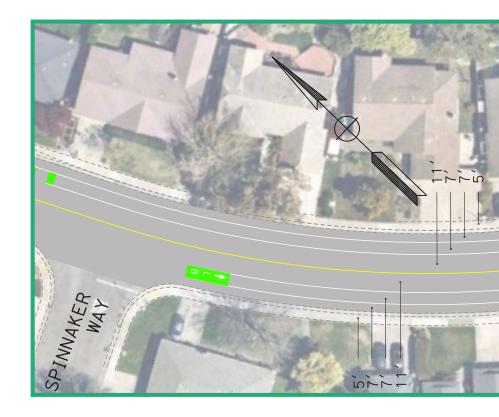
High-Visibility Crosswalk



Lanes



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive









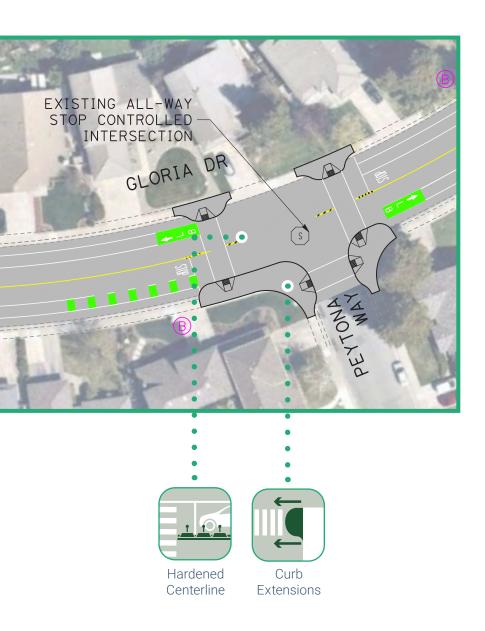
Bike Conflict Zone Marking



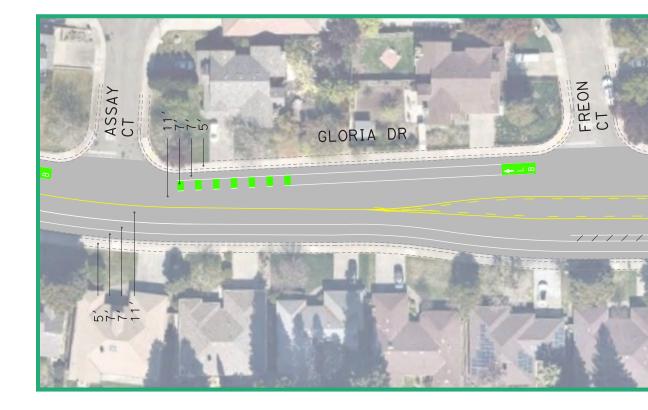
High-Visibility Crosswalk



Lanes



Conceptual Design for Gloria Drive from West of Florin Road to Rush River Drive









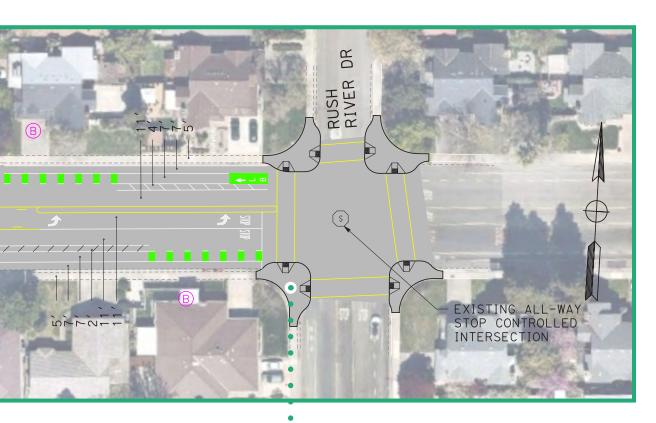
Bike Conflict Zone Marking



High-Visibility Crosswalk



Lanes





Cost Estimate for Gloria Drive from West of Florin Road to Rush River Drive

\$5,650,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

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Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.

Rush River Drive from Windbridge Drive to West of Greenhaven Drive

Rush River Drive from Windbridge Drive to West of Greenhaven Drive

Description

Mostly residential land use, including senior housing. Driveways mostly access the corridor indirectly from side streets, with the exception of some homes at the east end of the corridor. Speed limit is reduced to 25 mph in the middle of the corridor where most of the senior housing is located.

Key Issues

- Speeding drivers especially along curving segments
- Long distances between marked crosswalks
- Pedestrian access to bus stops
- Senior citizen safety
- Student safety

Destinations Along the Corridor

Schools	Senior Housing	Retail Centers
Montessori Country Day School	 Revere Court Memory Care ACC Care Center Hellenic Senior Center Greenhaven Estates Assisted Living and Memory Care 	Promenade Shopping Center

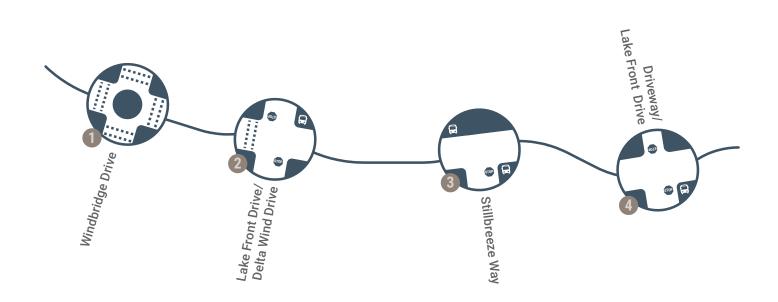
Key Statistics

age Observed Da d			Number of Travel Lanes
8,5		eet	2 with two-way left turn lane
	ď	d L 8,500	d Lane Width 8,500 15 feet

Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
4,060	Bike lane	4	30	3
feet		#56, #62, #106, #107	minutes	#227, #228, #248

Existing Conditions





Conceptual Design for Rush River Drive from Windbridge Drive to West of Greenhaven Drive



Existing Roundabout and Pedestrian Refuge Islands



Bike Conflict Zone Marking



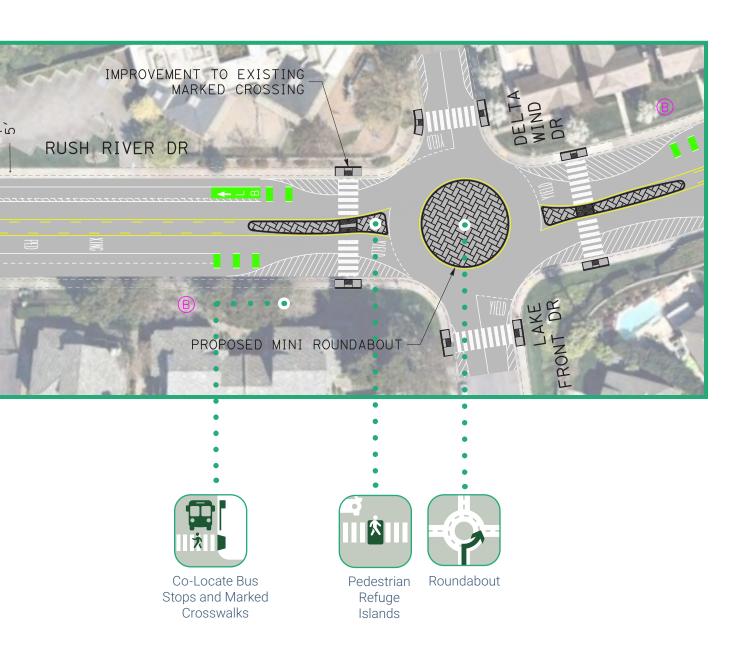
Buffered Bike Lanes



High-Visibility Crosswalk



Lanes



Conceptual Design for Rush River Drive from Windbridge Drive to West of Greenhaven Drive





Bike Conflict Zone Marking



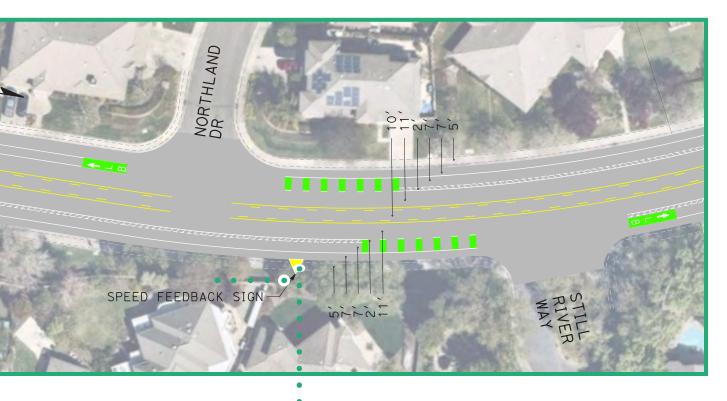
Buffered Bike Lanes



High-Visibility Crosswalk



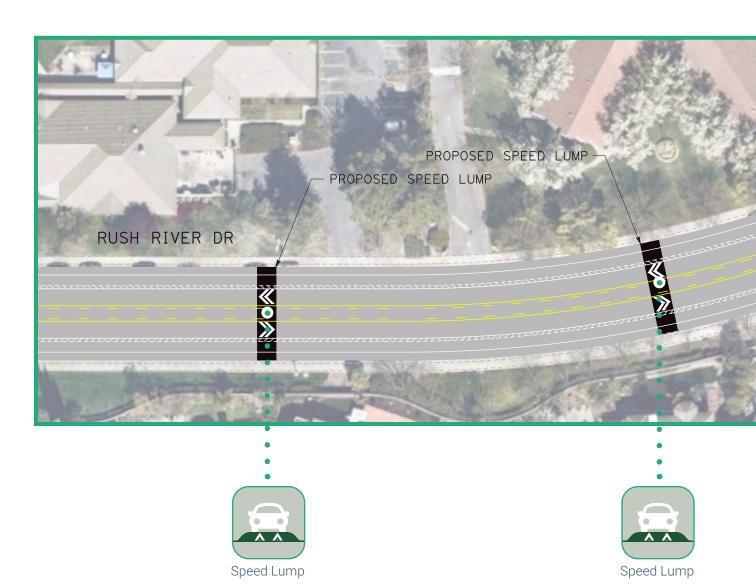
Lanes





Speed Feedback Sign

Conceptual Design for Rush River Drive from Windbridge Drive to West of Greenhaven Drive





Bike Conflict Zone Marking



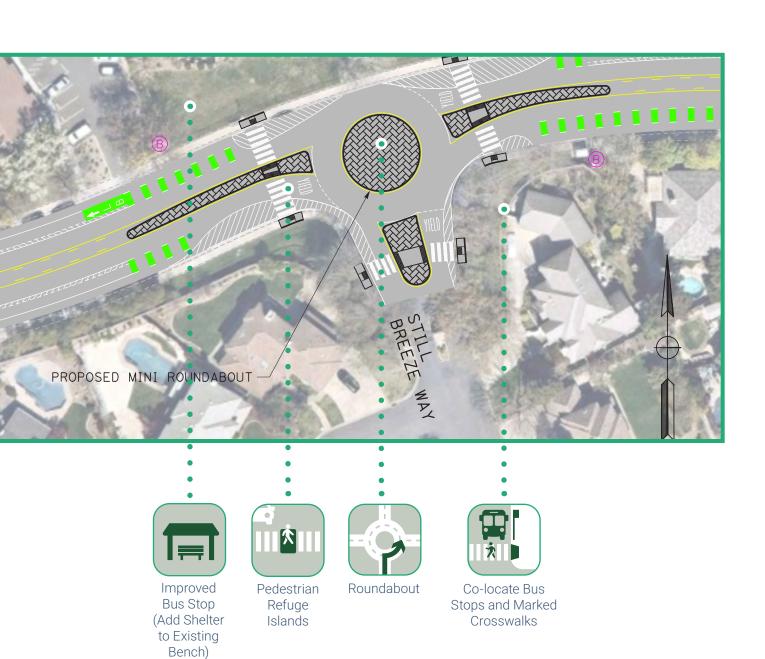
Buffered Bike Lanes



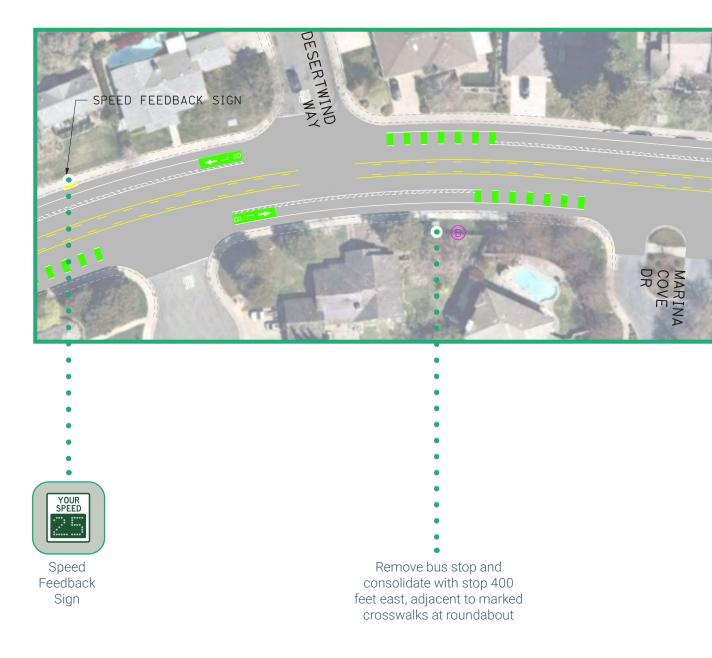
High-Visibility Crosswalk



Lanes



Conceptual Design for Rush River Drive from Windbridge Drive to West of Greenhaven Drive









Buffered Bike Lanes



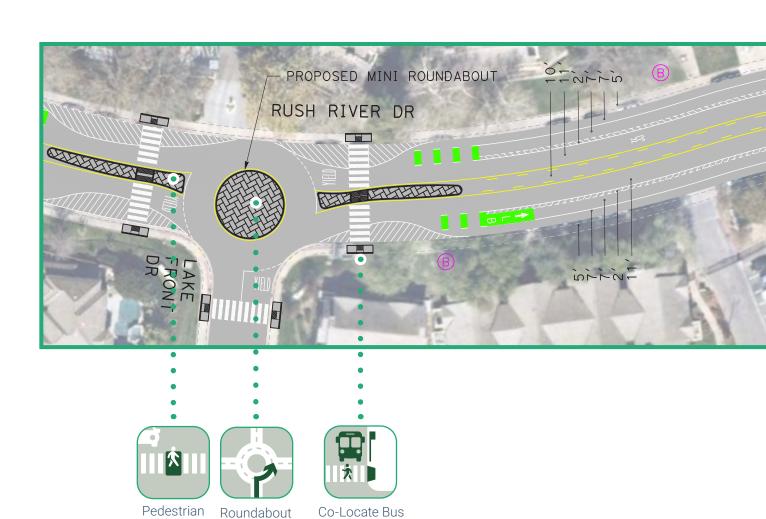
High-Visibility Crosswalk



Lanes



Conceptual Design for Rush River Drive from Windbridge Drive to West of Greenhaven Drive



Stops and Marked

Crosswalks

Refuge

Islands



Bike Conflict Zone Marking



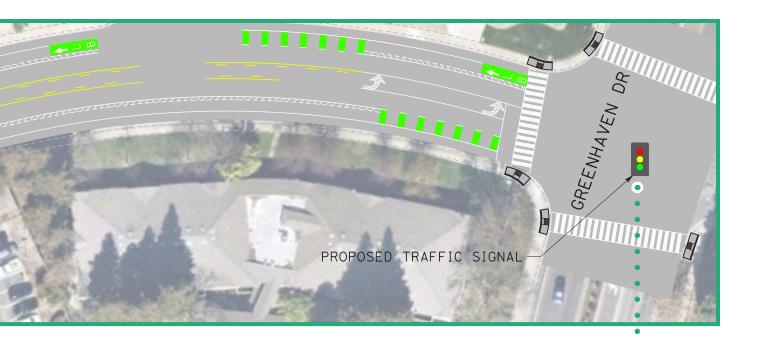
Buffered Bike Lanes



High-Visibility Crosswalk



Lanes





Extended Signal Clearance Time



Countdown Pedestrian Signal Heads



Leading Pedestrian Interval



Advanced Stop Lines



High-Visibility Crosswalks



New Traffic Signal

Cost Estimate for Rush River Drive from Windbridge Drive to West of Greenhaven Drive

\$5,800,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.



Florin Road from Gloria Drive to I-5

Description

Mix of land uses along a connection to I-5. Mix of access, including some single-family homes with driveways directly onto Florin Road.

Key Issues

- Speeding drivers
- · Long distances between marked crosswalks
- Safe interactions among those walking, bicycling, and driving at signalized intersections
- Student access and safety
- Bicycling access across I-5
- The City will make changes up to the Caltrans I-5 interchange right-of-way. Changes in the interchange right-of-way are the responsibility of Caltrans..

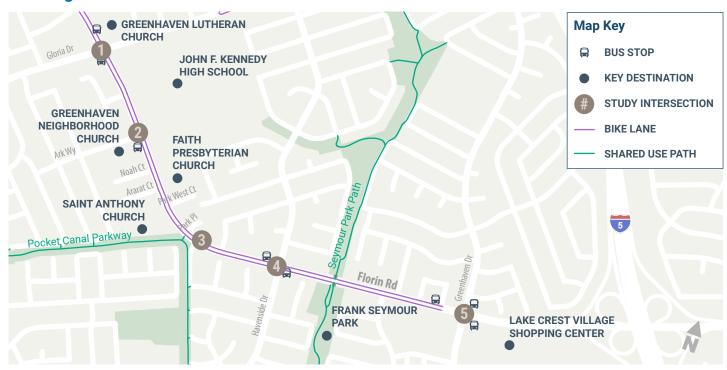
Destinations Along the Corridor

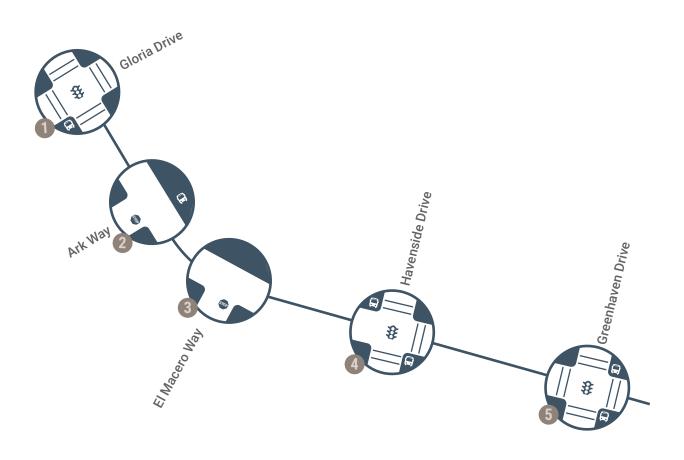
Schools	Parks	Retail Centers	Shared Use Paths	Houses of Worship
John F. Kennedy High School	Frank Seymour Park	Lake Crest Village Shopping Center	 Pocket Canal Parkway Seymour Park Path 	 Faith Presbyterian Church Greenhaven Lutheran Church Greenhaven Neighborhood Church Saint Anthony Church

Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
40 mph	32-36 mph	11,900 to 33,900	14 feet	4 with raised median
Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
3,440 feet	Bike lane west of Greenhaven Drive, none east of Greenhaven Drive	1 #81	15 minutes	2 #246, #247

Existing Conditions





Conceptual Design for Florin Road from Gloria Drive to I-5







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Lanes





Co-Locate Bus Stops and Marked Crosswalks



Pedestrian Signal



Curb Extensions

Conceptual Design for Florin Road from Gloria Drive to I-5







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes

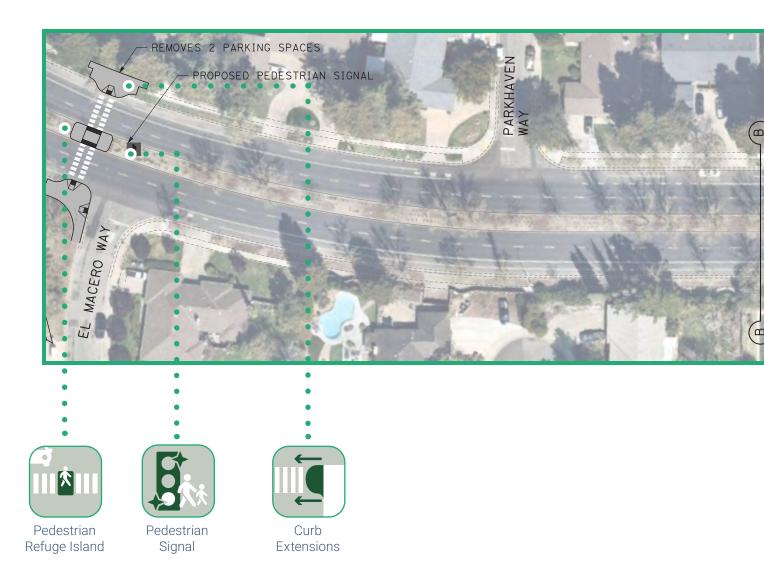




Speed Feedback Sign

Conceptual Design for Florin Road from Gloria Drive to I-5







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Conceptual Design for Florin Road from Gloria Drive to I-5







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Speed Feedback Sign

Conceptual Design for Florin Road from Gloria Drive to I-5







Bike Conflict Zone Marking



Buffered Bike Lane



Countdown Pedestrian Signal Head



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes





Extend Bike Lanes to Intersection

Cost Estimate for Florin Road from Gloria Drive to 1-5

\$7,300,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

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Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.

Greenhaven Drive

from Riverside Boulevard to North of **Florin Road**

Greenhaven Drive from Riverside Boulevard to North of Florin Road

Description

Residential land use with an elementary school. Residential driveways access the corridor directly. Greenhaven Drive is a major collector and serves as a cut-through between 43rd Avenue, Gloria Drive, and Florin Road. Very wide (20-foot) lanes in some sections.

Key Issues

- Speeding drivers
- · Long distances between marked crosswalks
- Student access and safety

Destinations Along the Corridor

Schools	Parks	Shared Use Paths
Caroline Wenzel Elementary School	Frank Seymour Park	Seymour Park Path

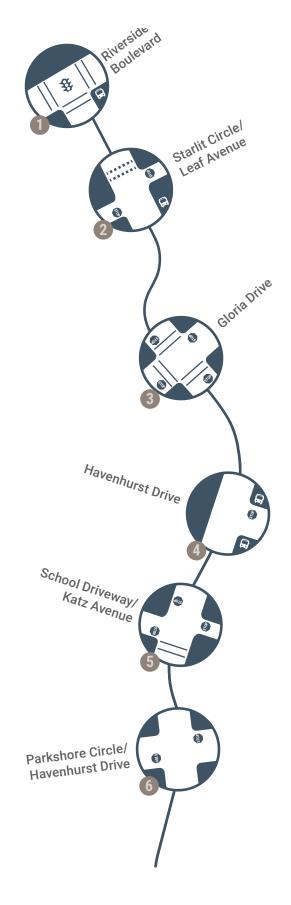
Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
35 mph	30-32 mph	6,100 to 9,500	20 feet	2 with two-way left turn lane south of Gloria Drive

Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
2,490	Bike lane	3	15	2
feet		#102, #103, #106	minutes	#226, #228

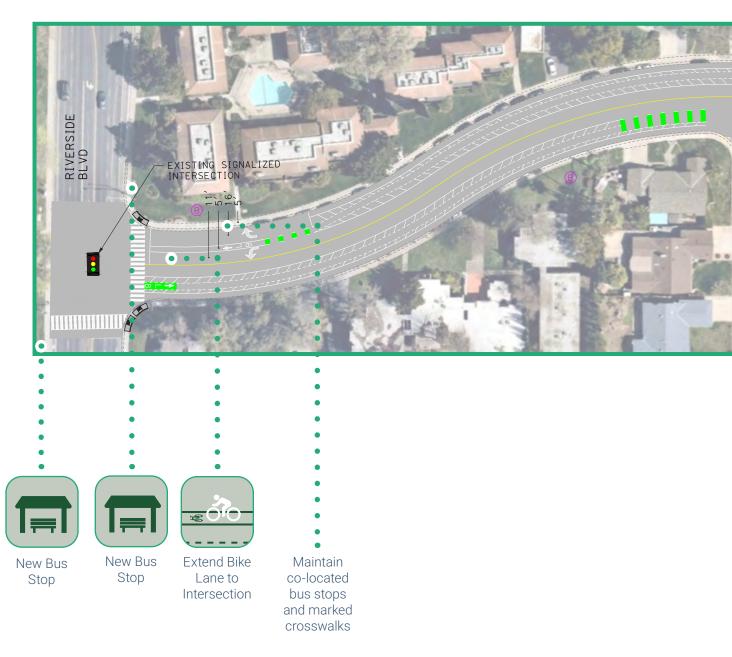
Existing Conditions





Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road







Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



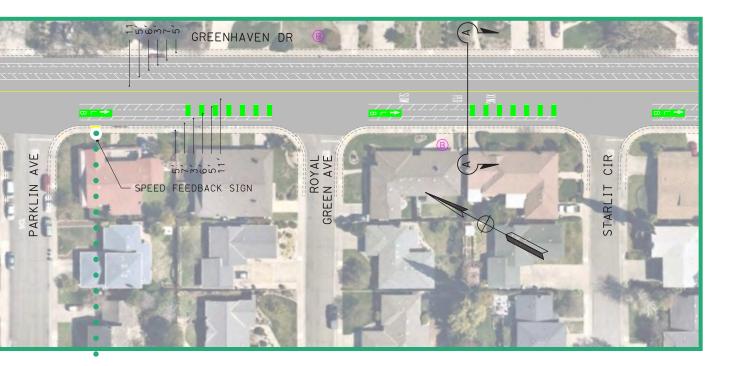
Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head

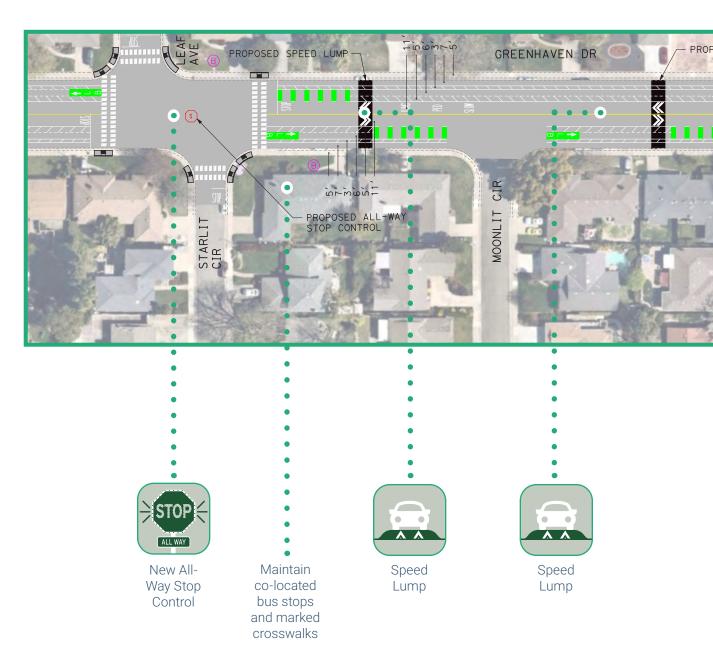




Speed Feedback Sign

Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road







Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



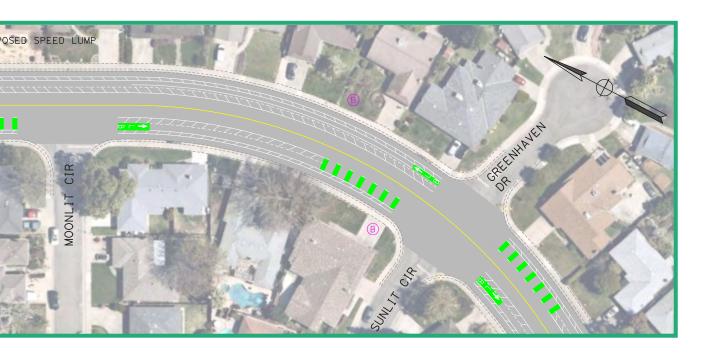
Leading Pedestrian Interval



Narrow Lanes



Signal Head



Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road





Maintain co-located bus stops and marked crosswalks



Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head

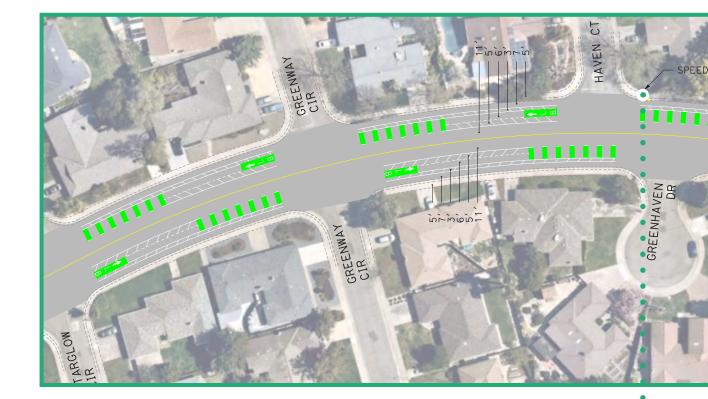




Speed Feedback Sign

Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road







Speed Feedback Sign



Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



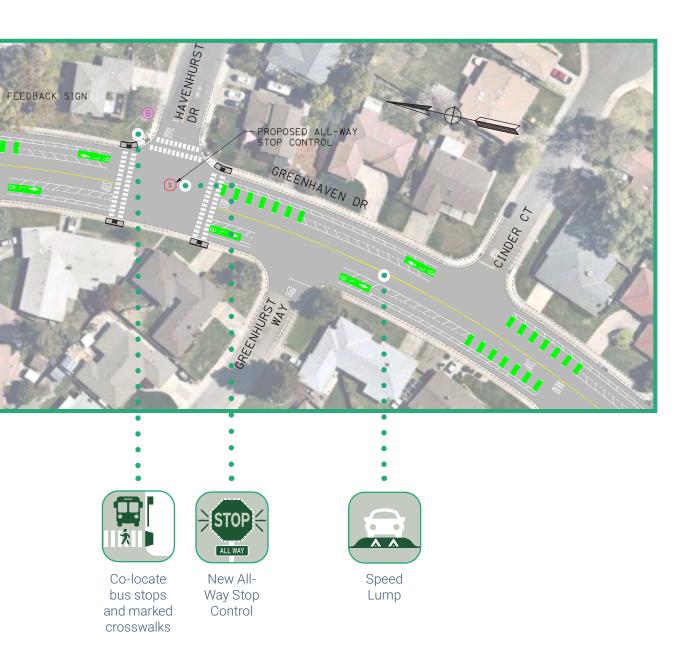
Leading Pedestrian Interval



Narrow Lanes

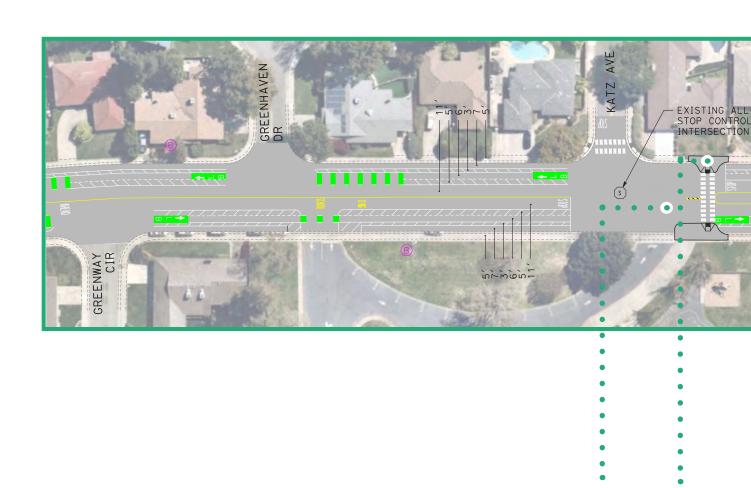


Countdown Pedestrian Signal Head



Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road





Curb Extensions



Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



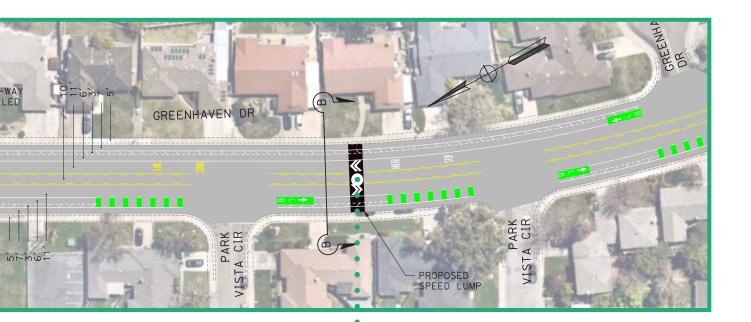
Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head

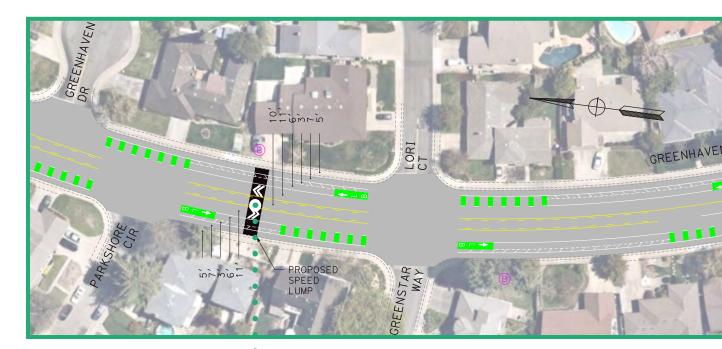




Lump

Conceptual Design for Greenhaven Drive from Riverside Boulevard to North of Florin Road









Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



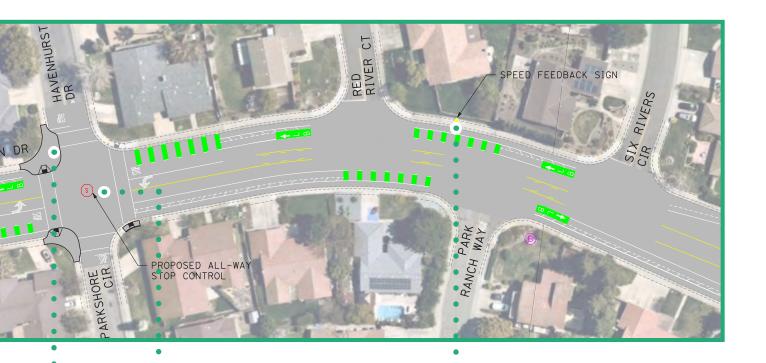
Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head





Curb Extensions



New All-Way Stop Control



Speed Feedback Sign

Cost Estimate for Greenhaven Drive from Riverside Boulevard to North of Florin Road

\$5,950,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

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Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.

Greenhaven Drive from South of Florin Road to North of Pocket Road

Greenhaven Drive from South of Florin Road to North of Pocket Road

Description

Mix of residential, retail, and office land uses with an elementary school. Few driveways access the corridor directly.

Key Issues

- Walking and bicycling access between Pocket Canal Parkway and Lake Crest Village Shopping Center
- Speeding drivers

Destinations Along the Corridor

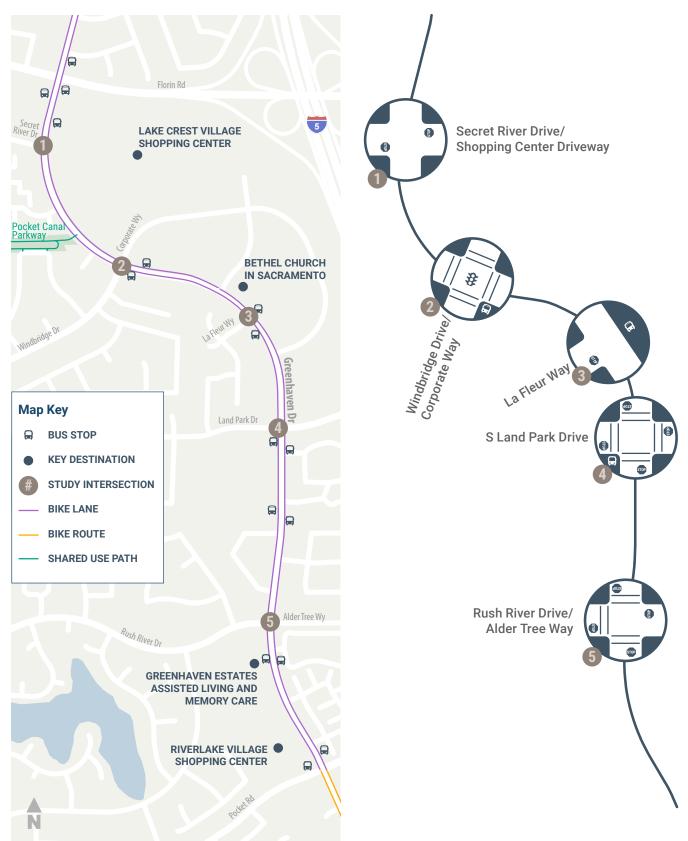
Senior Housing	Retail Centers	Shared Use Paths	Houses of Worship
Greenhaven Estates Assisted Living and Memory Care	Lake Crest Village Shopping CenterRiverlake Village Shopping Center	Pocket Canal Parkway	Bethel Church in Sacramento

Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
35 mph	25-30 mph	8,200 to 19,200	15 feet	4 with raised median 2 or 4 with two-way left turn lane

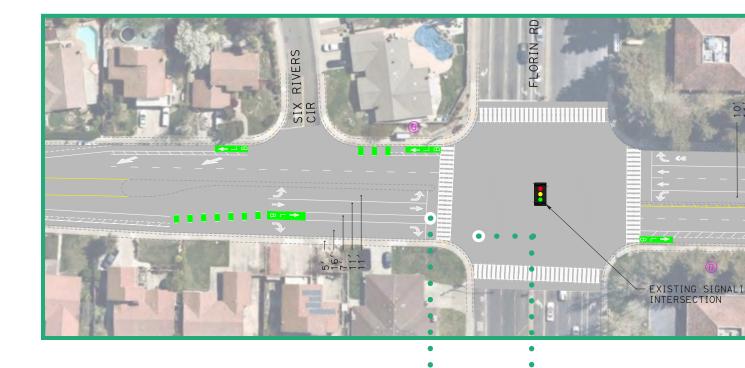
Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
1,990 feet	Bike lane	4 #56, #62, #106, #107	30 minutes	4 #227, #228, #246, #248

Existing Conditions



Conceptual Design for Greenhaven Drive from South of Florin Road to North of Pocket Road







Maintain co-located bus stops and marked crosswalks



Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head

Location-Specific Recommendations





Co-locate Bus Stops Crosswalks

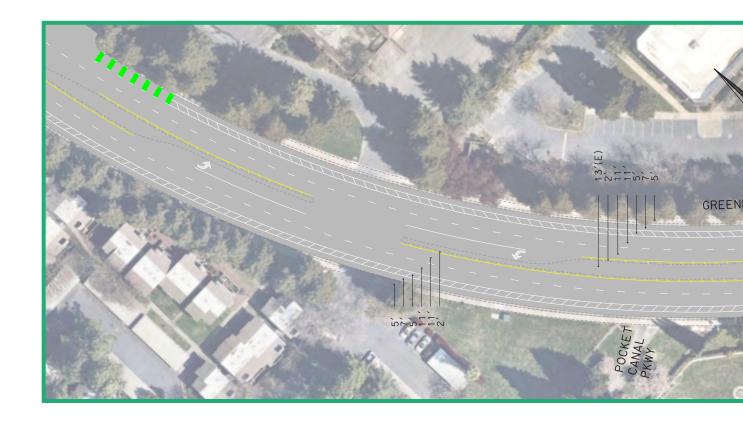
Marked crosswalk provides connection to Pocket Canal and Marked Parkway via sidewalks and bike route on Secret River Drive and Long River Drive



New Traffic Signal

Conceptual Design for Greenhaven Drive from South of Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval

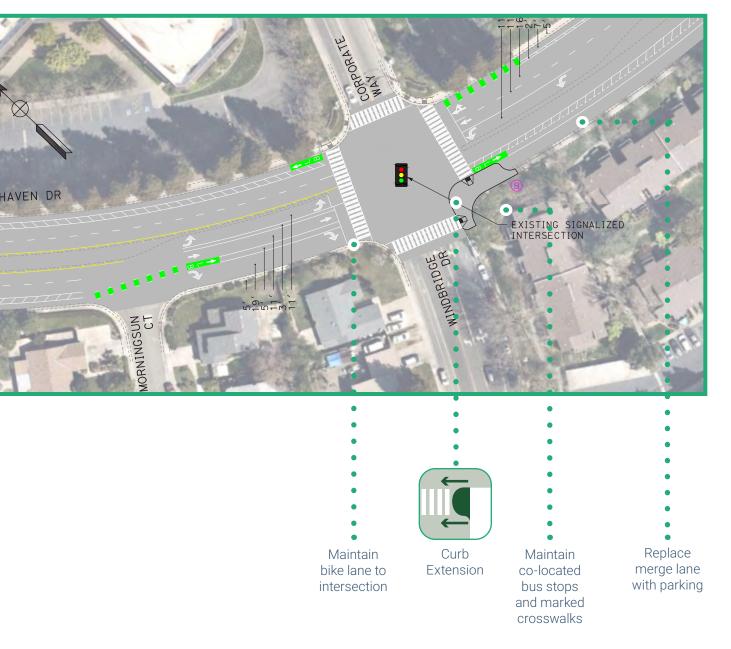


Narrow Lanes



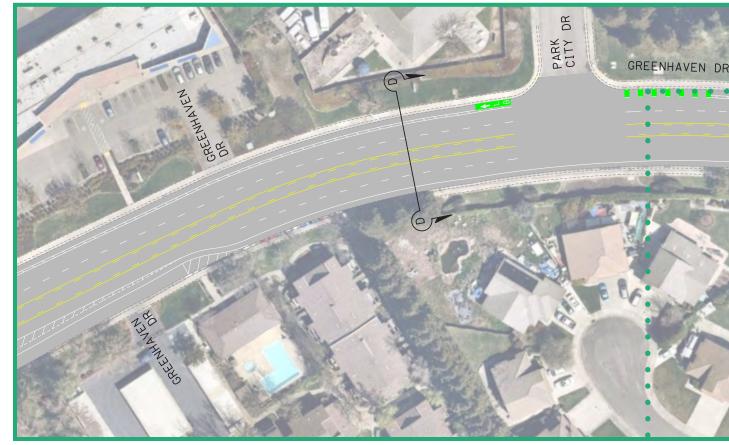
Countdown Pedestrian Signal Head

Corridor-Wide Recommendations



Conceptual Design for Greenhaven Drive from South of Florin Road to North of Pocket Road







Rectangular Rapid Flashing Beacon



Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Signal Head

Corridor-Wide Recommendations





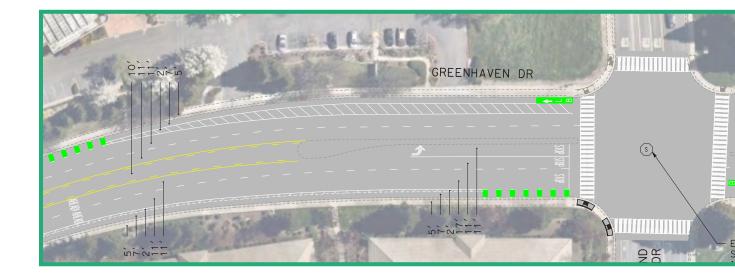
Pedestrian Refuge Island



Co-locate **Bus Stops** and Marked Crosswalks

Conceptual Design for Greenhaven Drive from South of Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



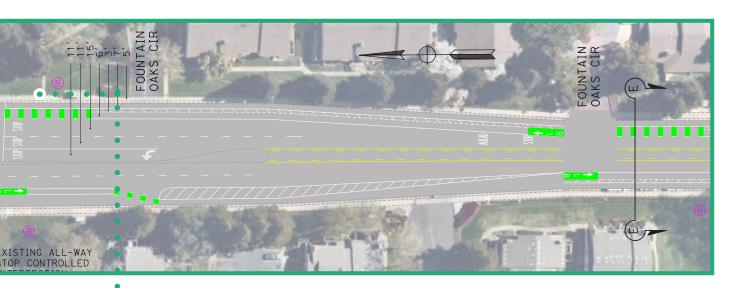
Narrow Lanes



Countdown Pedestrian Signal Head

Corridor-Wide Recommendations

Location-Specific Recommendations



Maintain co-located bus stops and marked crosswalks

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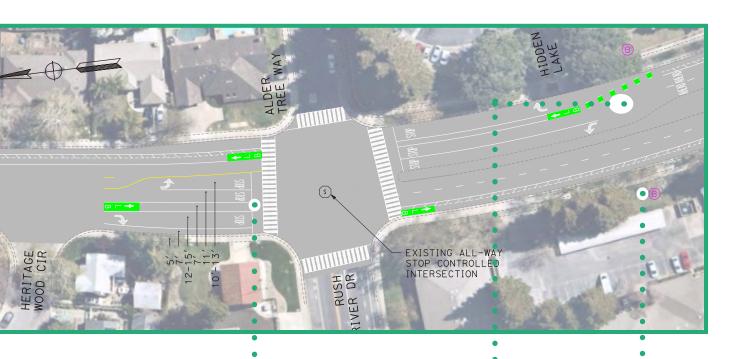
Narrow Lanes



Countdown Pedestrian Signal Head

Corridor-Wide Recommendations

Location-Specific Recommendations





Extend Bike Lane to Intersection



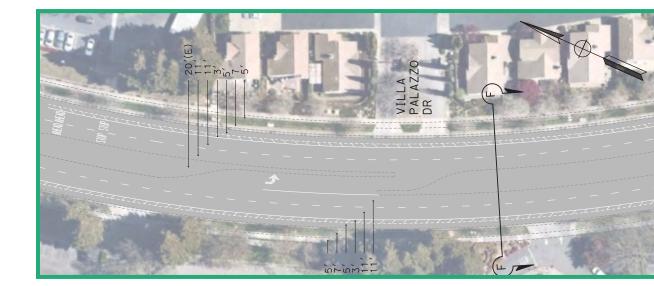
crosswalks



Improve Bus Stop (add shelter and bench)

Conceptual Design for Greenhaven Drive from South of Florin Road to North of Pocket Road







Bike Conflict Zone Marking



Buffered Bike Lane



Extended Signal Clearance Time



High-Visibility Crosswalk



Leading Pedestrian Interval



Narrow Lanes



Countdown Pedestrian Signal Head

Corridor-Wide Recommendations

Location-Specific Recommendations



Maintain co-located bus stops and marked crosswalks

Cost Estimate for Greenhaven Drive from South of Florin Road to North of Pocket Road

\$7,150,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

Actual project costs will be determined by surveyed base mapping, geotechnical reports, concept refinement, environmental reviews, right of way availability, project phasing, and bid conditions at the time of advertisement. Project costs should be reviewed prior to any grant application or initiation of a Capital Improvement Project to revalidate and update the assumptions in this study as necessary.

Right of Way

In addition to construction costs, right of way costs were assumed that include temporary construction easements for items such driveway modifications, curb ramps reconstruction, signal equipment poles and cabinets. It was assumed that each project could be constructed almost exclusively within the roadway prism and right of way acquisition would not be needed along the entire project frontage. Further refinement of the base mapping in subsequent phases of design will more accurately identify specific right of way needs.

Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.

Genevieve Didion K-8 School Area

Genevieve Didion K-8 School Area

Description

The school and adjacent Lewis Park lie within a residential neighborhood. Vehicle access to the school is primarily from Riverside Boulevard via Park Riviera Way and several adjoining streets. Park Riviera Way has very wide (20-foot) lanes.

Key Issues

- Student safety
- Cut-through drivers on residential streets
- Driver queuing during school pickup and drop-off periods
- Sidewalk gap on north side of Park Riviera Way immediately east of Lewis Park

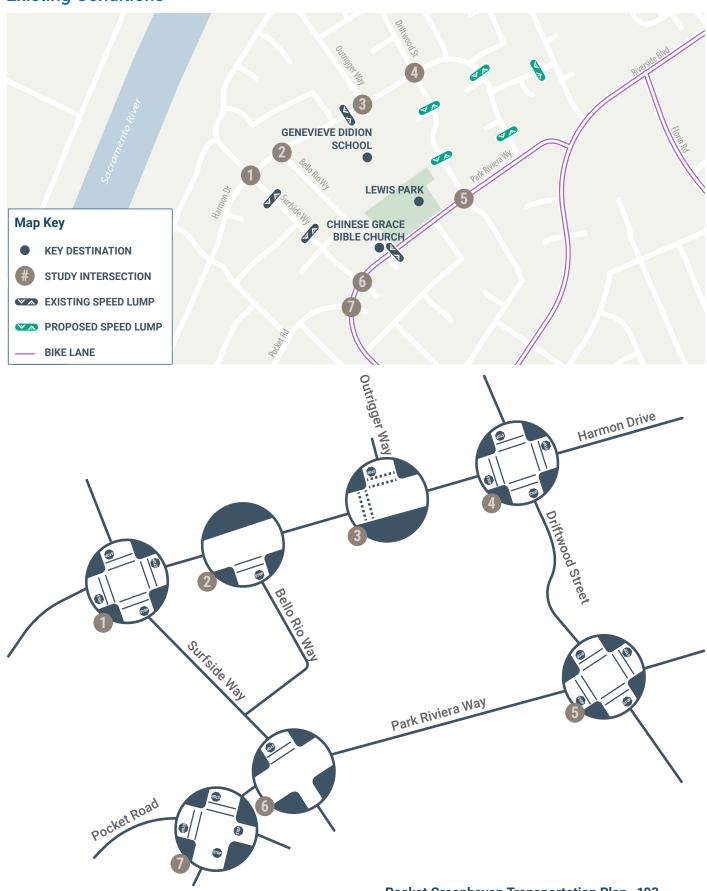
Destinations In the Area

Schools	Parks	Houses of Worship
Genevieve Didion K-8 School	• Lewis Park	Chinese Grace Bible Church

Key Statistics

Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
25 mph	No data	No data	20 feet	2
Longest Distance Between Marked Crosswalks	Bikeway	Number of Bus Routes	Weekday Time Between Buses	Number of School Bus Routes
990 feet	Bike lane on Park Riviera Way, none on other streets	None	None	None

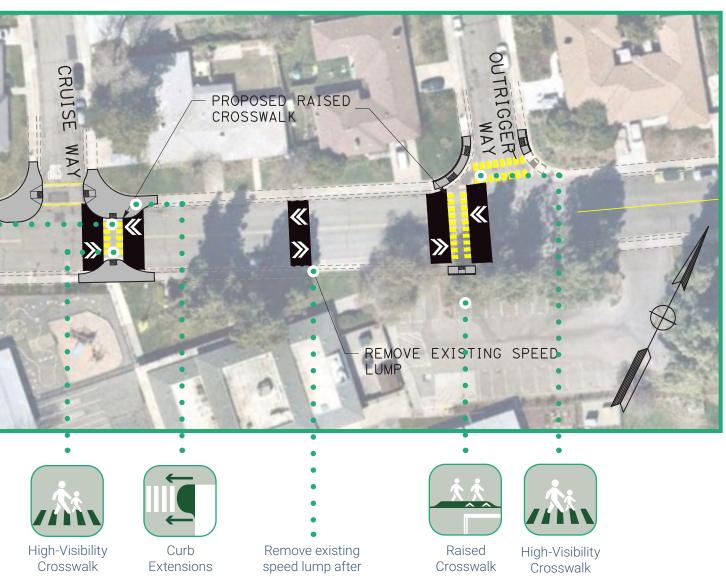
Existing Conditions



Conceptual Design for Genevieve Didion K-8 School Area

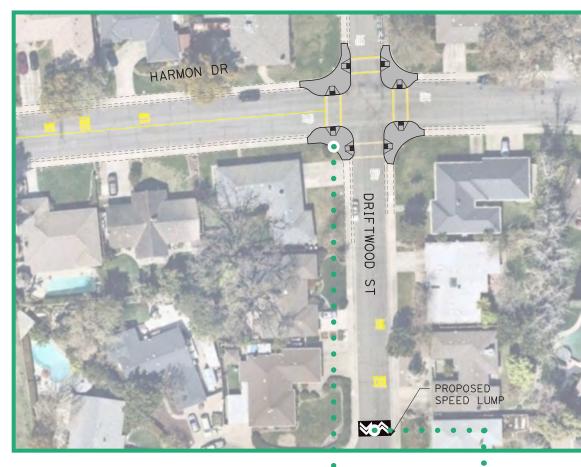






raised crosswalks are installed

Conceptual Design for Genevieve Didion K-8 School Area







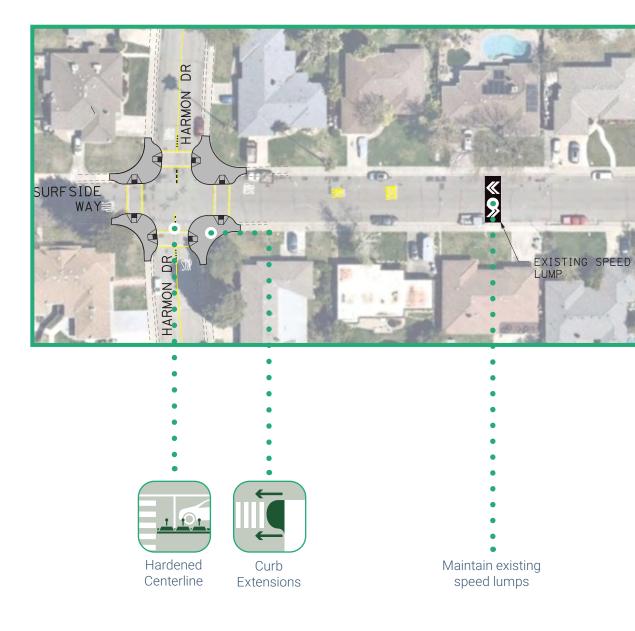
Speed Lump





Speed Lump

Conceptual Design for Genevieve Didion K-8 School Area



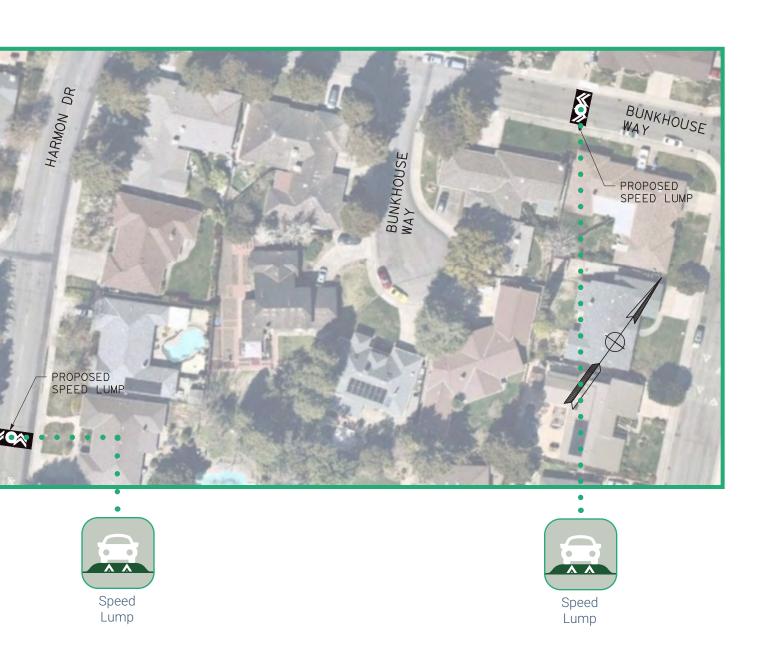


Conceptual Design for Genevieve Didion K-8 School Area

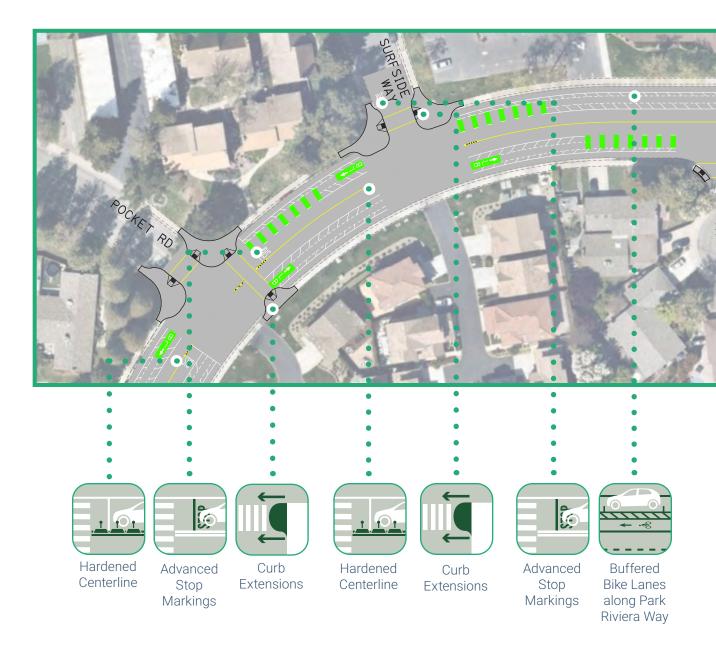


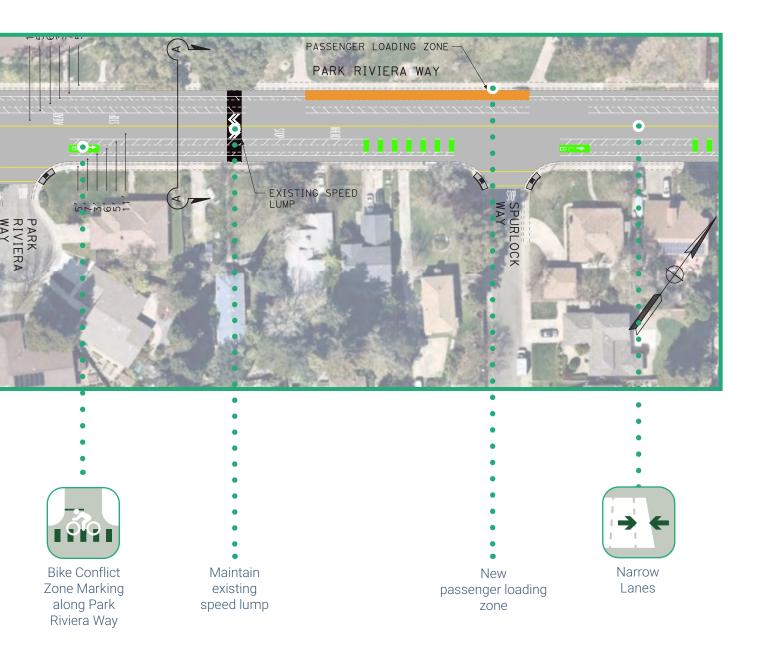


Speed Lump

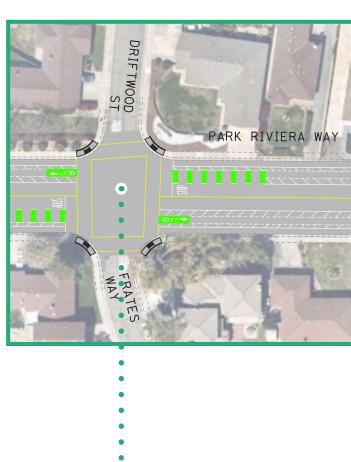


Conceptual Design for Genevieve Didion K-8 School Area





Conceptual Design for Genevieve Didion K-8 School Area





Advanced Stop Markings



Cost Estimate for Genevieve Didion K-8 School Area

\$2,290,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

Construction

Construction costs include the cost to build the primary items associated with the safety countermeasures for the corridor. The items were estimated based on the preliminary design concepts and recent construction bid unit costs. The costs were broken down into four categories: major roadway items; electrical items such as traffic signals and lighting; minor items such as fencing, signage, sidewalk repair, and utility adjustments; and mobilization, or preparatory work that must be performed before starting work on the job site.

A contingency factor was included to account for refinement of project design, changes in project details, or unforeseen changes in construction costs.

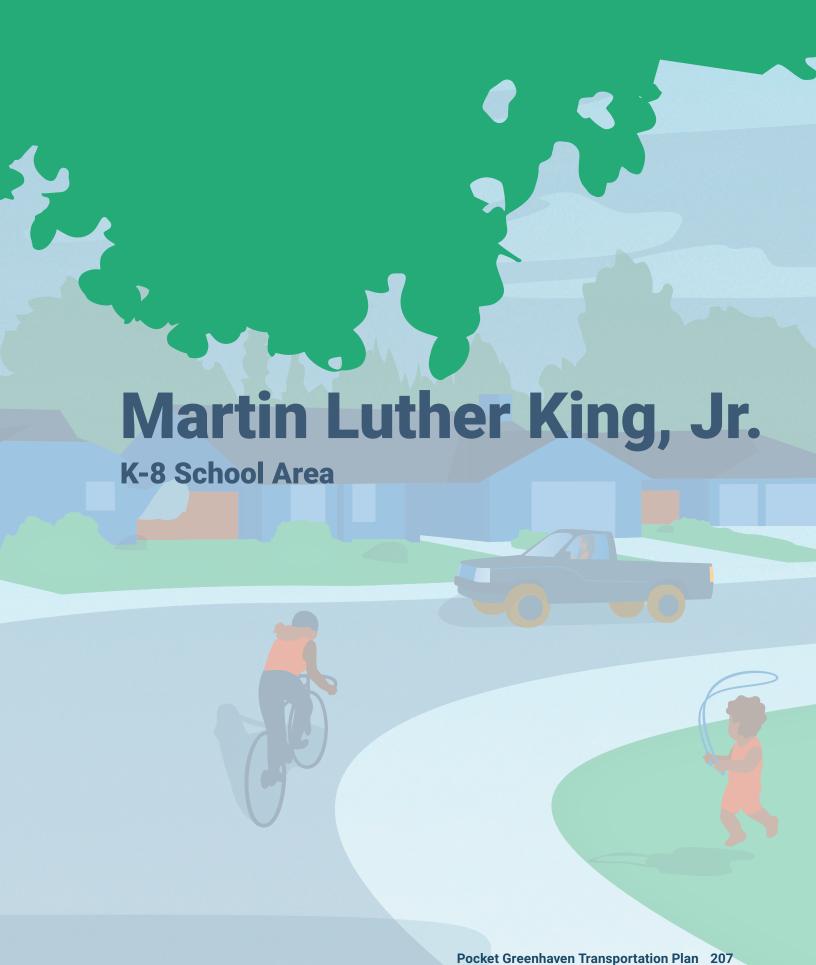
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Right of Way

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Delivery

Project delivery costs encompass all of the work to complete subsequent phases including preliminary engineering, environmental documentation, final design, right of way engineering, and construction oversight.



Martin Luther King, Jr. K-8 School Area

Description

The school and adjacent Reginald Renfree Park lie within a residential neighborhood. Vehicle access to the school is primarily from Pocket Road and Rush River Drive via Little River Way, with additional access via Blue Water Circle and other streets.

Key Issues

- Student safety
- Long distances between marked crosswalks
- Driver queuing during school pickup and drop-off periods
- Collisions with median refuge island on Little River Way in front of school when drivers looking toward sun

Destinations in the Area

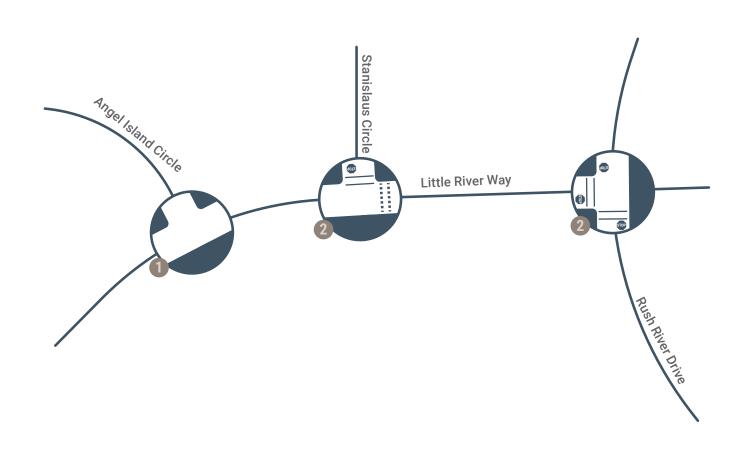
Schools	Parks
Martin Luther King, Jr. K-8 School	Reginald Renfree Park

Key Statistics

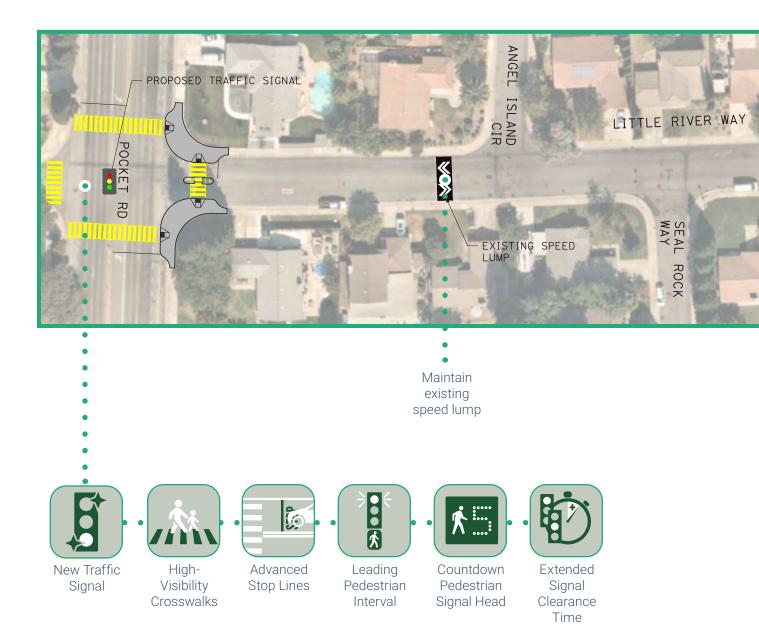
Posted Speed Limit	Average Observed Speed	Daily Vehicles	Maximum Travel Lane Width	Number of Travel Lanes
25 mph	17 mph	1,500	Lanes not marked	2
Language Diatamas	Dilaman	Number of Bus	Wooldoy Time	Number of School
Longest Distance Between Marked Crosswalks	Bikeway	Routes	Weekday Time Between Buses	Bus Routes

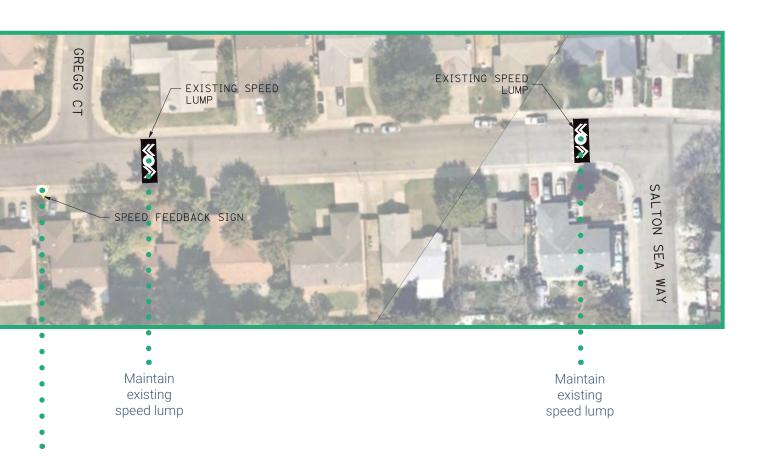
Existing Conditions





Conceptual Design for Martin Luther King, Jr. K-8 School Area



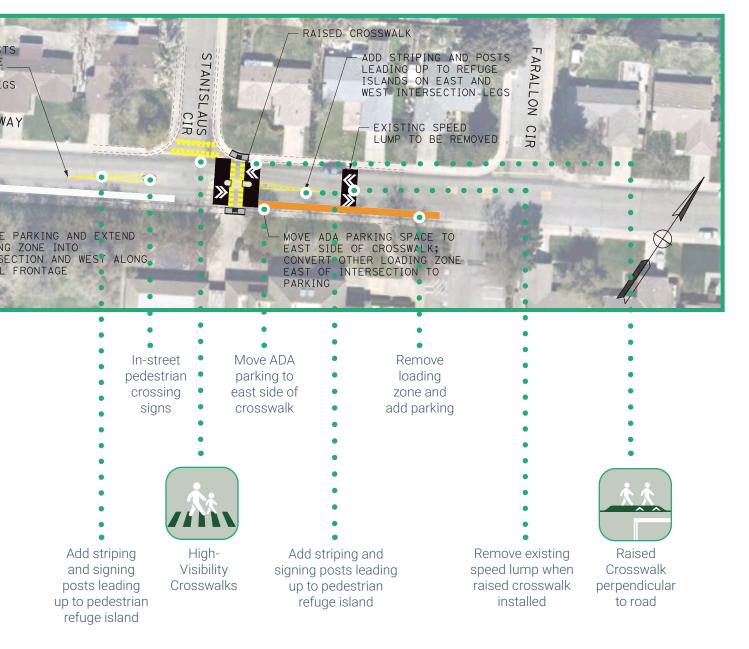




Speed Feedback Sign

Conceptual Design for Martin Luther King, Jr. K-8 School Area





Conceptual Design for Martin Luther King, Jr. K-8 School Area





Cost Estimate for Martin Luther King, Jr. K-8 School Area

\$1,600,000

The components of this cost estimate are described below. A detailed breakdown of these costs is provided in Appendix E.

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This plan presents a vision for future mobility in the Pocket Greenhaven neighborhood with improved safety and enhanced options for walking and biking. It includes ten corridor concept level plans that were developed by analyzing existing conditions and applying best practices. After adopting the plan, the City may begin the implementation of the vision outlined in the plan. Implementation of proposed corridor improvements may move forward together but more likely will be advanced as independent projects as funding becomes available.

The plan is expected to be adopted by City Council in 2022. While some very low cost improvements may be implemented in the short term, the great majority will need grant funding.

The timeline for implementation is contingent upon available city transportation funds and grant funding. There is an estimated \$5 billion back log of needed transportation improvements in the City of Sacramento. The City of Sacramento Transportation Priorities Plan is being developed to address the city's mobility needs within its limited funding, prioritizing the over 700 planned projects approved by City Council since 2000. The improvements identified in the Pocket Greenhaven Transportation Plan will be included in this prioritization process.

Should funding be available for capital project implementation, the next steps for the City would follow a typical delivery timeline for a grant funded project and would include:

- Project Development and Environmental Clearance. At this phase, the City seeks grant funding and identifies local funding to create Capital Improvement Projects (CIPs). Design and cost estimates are developed beyond the concept level, required environmental clearances are obtained, community and stakeholders are engaged, and additional funding sources for final design and construction are pursued.
- Final Design and Construction. After the
 project has been environmentally cleared, final
 design is completed and construction funds
 are identified. The final design will enable the
 project to be constructed as a whole or in
 phases dependent on funding availability.

