

September 8, 2022

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From	Todd Tregenza, GHD Tony Jusay, GHD	Tel	916-245-4216
Subject	Draft Transitional Project Development Summary	Project no.	12575776

1. Project Summary

Introduction

After years of considering additional freeway alignments for the northern extent of State Route (SR) 710, through collaboration with Caltrans, the time has arrived to shift from planning freeway-to-freeway concepts to planning freeway-to-local street connections. Steps to relinquish the roadways within Caltrans right-of-way to the City of Pasadena (City) highlight an important milestone. The 710 Northern Stub Transitional Project Development provides near term multimodal improvements that can be implemented quickly to enhance safe north/south and east/west mobility, particularly for non-motorized users, along the Pasadena Avenue and St John Avenue corridors.

Purpose and Need

The purpose of the 710 Northern Stub Transitional Project Development is to identify implementable near-term transportation projects as an interim step prior to the long-term planning the City must undertake to create a lasting community driven vision for the northern stub of 710. The limits of the project area and proposed improvements extend from Walnut Street to the north to Columbia Street to the south. Pasadena Avenue and St John Avenue are the main roadways that run north to south, as well as east-west overcrossings and streets, including Union Street, Colorado Boulevard, Green Street, Del Mar Boulevard, California Boulevard, and others. The overall project corridor distance is approximately 1.8 miles. Additionally, intersections along Colorado Boulevard at the San Rafael Avenue/SR 134 on/off ramps and Orange Grove Boulevard are also included in the list of improvement recommendations. Key parameters for developing these concepts include the premise that near-term projects shall not preclude future changes to land use, roadway networks, or other community development concepts that could be considered as part of future long-term planning effort.

To implement project improvements, the City is seeking Measure R Mobility Improvement Project (MIP) funding programmed by LA Metro. These proposed improvements align with newly adopted Metro Objectives for Multimodal Highway Investments that help to realize more holistic, multimodal, and equitable outcomes. It is also noted that concepts developed as part of this effort do not include roadway reconfigurations that would reduce the number of “through” travel lanes along the corridor.

Project Site Visits

The project team performed multiple study area site visits, observing and documenting existing physical corridor conditions, noting, for example, deficiencies in accessibility and opportunities for enhancements. The project team also observed traffic conditions, including travel speeds, vehicle queues, and driver behavior. An existing conditions analysis was not performed as part of this project, however. The project team reviewed and referenced the recently completed *SR 710 N Stub Repurposing Technical Feasibility Assessment* as a source of quantified vehicular operations. The following are a sample of existing corridor conditions observed in the field during the project team’s site visits on April 5, 2022, and May 23, 2022.

Photo 1 *Uneven sidewalk, shown here on Bellefontaine, should be reconstructed to improve accessibility*



Photo 2 *Asphalt sidewalk, shown here on St. John Avenue, provides uneven walking surface. Utilities obstruct path of travel.*



Photo 3 *Caltrans signage extends into path of travel along asphalt sidewalk, shown here on Pasadena Avenue.*



Photo 4 *Guardrail used to block side street access contribute to a “highway” aesthetic and conflict with sense of liveable City street.*



Photo 5 *High vehicle speeds on St. John Avenue, south of the SR 710 off ramp, challenge movement between parking and parks.*

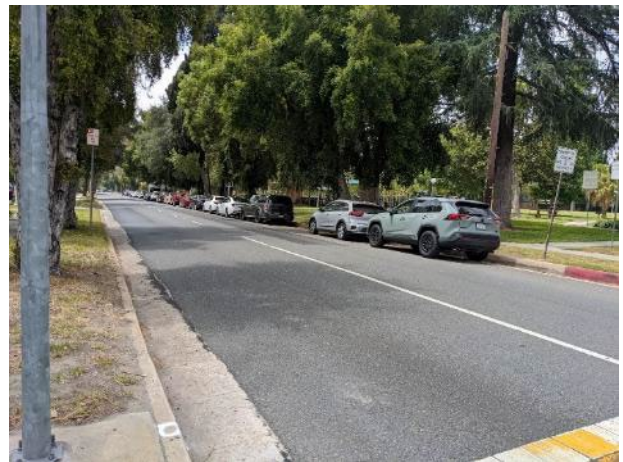


Photo 6 *At Colorado Boulevard near the SR 134 WB ramps at San Rafael Avenue, sidewalk is obstructed by guardrail and utilities.*



2. Community Engagement

Targeted Outreach

The project development team conducted targeted outreach and presented the project including background, objectives, and a menu of treatments to eight (8) stakeholder groups to learn about any concerns, insights, and perspectives. One in-person meeting and seven (7) virtual meetings were held. Additionally, City staff from Department of Transportation (DOT) conducted a one-on-one meeting with a project area adjacent school. The stakeholders included meetings with group organizations and dates listed in Table 1 below:

Table 1: Completed Stakeholder Meetings

Stakeholder	Meeting Date
Arlington Garden	5-23-22
Sequoia School	5-24-22
The Waverly School	5-25-22
710 Ad Hoc Committee	5-26-22
Westridge Schools	5-27-22
Maranatha High School	6-1-22
West Pasadena Residents Association (WPRA)	6-1-22
Huntington Hospital	6-2-22

Key themes identified from targeted outreach meetings include:

- Safety – safe crossing for pedestrians at intersections and concern with improved street lighting (road safety)
- Traffic and roadway – Concerned with safety and vehicle speeds on Pasadena Ave advocated for walkable streets
- Biking and walking – Support for bikeway and pedestrian improvements
- Streetscape - Support for green street features including permeable hardscape and appropriate trees
- Access/ Connectivity – Support for crossings to access destinations including parks and schools
- Transit Connectivity – support for bus lanes and potential service options

Open House

An in-person open house meeting was held on Tuesday, August 9, 2022, between the hours of 6:00PM to 7:30PM. The meeting was in a public area at the front entrance of Westridge School at 324, Madeline Drive. The City mailed approximately 2600 notices, as well as sent emails to residents along the corridor two weeks in advance of the event. An estimated 75 to 100 people attended the meeting. Six (6) poster boards were on display including the Project Overview, Project Area, Upper Roadway Improvements, Lower Roadway Improvements, Areawide Improvement Options, and Potential Transit Route Options. Project fact sheets in both English and Spanish were made available. A QR code link to the Online Project Survey was also provided allowing additional options to take in feedback.

Project team staff provided background information, answered questions on various project concepts, and encouraged attendees to leave comments on 'post-it' notes.

Photo 7 *Community members attending August 9, 2022, Open House meeting.*



Photo 8 *Attendees and project team staff discussing potential project concepts.*



A total of forty-eight 'post-it' comments were placed on poster boards. Comments highlighted interest in bikeway and pedestrian improvements, traffic signal/lights, traffic calming, roadway, transit, wayfinding, and development. Below is a list of comment topics that identifies the number of times the topic was noted.

- | | |
|----------------------------|------------------|
| • Bikeways; 15 | • Roadway; 3 |
| • Pedestrian; 12 | • Transit; 2 |
| • Traffic Signal/Lights; 7 | • Development; 2 |
| • Traffic Calming; 5 | • Wayfinding; 2 |
| • Trees/ Greening; 4 | • Enforcement; 1 |

The detailed summary of comment responses captured from the August 9, Open House Meeting and Online Project Survey are included in Appendix A.

3. Improvement Recommendations

The main roadway network for the 710 North Stub Transitional Project Development includes Walnut Street Pasadena Avenue, St John Avenue, California Boulevard, Columbia, etc. and the existing freeway overcrossing roadways including Union Street, Colorado Blvd, Green Street and Del Mar Blvd. Additionally, intersections along Colorado Boulevard at the SR134 on/off ramps and Orange Grove Boulevard are included. Listed below indicate the streets, limits and intersection locations.

- Columbia Street from Orange Grove Boulevard to Fair Oaks Avenue
- Pasadena Avenue from Walnut Street to Columbia Street
- St John Avenue from Walnut Street to California Boulevard
- Orange Grove Blvd and Colorado Blvd Intersection
- San Rafael Ave at Colorado Blvd Intersection

This section also describes treatments and elements to apply globally to the project list development

- | | |
|---|--------------------------------|
| • Signal timing optimization and upgrades | • Directional curb ramps |
| • Leading pedestrian intervals, adequate timing | • High – visibility crosswalks |
| • Bicycle improvements | • Sidewalk improvements |
| • Bulb – outs/ curb extension | • Lighting |

3.1 Street Improvement Concepts

The concepts presented in this memorandum were prepared using the *Remix Streets* platform by Via in an effort to illustrate design intent. These planning level illustrative concepts will be further refined as project development progresses, and rendered at increased levels of detail in scaled CAD drawings to improve the level of confidence in improvement constructability, consistency with design standards, and accuracy of design and construction cost estimates.

Design Basis

The basis for concept design includes the City's Standard Plan Drawings and City's Street Design Guidelines. Additional guidance for design considerations that are not specifically included in the City's local design guidance comes from both Caltrans' Highway Design Manual, Design Information Bulletins, and the National Association of City Transportation Officials (NACTO).

PASADENA STREET DESIGN GUIDE

FIGURE 3-2 CROSS SECTION DIMENSIONS FOR CONNECTOR-CITY STREETS

Function: Connector-City	Vehicle Zone			Access Zone	Amenity / Curb Zone**	Walk Zone	Building Frontage Zone	Total Sidewalk or Parkway Width
Context	Through / Left Turn Lane	Outside Lane (Maximum)*	Bicycle Lane**	Parking Lane		Clear Walk (Minimum)	(Minimum)	
Urban Commercial	10'	11'	7-9'	7.5'	6-7'	8'	1'	15'-16'
Urban Residential	10'	11'	7-9'	7.5'	6-7'	6'	1'	13'-14'
Suburban Commercial	10'	11'	7-9'	7.5'	3-7'	5'	N/A	8'-12'
Suburban Residential	10'	11'	7-9'	7.5'	3-7'	5'	N/A	8'-12'
Green-Edge Drive	10'	11'	7-9'	7.5'	3-7'	5'	N/A	8'-12'

*Outside Lane refers to a travel lane that is adjacent to the curb. The outside lane may exceed 11' where severe crowding, depression, or other geometric characteristics are present.

**The 7' bicycle lane includes a 2' buffer on one side; the 9' bicycle lane includes a 2' buffer on both sides.

***On Connector-City streets in an urban context, the Amenity / Curb Zone will likely be present. This range represents a 6' planter strip or a 7' transit shelter. More suburban contexts may only have a 3' Amenity / Curb zone for vertical elements such as street lamps if there is a parking lane present.

Organization of Transitional Concept Development Summary

Areawide Improvement Recommendations

The first subsequent section describes global, areawide improvement recommendations proposed for application within the entire study area, and/or along several segments of the study corridors. These include consideration of new traffic signal hardware and communications technology, intersection curb extensions, sidewalks, crosswalks, ADA enhancements, bikeway improvements, landscaping, undergrounded utilities and street and pedestrian scale lighting.

Corridor Improvement Recommendations

Following description of the areawide improvements, an illustrative map of each study corridor is presented alongside callouts to specific cross sections, a narrative description of the improvement intent, and a summary of high-level preliminary construction cost estimates. A review of existing mobility or traffic safety concerns is provided for each segment. Some corridors feature multiple pages to illustrate a variety of design concepts. A key map is presented to orient the reader to the segment's context within the study area.

Areawide Improvement Recommendations

Photo 9 *Curb extensions reduce crossing distance and help pedestrians and drivers see each other better.*



Photo 12 *Locating and organizing traffic signal and communication hardware out of sidewalk areas minimize obstructions to users.*



Photo 10 *ADA warning devices alert users where to access sidewalks and high visibility crosswalks improve intersection visibility.*



Photo 13 *Undergrounding utilities improve sidewalk clearances and help reduce hazards during weather related power outages.*



Photo 11 *New sidewalks are proposed to replace worn, asphalt and/or missing sidewalks and meet ADA standards.*



Photo 14 *Street and pedestrian level lighting serve roadway users and increase visibility and safety for people walking.*



Areawide Improvement Recommendations

Photo 15 Landscaping including drought tolerant vegetation help reduce water use and improve street aesthetics,



Photo 16 Raised speed tables are traffic calming devices that can also be used at crossings to increase pedestrian safety.



Photo 17 Class II, bike lanes provide a dedicated space for cyclists and can be enhanced with color at conflict areas.



Photo 18 A Class IV, two-way grade separated bikeway offers high safety benefits between motorists and people walking and biking.



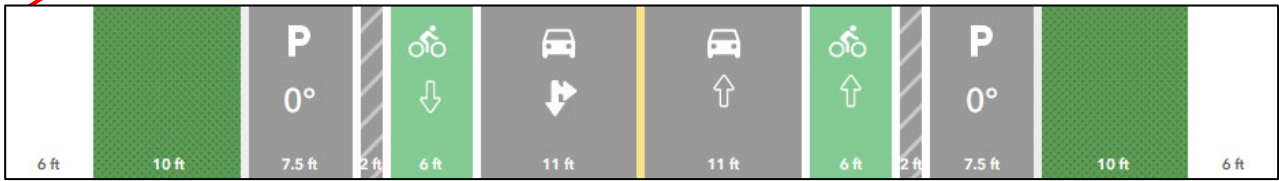
Photo 19 A Class IV, two-way at-grade bikeway uses space within the roadway with barrier devices for separation between vehicles.



Photo 20 A Class IV, one-way bikeway next to parking provides a dedicated lane and separation between motorists.



Columbia Street (Orange Grove Boulevard to Fair Oaks Avenue) – 1 of 2



Segment Overview

Existing Condition

Columbia Street is an east/west roadway with limited residential frontage. The roadway currently allows on-street parking and features one travel lane per direction. The curb to curb width is approximately 25 feet. 6-foot sidewalks are placed behind 10-foot landscape buffers.

Proposed Improvement

The improvement goal is to better define travel lanes and parking areas. Additionally, bike lanes would east-west bikeway connectivity that is minimal in the study area. Specific proposals include:

- Define 11-foot travel lanes in each direction
- Provide Class II bike lanes from Orange Grove Boulevard to Fair Oaks Avenue
- Designate 7-foot parking aisles in each direction, separated from bikeway with 2-foot painted buffer
- Install median island between Pasadena Avenue and Fremont Avenue on Columbia Street
- Painted high-visibility crosswalks at intersections and reduce crossing widths
- Upgrade traffic signals along the Columbia Street corridor where feasible



Columbia Street (Orange Grove Boulevard to Fair Oaks Avenue) – 2 of 2



Existing Condition
The offset intersection on Columbia Street facilitates north-south travel between Pasadena Avenue and Fremont Avenue, carrying significant traffic volumes during peak periods. The concept presented in this proposal is geometrically similar to a concept prepared by the City of South Pasadena.

Proposed Improvement
The proposed median improves the safe movement of vehicles through the offset intersection. Left turn pockets on each approach to the offset intersection clarifies vehicle positioning and improves operations. Parking is preserved to maximum extent feasible. Limited curb-to-curb width restricts bikeways to Class III markings and signage in vicinity of offset intersection.

Pasadena Avenue (Columbia Street to Bellefontaine Street)



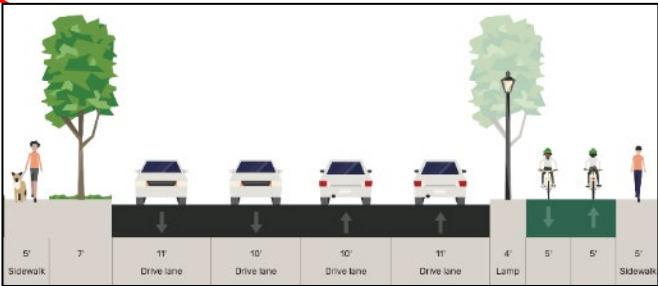
Segment Overview

Existing Condition

Pasadena Avenue runs north-south with two lanes in each direction. The curb-to-curb width is 50 feet. Limited access to side streets is provided on the west side frontage. Residential frontage exists on the east side only. No on-street parking or bikeways are provided. 5-foot sidewalks along the west side are buffered by a 7-foot landscape area. The east side asphalt sidewalks are non-standard and in poor condition. Arlington Garden and Westride School are key destinations along this segment.

Proposed Improvement

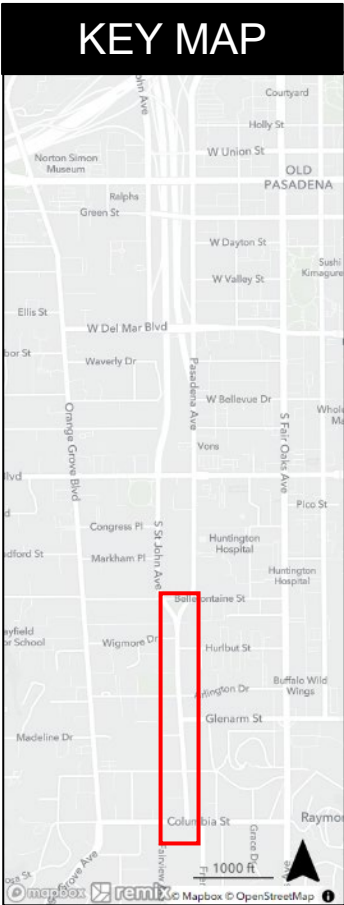
The key improvement recommendation along this segment is a Class IV cycle track on the east side of Pasadena Avenue. The bikeway is proposed to be elevated and separated from the roadway section by a half-height curb.



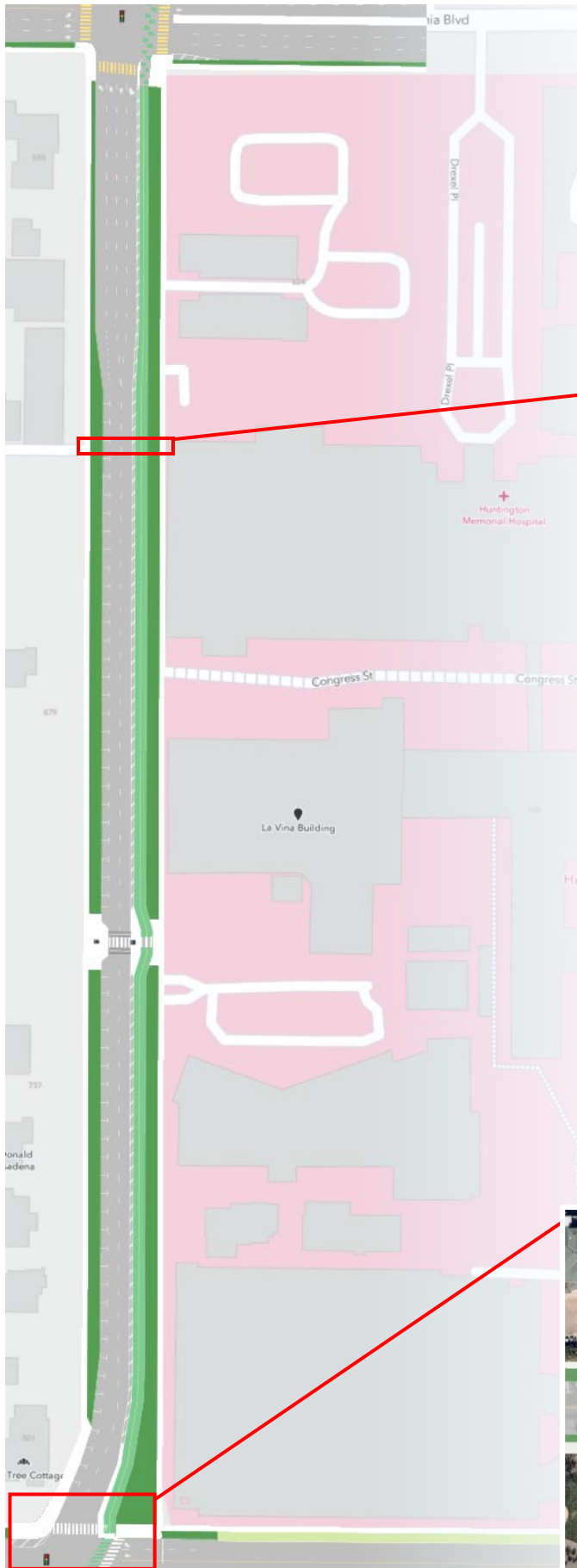
The 4-foot separation between the bikeway and roadway provides sufficient width for tree wells and new street and pedestrian scale lighting. Reconstructed concrete sidewalks will be provided on the east side.

Additional improvements along this segment include:

- Minor street curb extensions and crossing enhancements
- Additional controlled pedestrian crossing between Glenarm and Bellefontaine (location TBD)
- Aesthetic and functional enhancement to street closure at Wigmore Drive



Pasadena Avenue (Bellefontaine Street to California Boulevard)



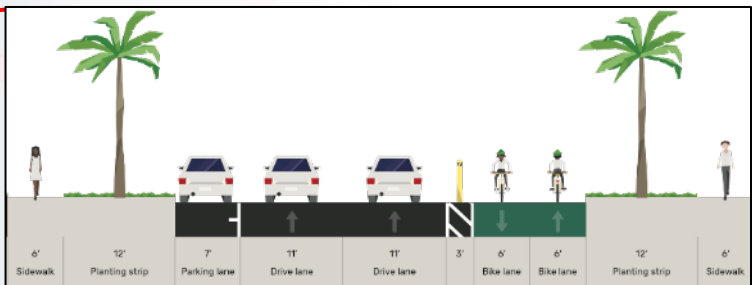
Segment Overview

Existing Condition

Pasadena Avenue is one-way in the northbound direction, forming a couplet system with St. John Avenue. The curb to curb width is 44 feet, featuring on-street parking on the west side. 6-foot sidewalks on each side of the street are separated from the roadway by 12-foot landscaped buffers. The Waverly School farm and Ronald McDonald House of Pasadena are key destinations on the west side. Huntington Memorial Hospital property extends the entire length of the east side frontage.

Proposed Improvement

Along this segment, the improvement recommendation is to continue the Class IV cycle track northerly from Bellefontaine.



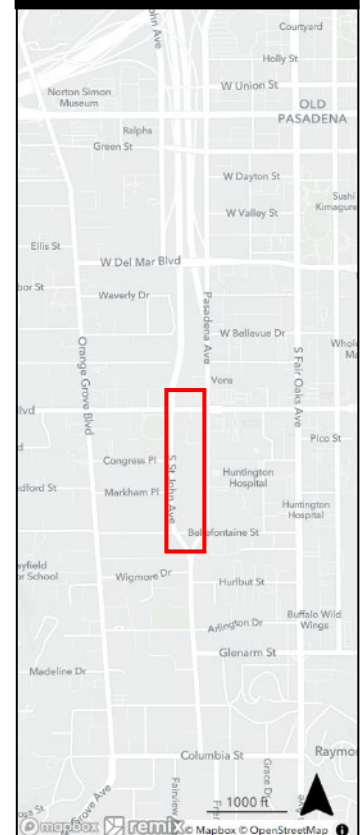
However, unlike the southerly segment of Pasadena Avenue, the sidewalk and landscape area on the east side are in good condition. Therefore, rather than a full reconstruction of the east side frontage, it is recommended the Class IV facility be continued at street grade along this segment, separated by vertical bollards or delineators.

Additional improvements along this segment include:

- Reconfiguration of Bellefontaine intersection to eliminate free right turn lane (reduce driver confusion)
- Provide signalized and raised crosswalk between Huntington Memorial Hospital and Ronald McDonald House
- Necessary traffic signal upgrades will be included



KEY MAP



St. John Avenue (Bellefontaine Street to California Boulevard)

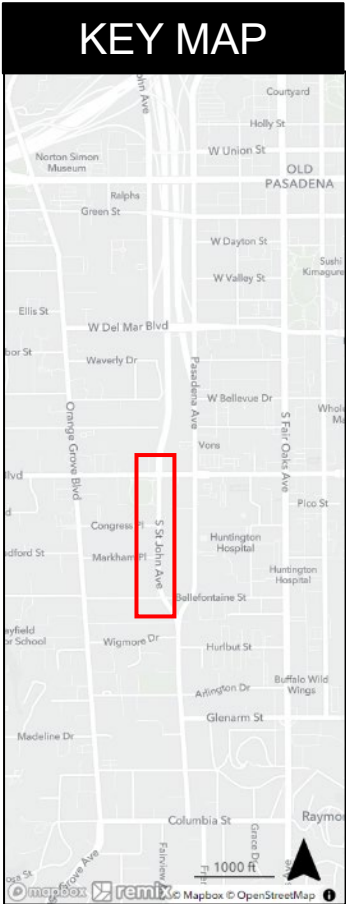
Segment Overview

Existing Condition

St. John Avenue is one-way in the southbound direction, forming a couplet system with Pasadena Avenue. The curb-to-curb width is narrower than Pasadena Avenue, at just 32 feet, featuring on-street parking on the west side. 5-foot sidewalks on each side are separated from the roadway by 8-foot landscaped buffers. Singer Park is a major destination on the north end of this segment, drawing visitors from the neighborhoods and nearby Waverly School and Sequoyah School.

Proposed Improvement

The primary objective is to calm traffic along this segment. The narrow roadway width precludes the ability to designate a bikeway. Curb extensions are recommended at the St. John Avenue intersection with California Boulevard and the SR 710 off-ramp. This improvement will slow traffic exiting the freeway and entering the neighborhood context of St. John Avenue.

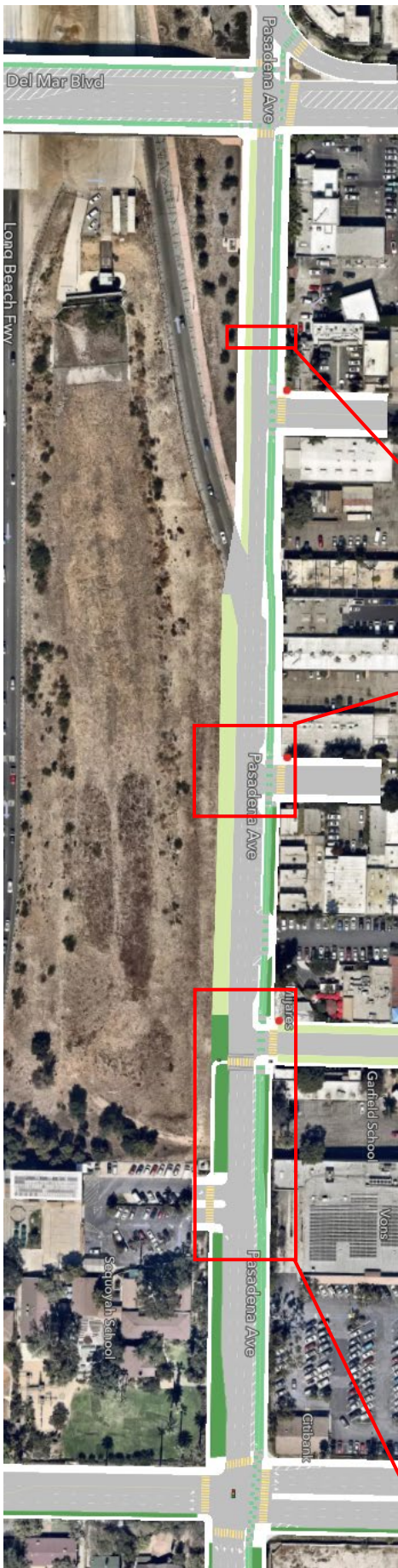


It is recommended to modify the typical cross section for this segment with narrower travel lanes, to calm traffic, and by designating a 3-foot buffer between the parking aisle and southbound motorists, to ease passenger loading and unloading.

Additional improvements along this segment include:

- Reconfiguration of Bellefontaine intersection to eliminate free right turn lane (reduce driver confusion)
- Provide signalized and raised crosswalk at the south end of Singer Park to further calm southbound motorists existing the freeway
- Aesthetic and functional enhancement to street closures at Congress Place and Markham Place
- Traffic signal upgrades to the extent feasible

Pasadena Avenue (California Boulevard to Del Mar Boulevard)



Segment Overview

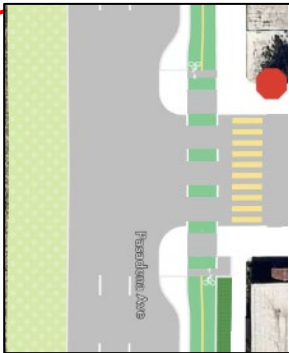
Existing Condition

This segment of Pasadena Avenue continues as a northbound-only two- to three-lane roadway. This segment is three lanes leading to the SR 710 ramp, after which point the roadway transitions to two lanes. The curb-to-curb width varies from 44 to 34 feet. On the east side, sidewalk varies between 10-feet wide and 5-feet wide, where a 5 foot landscape buffer is provided.

On the southernmost end, this segment serves an important role for Sequoyah School, providing primary access to parking, drop-off, and pick-up. This is the only section of this segment to feature sidewalk on the west side, separated from the roadway by a 20-foot landscaped buffer.

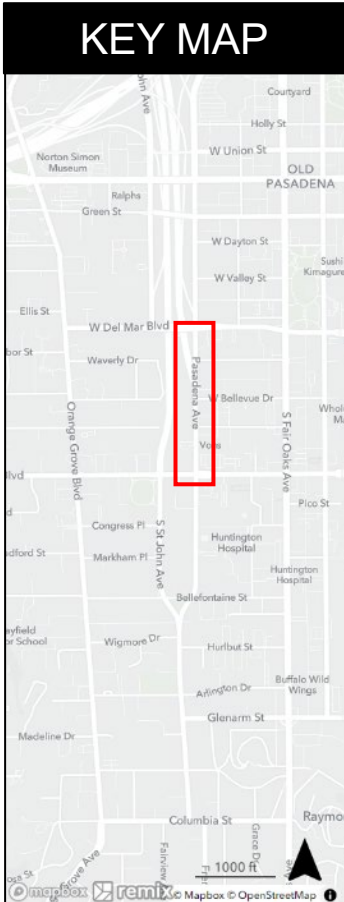
Proposed Improvement

Along this segment, the proposed two-way Class IV cycle track is continued at both street-level grade, south of Palmetto Drive, and raised between street and sidewalk grade between Palmetto Drive and Del Mar Boulevard.



Where on-street parking is provided, curb extensions are recommended to enhance minor street crossings.

Improve Sequoyah School access with left turn lane. Continue sidewalk north to raised signalized crossing at Palmetto Drive. Raised crosswalk provides traffic calming benefit.



St. John Avenue & Pasadena Avenue (Colorado Boulevard to Walnut Street)

Segment Overview

Existing Condition

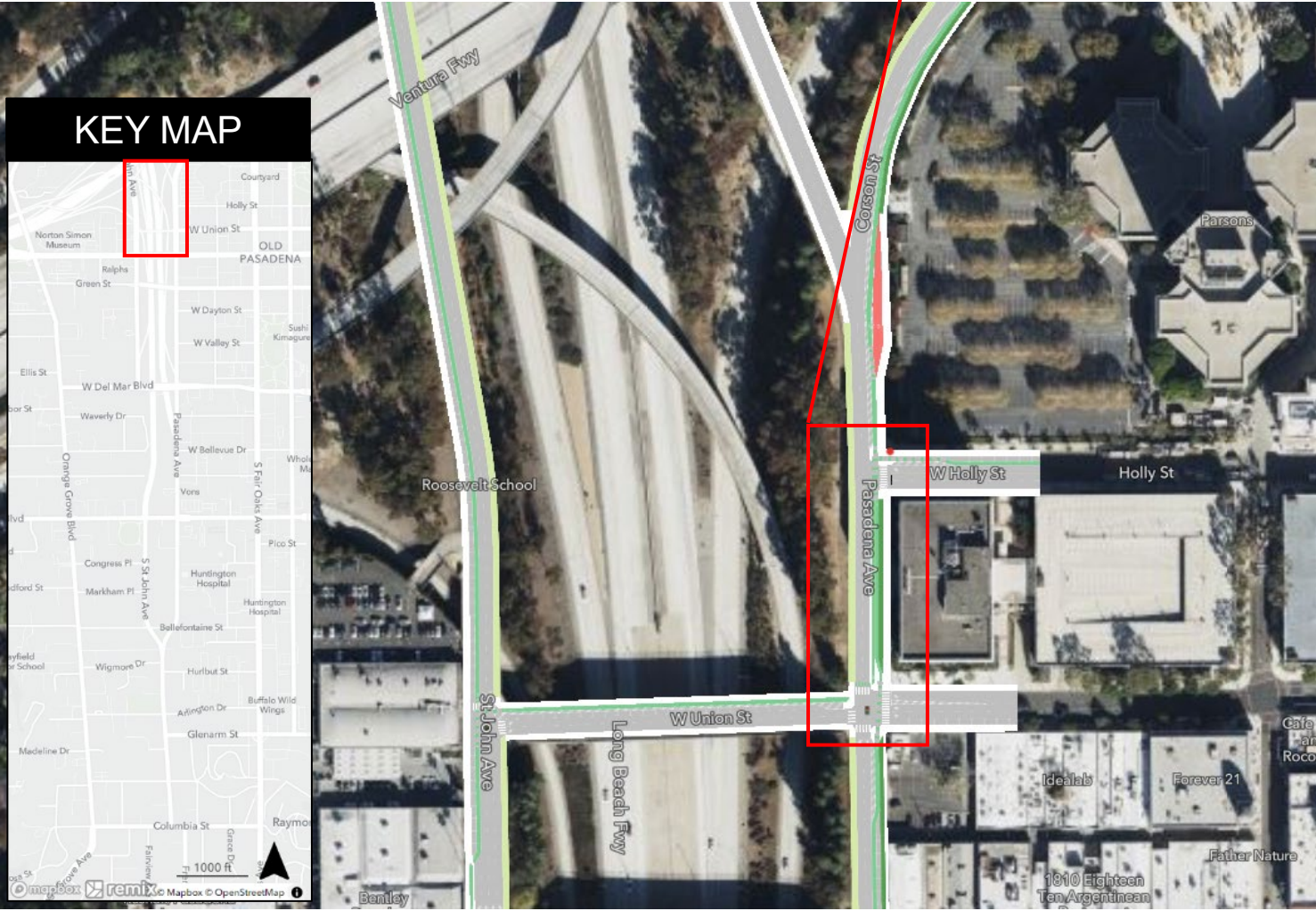
The St. John Avenue and Pasadena Avenue study corridors continue as one-way couplets north of Colorado Boulevard and terminate at Walnut Street. The curb-to-curb widths are about 34 feet, except for a three-lane section of St. John Avenue south of Green Street.

10-foot sidewalks are provided on the west side of St John Avenue without landscape buffer. On Pasadena Avenue, 5-foot sidewalks and landscape buffers are provided south of Union Street. Wider 12-foot sidewalks with tree wells and landscaping are provided north of Union Street. 5-foot Class II bike lanes are provided on each roadway, with on-street parking on all segments except Pasadena Avenue north of Union Street.

Proposed Improvement

As with the segments between Del Mar Boulevard and Colorado Boulevard, the recommendation is to widen Class II bike lanes to a 6-foot minimum.

In order to provide southbound bicycle connectivity from Holly Street to St John Avenue, a short two-way Class IV cycle track section is recommended between Holly Street and Union Street. At Union Street, southbound cyclists will cross the SR 710 freeway stub in a parking-protected Class IV bikeway.



Bellefontaine Street (St. John Avenue to Pasadena Avenue)

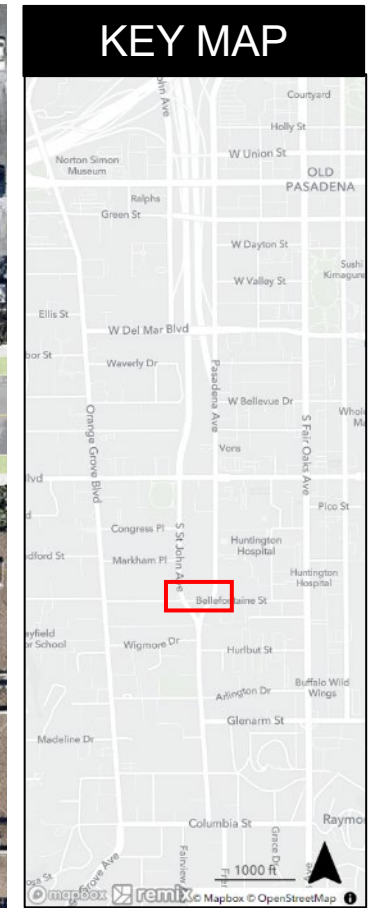
Segment Overview

Existing Condition

Bellefontaine Street marks the point where Pasadena Avenue transitions from a two-way street to a one-way couplet with St. John Avenue. At the intersections of Bellefontaine with Pasadena Avenue and St. John Avenue, right-turns are channelized with stop-controlled by-pass lanes. Traffic crosses Bellefontaine Street at a high rate of speed. 6-foot sidewalks are separated from traffic by a 9-foot landscape buffer. Bellefontaine Street is designated as a Class III "Roseway".

Proposed Improvements

- Curb extensions and high-visibility crosswalks (north-south & east-west) at St John and Pasadena Avenue(s)
- Close median at Bellefontaine Street and Pasadena Avenue for safer turns and merging
- Traffic signal upgrades, street lighting and trees
- Concrete sidewalk
- Class IV, bi-directional bikeway on the northbound travel direction of Pasadena Avenue with enhanced crossing on Bellefontaine Street



California Boulevard (St. John Avenue to Pasadena Avenue)

Segment Overview

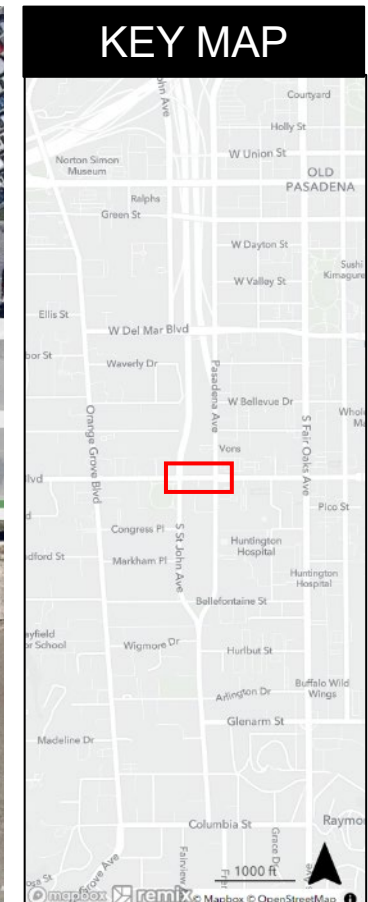
Existing Condition

California Boulevard crosses St. John Avenue at the SR 710 off-ramp, a high speed intersection approach. No on-street parking is permitted on this segment.

Between the SR 710 off-ramp and Pasadena Avenue, a separate City-led project is replacing 6-foot asphalt sidewalks on the north side with 10-foot concrete sidewalks. The City project will also reconfigure the westbound approach to Pasadena Avenue by converting a “through” lane to a right-turn lane, and reduce the westbound travel lanes approaching St. John Avenue from two to one. The City project is also adding a fourth crosswalk to the Pasadena Avenue intersection on the west leg.

Proposed Improvements

- Raised median on west leg of St. John Avenue intersection to provide mid-block pedestrian refuge, calm traffic, and shorten pedestrian exposure
- Curb extensions on east leg of Pasadena Avenue intersection to improve safety of Class IV cycle track crossing



Del Mar Boulevard (St. John Avenue to Pasadena Avenue)

Segment Overview

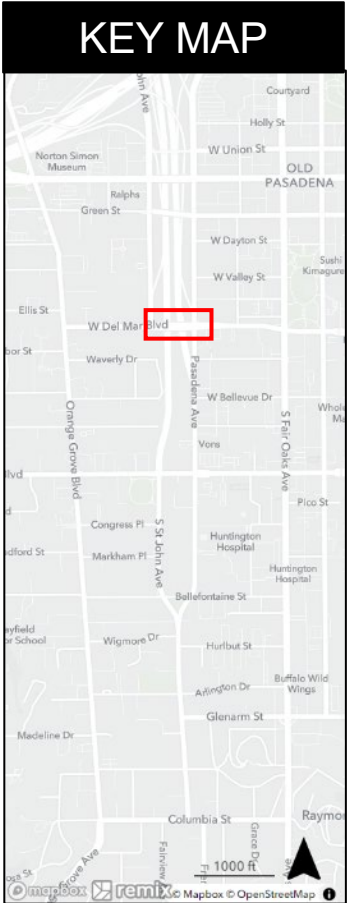
Existing Condition

Del Mar Boulevard intersects St John Avenue south of the SR 710 off-ramp. A separate City-led project is seeking to reconfigure the St. John Avenue southbound approach to reduce weaving between local traffic and freeway egress traffic. Del Mar Boulevard intersections Pasadena Avenue immediately south of the SR 710 on-ramp (towards SR 134 and SR 210). 10-foot sidewalks on each side of Del Mar Boulevard provide pedestrian connectivity between St. John Avenue and Pasadena Avenue. The 80-foot curb-to-curb Del Mar Boulevard overcrossing is wider than necessary to manage the existing travel lanes.

Proposed Improvements

The excess curb-to-curb width is proposed to be reconfigured for street-level directional Class IV bikeways along the SR 710 overcrossing. Closing this east-west gap in the bicycle network is necessary to transition between the two-way and one-way bike facilities recommended along the corridor.

It is recommended that protected intersection elements are recommended at the intersections with St. John Avenue and Pasadena Avenue to improve multimodal safety at these critical nodes within the proposed study area bikeway network. Traffic signal upgrades will be necessary to accommodate these elements.



Colorado Boulevard (St. John Avenue to Pasadena Avenue)

Segment Overview

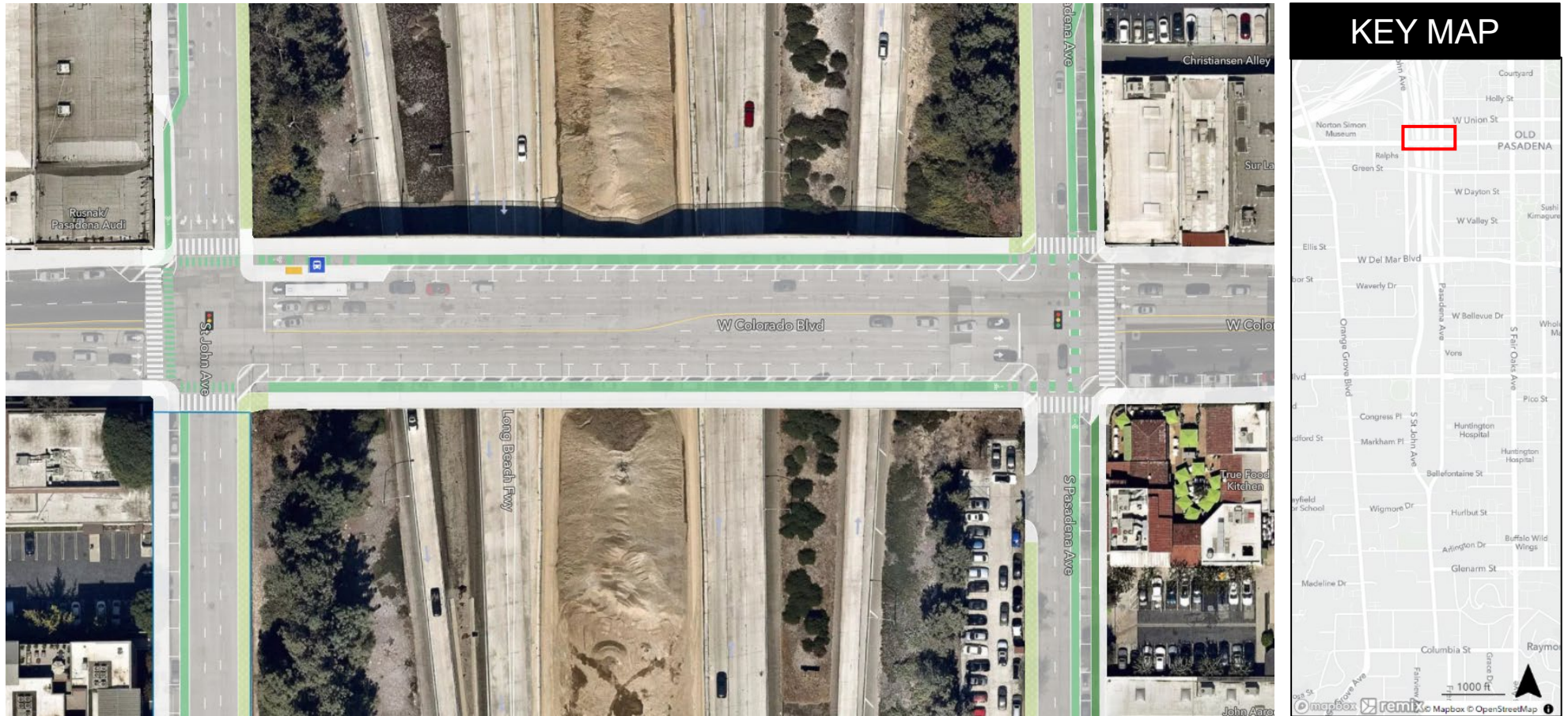
Existing Condition

Colorado Boulevard is a major east-west corridor in the City of Pasadena. Colorado Boulevard is also the primary Rose Parade float route, which introduces a unique design constraint when considering corridor and intersection improvements. Between St. John Avenue and Pasadena Avenue the curb-to-curb width is 88 feet, with two travel lanes in each direction, center turn lanes and well-utilized parking on both sides.

Proposed Improvement

It's recommended that parking-protected Class IV directional bikeways be implemented on Colorado Boulevard to ensure this major arterial route does not remain a high-stress gap in the bikeway network. Because the existing (and proposed enhanced) Class II bike lanes on St. John Avenue and Pasadena Avenue are one-way bikeways, both north and south of Colorado Avenue, it is important to provide east-west connectivity to complete the circulation system.

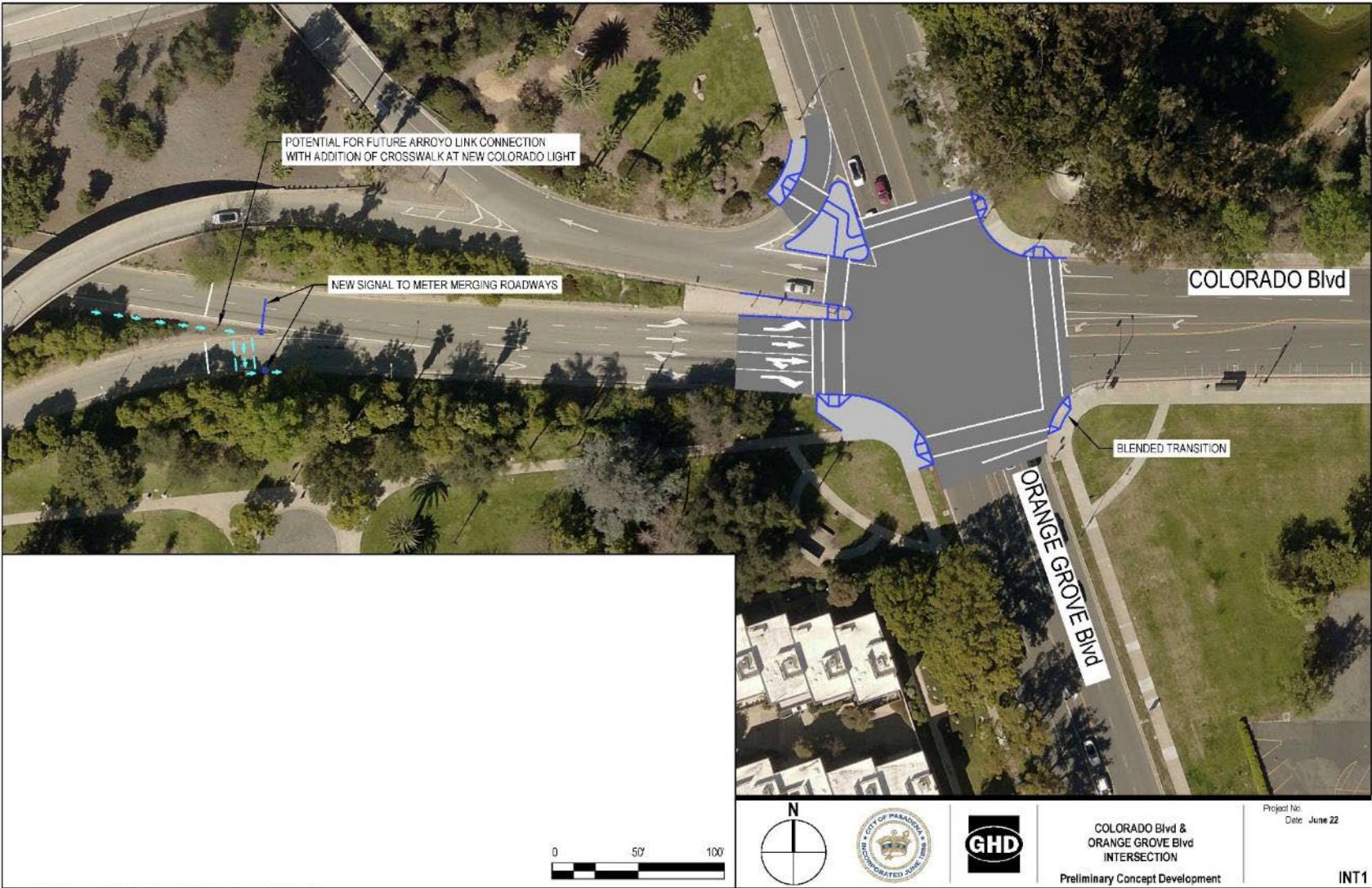
If possible, within the design constraints of the Rose Parade, a curb extension should be constructed to bring the bus loading and alighting towards the travel lane to avoid conflicts with the bikeway.



Orange Grove Boulevard at Colorado Boulevard

Proposed Improvement

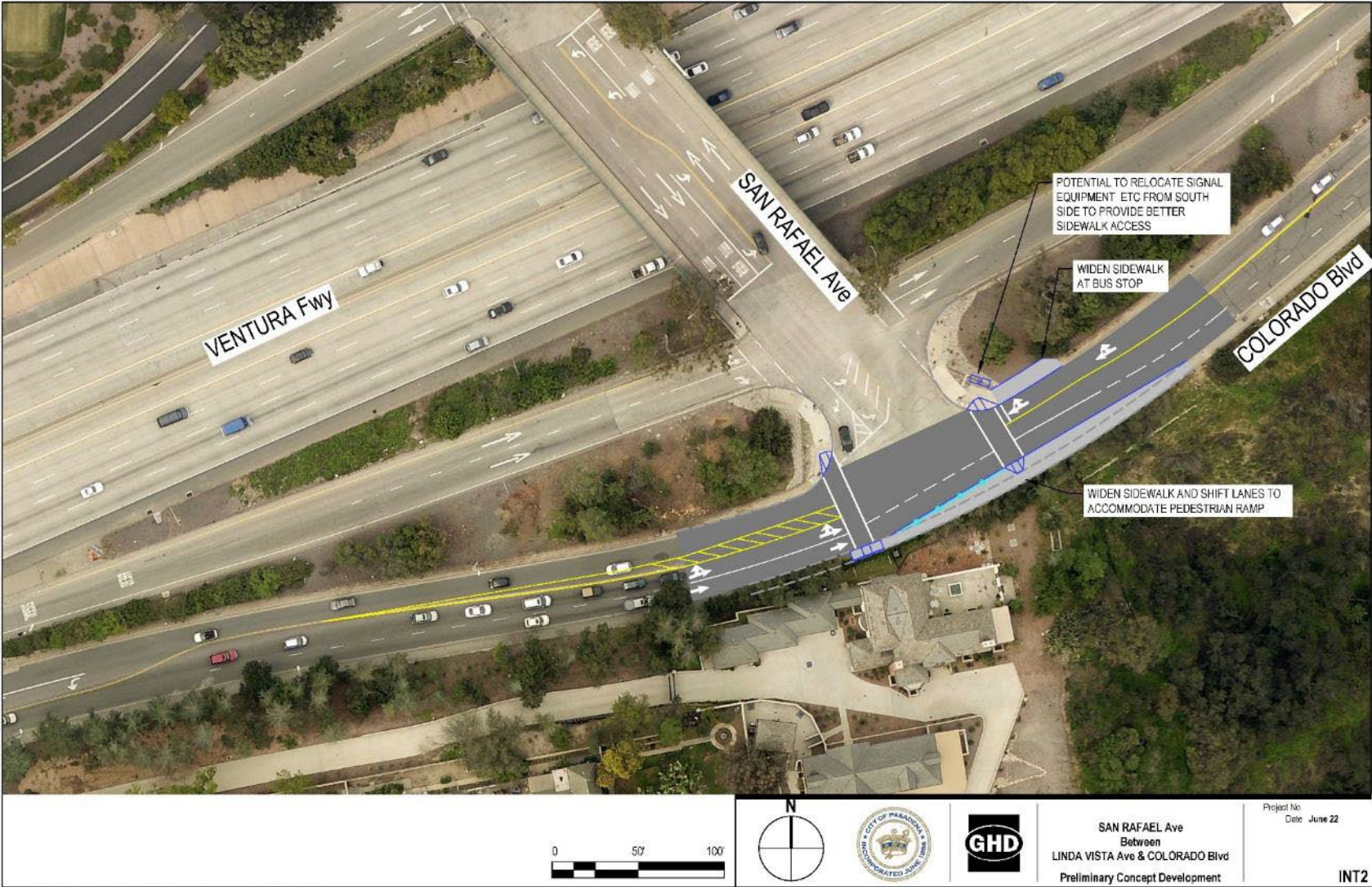
New traffic signal will be added to meter the eastbound 210 off ramp with the eastbound Colorado Boulevard approach at Orange Grove Boulevard to reduce current weaving/merging conditions. Additionally, new ADA curb ramps are proposed to enhance safer pedestrian crossings at the Colorado Boulevard and Orange Grove Boulevard intersection.



San Rafael Avenue at Colorado Boulevard

Proposed Improvement

Widened sidewalks will be added to the existing bus stop on the north side of Colorado (westbound direction) and added to the south side of Colorado in the eastbound direction. Existing traffic signal equipment will be relocated to allow for the sidewalk widening. Curb ramps will also be installed to enhance pedestrian crossing and meet ADA standards at the San Rafael Avenue and Colorado Boulevard intersection.



4. Improvement Cost Estimates

For each of the project locations, costs for the proposed improvements have been estimated and are summarized in Table 2 below. The project costs are shown as lump sum and include Traffic Control, Utilities, Removals, Concrete, AC Pavement, Traffic Signals, Street Lighting, Landscaping, etc. Additionally, based on City staff input, soft costs are included such as Conceptual/Final Design, Project Management Support, Material Testing, Construction Contingency and Capital Overhead.

Table 2: Summary of Improvement Costs by Project

Project	Project Cost
Columbia Street (Orange Grove Blvd to Fair Oaks Ave)	\$ 9,900,000
Pasadena Ave and St. John Ave Roadway Network (Walnut St to Columbia St)	\$ 75,100,000
*Orange Grove Blvd at Colorado Blvd	\$ 4,500,000
*San Rafael Ave at Colorado Blvd	\$ 4,800,000
Total Project Improvement Costs	\$ 94,300,000

* Includes work outside the limits of this study.

Appendix A

Summary of Comments Provided at August 9, 2022 Open House Meeting

A total of forty-eight 'post-it' comments were placed on poster boards from the August 9, 2022, Open House Meeting captured in the table below. Comment topics included bikeways, pedestrian, traffic signal/light, traffic calming, roadway, transit, wayfinding, and development. This bulleted list identifies the topics, abbreviations, and number of times the topic was noted.

- Bikeways (B); 15
- Pedestrian (P); 12
- Traffic Signal/Lights (TS); 7
- Traffic Calming (TC); 5
- Trees/ Greening (TG); 4
- Roadway (R); 3
- Transit (PT); 2
- Development (D); 2
- Wayfinding (W); 2
- Enforcement (E); 1

Poster Board Comments

Poster Board	#	Comment	Topic
Project Area	1	Sidewalks in project area need to be replaced. I recently tripped in an area not marked for replacement. Required stitches and a tooth crown.	P
	2	Build or develop near Huntington Hospital south near the fork.	D
	3	Building concern near the fork on both side where the hospital is located and could be developed	D
	4	Traffic light @ Arlington & Pasadena to reduce traffic accidents	TS
	5	Re-landscape fork-in-the-road park area; Plant trees not saplings along Pasadena and St John Avenues	TG
	6	Make sure bike lanes connect north-south from north of Walnut & the 134 to the stub area	B
	7	Consider funding options, even creative ideas for the original walkway plan from City Hall area to the Arroyo, near Holly	P
	8	More trees, native plants, rain garden to capture rainwater	TG
	9	Caltrans maintaining 2 lots usable for parking	PK
	10	Protected bike lanes	B

Transit	1	OG bus route south of California for work and school	PT
	2	Prefer route 2	PT
Recommended Roadway Improvements (Lower)	1	No speed bumps (St John)	TC
	2	Yes, on speed humps. Yes!	TC
	3	More speed tables and traffic calming	TC
	4	Yes, on traffic signal and raised crossing at this location (St John @ Singer Park)	P/TS
	5	Fix sidewalks plant trees (not saplings) and put in crosswalks	P/TG
	6	Light timing for enhanced ped & bike access @ California	P/B/TS
	7	Why not major street curb extensions for better pedestrian safety and amenity?	P
	8	Traffic light at Arlington Garden	TS
	9	Open dead ends at: Congress Pl, Markham Pl, and Wigmore Dr	R
	10	Signs showing alt routes to 110 south (Bellefontaine St and St John Ave)	W
	11	Love the separated bike lanes!	B
	12	I hope that the trees in the area between the bike lanes and the traffic lanes will actually happen. Dense shade is essential.	B/TG
	13	Traffic calming	TC
	14	Parking protected bike lanes would be much better (Columbia St)	B
	15	Bike lanes on Columbia will be great to provide safer bike access to the Arroyo.	B
	16	New concrete sidewalks on both sides of street would be great. Current sidewalks especially on east are terrible (Pasadena Ave)	P
	17	ADA crosswalks & re signal with pedestrian priority (Columbia St)	P/TS
	18	Class IV bike lanes on Pasadena Ave are great! Yes- Please do it.	B

	19	Excessive speed is a huge problem on this corridor! Yes, please calm traffic via speed tables and the protected bikeway (Pasadena Ave next Huntington)	TC
	20	Add a spoon (Bellefontaine St)	A
	21	Please restore parkways & add new native trees to improve walkability.	P
	22	Light with crosswalk (Arlington Ave)	P/TS
	23	Bulb outs at crossing of Pasadena Ave at Glenarm for safer pedestrian crosswalks.	P
	24	Left turn signal from Pasadena Ave to Glenarm for safer left turns.	TS
	25	Add crosswalks/ speed table	P
	26	Yes. Please eliminate this slip lane, cover with mulch and plant with natives. (Bellefontaine St to Pasadena Ave)	R
	27	Bike lanes need to be really protected - bollards aren't enough	B
	28	Please consider more robust protection than a plastic bollard	B
	29	This bike lane vacuum at this offset intersection creates major bike safety issues (Pasadena/ Columbia/ Freemont)	B
Recommended Roadway Improvements (Upper)	1	Great! Hopefully, bike lanes can link to north of Holly & the 134 too - much needed	B
	2	Consider improvements @ 210 & 134 on ramps - wayfinding	W
	3	Excellent! (Reference to Colorado Blvd class IV)	B
	4	Concern of vehicles turning movement and decision-making changing lanes (exit from SR710 to St John and Del Mar)	R
	5	Raised curbs really good bike protection.	B
Area-wide Improvement Options	1	No more door zone bike lanes > Class IV are much better	B
	2	Enforce speed limits along St. John and Pasadena Ave	E

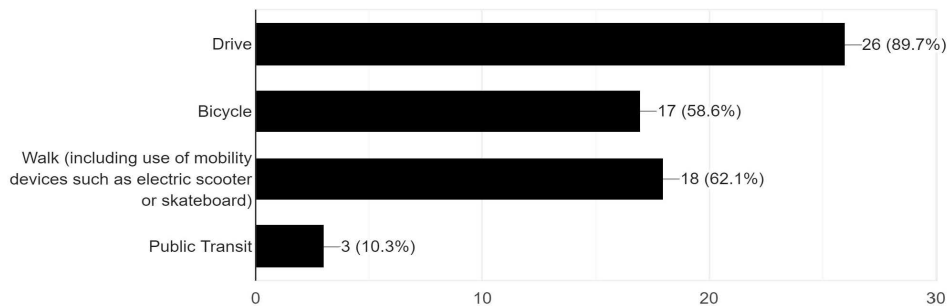
Summary of Responses from Online Survey

710 N Stub Transitional Project Development Online Survey Responses

Question #1 is optional and confidential as survey responses included address and nearest cross street locations.

2. How do you typically travel in the project area? Check all that apply.

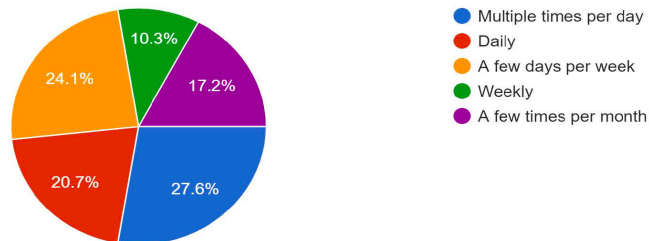
29 responses



Majority 'drive' followed by 'walk' and 'bicycle'.

3. How often do you travel in the project area?

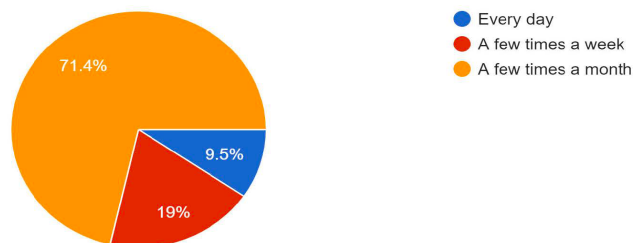
29 responses



Nearly 50% indicated that they travel in the project 'Multiple times per day', as well as 'Daily'.

4. How frequently do you bicycle in the area?

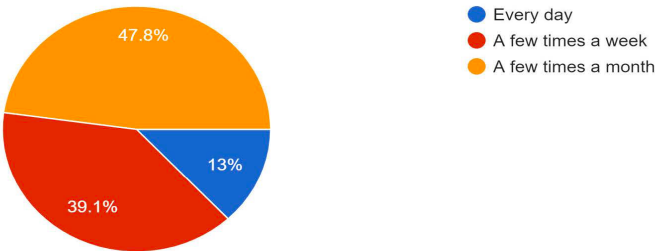
21 responses



Majority of responses bike 'a few times a month' in project area.

5. How frequently do you walk/run in the project area?

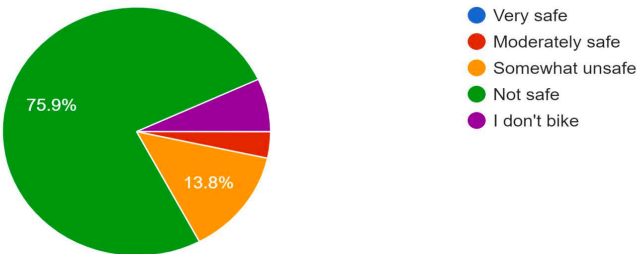
23 responses



Majority of responses walk/run 'a few times a month' in project area.

6. How safe do you feel when bicycling on along streets within the project area?

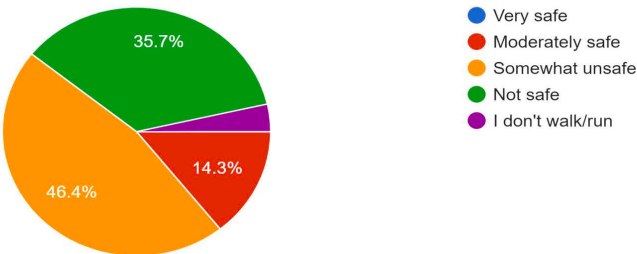
29 responses



About 76% feel streets are 'Not safe' when biking along streets in project area.

7. How safe do you feel when walking or running?

28 responses

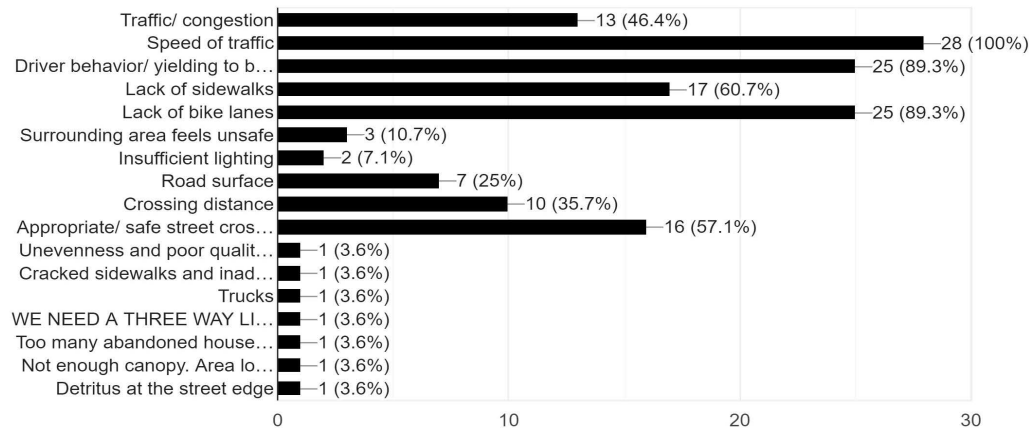


About 36% feel streets are 'Not safe' and about 46% 'Somewhat unsafe' when walking or running.

710 N Stub Transitional Project Development Online Survey Responses

8. If you answered 'somewhat unsafe' or 'not safe' to questions 6 and 7, what are the elements that you feel make it unsafe? Check all that apply.

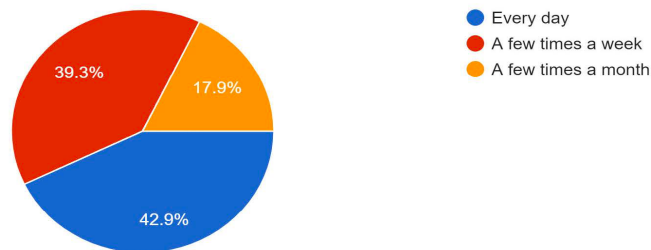
28 responses



Most respondents selected 'Speed of traffic' that made them feel unsafe followed by 'Lack of yielding to bikes/peds' and 'Lack of bike lanes'.

9. How frequently do you drive (motor vehicle)?

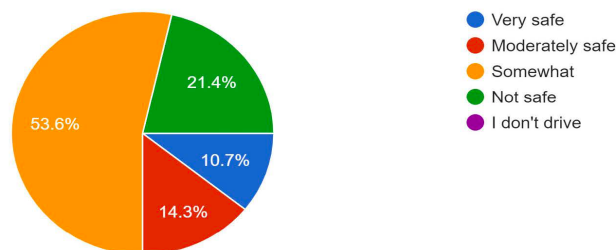
28 responses



Less than half of responses indicated they drive 'Every day'.

10. How safe do you feel when driving on St. John Avenue or Pasadena Avenue?

28 responses

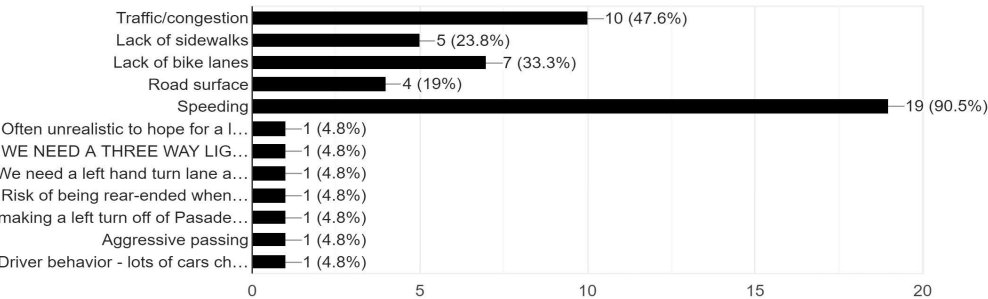


When driving, more than 53% of respondents felt 'Somewhat safe' while about 21% felt 'Not safe'.

710 N Stub Transitional Project Development Online Survey Responses

11. If you answered 'somewhat unsafe' or 'not safe' to question 10, what are the elements that you feel make it unsafe? Check all that apply.

21 responses



Even amongst respondents who drive 'Speeding' was checked the most followed by 'Traffic/congestion'.

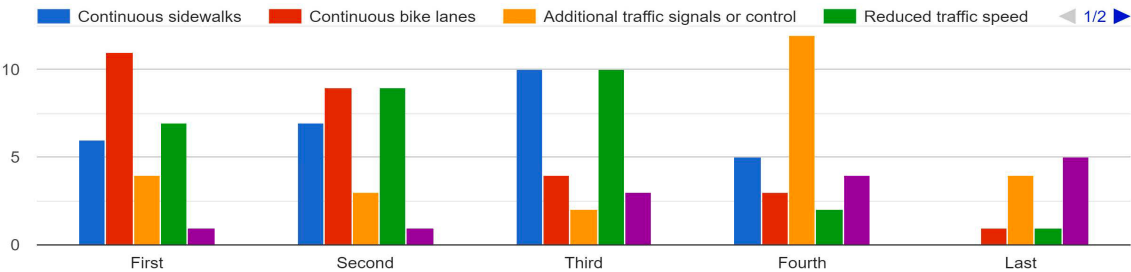
12. Is your commute typically:

28 responses



About 61% commute 'To a location within Pasadena'.

13. When thinking about possible enhancements to the corridor, in what priority order would you place these elements?



Continuous bike lanes' were selected as first priority, followed second by 'Reduced traffic speed' & 'Continuous bike lanes', followed third by 'Continous sidewalks' & 'reduced traffic speed', and fourth 'additional traffic control'. 'Other' was selected as highest for last position.

710 N Stub Transitional Project Development Online Survey Responses

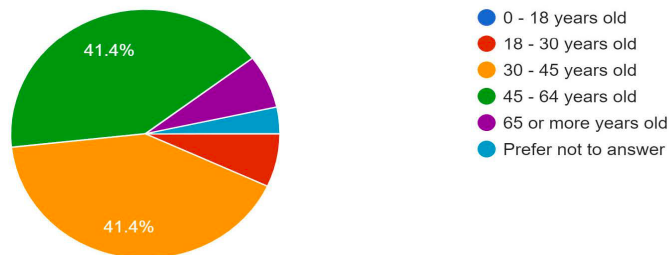
13.a If you selected 'Other (open)' in question 13 please provide response.

- 1 seems like more of this traffic should go along Raymond or Arroyo Blvd.
- 2 Drought tolerant Landscaping
- 3 Safe pedestrian crossings for Pasadena Ave.
- 4 Blocks are really long here so some mid-block crossings would really help
- 5 Eliminate trucks using Pasadena Avenue
- 6 WE NEED A THREE WAY LIGHT AT GLENARM AND PASADENA AVE!!
- 7 Shade and street trees
- 8 Dedicated turn lanes where there are currently none
- 9 Trees and shade, benches trash cans
- 10 More crosswalks
- 11 Ecological landscaping that provides canopy and biodiversity benefits
- 12 Controlled turn lane at Glenarm/Pasadena

Four responses related to trees and landscaping; three responses related to crossings; two responses related to turn lanes; two responses include diverting traffic to Raymond and Arroyo and eliminating trucks on Pasadena; one comment indicating threeway light on Glenarm and Pasadena Ave.

14. What is your age?

29 responses



About 83% of respondents were between 30 to 64 years old.

15. As what gender do you identify?

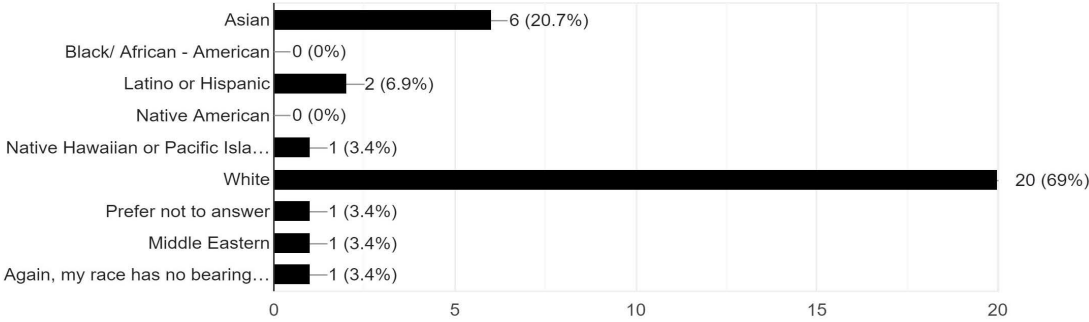
27 responses



A majority of responses identified as Female.

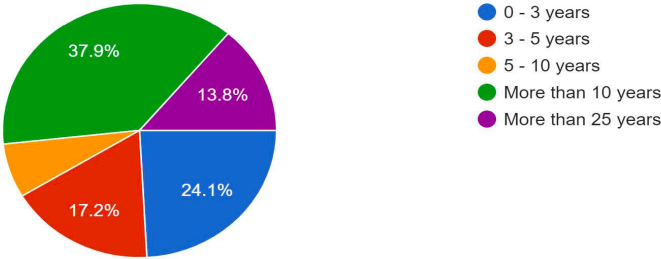
710 N Stub Transitional Project Development Online Survey Responses

16. Please select the race/ ethnicity with which you identify. Check all that apply.
29 responses



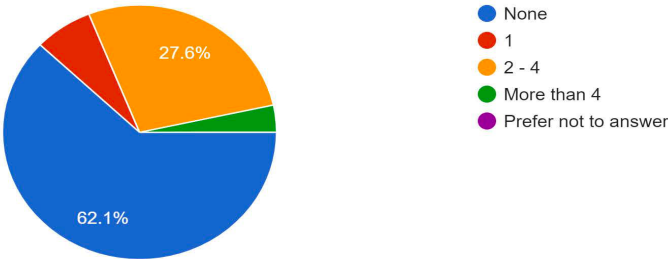
See graph.

17. How long have you lived at your place of residence?
29 responses



Nearly 38% of respondents have lived in place of residence for more than 10 years followed by new residents who have lived in place of residence from 0-3 years.

18. How many children live in your household?
29 responses



See graph.