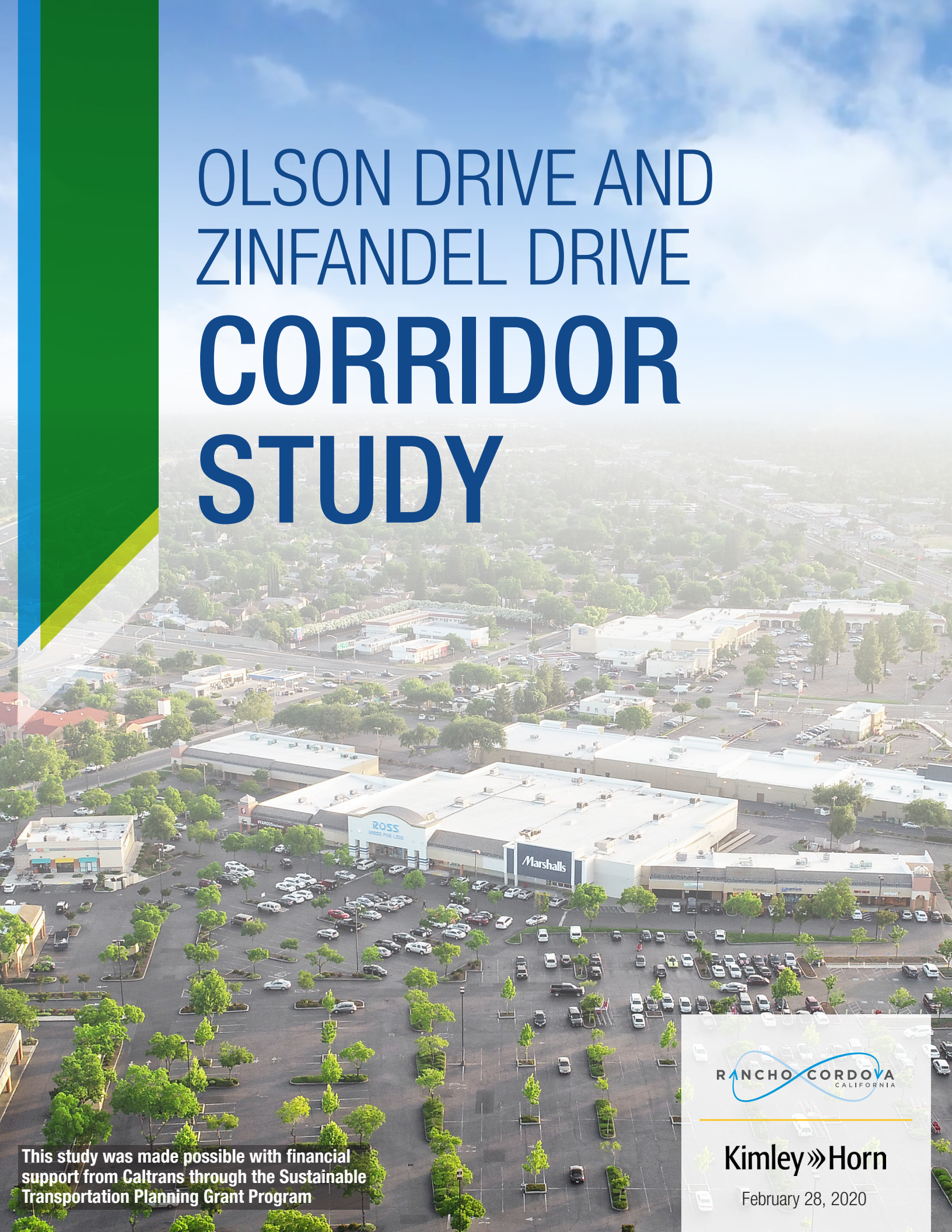
OLSON DRIVE AND ZINFANDEL DRIVE CORRIDOR STUDY



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RANCHO CORDOVA CALIFORNIA

Kimley»Horn

February 28, 2020

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BACKGROUND

Olson Island is a commercial district within the heart of Rancho Cordova, adjacent to the US-50 Freeway. The "island" is comprised of 12 property owners and a total of 26 individual parcels, with three property owners representing a majority of the ownership.

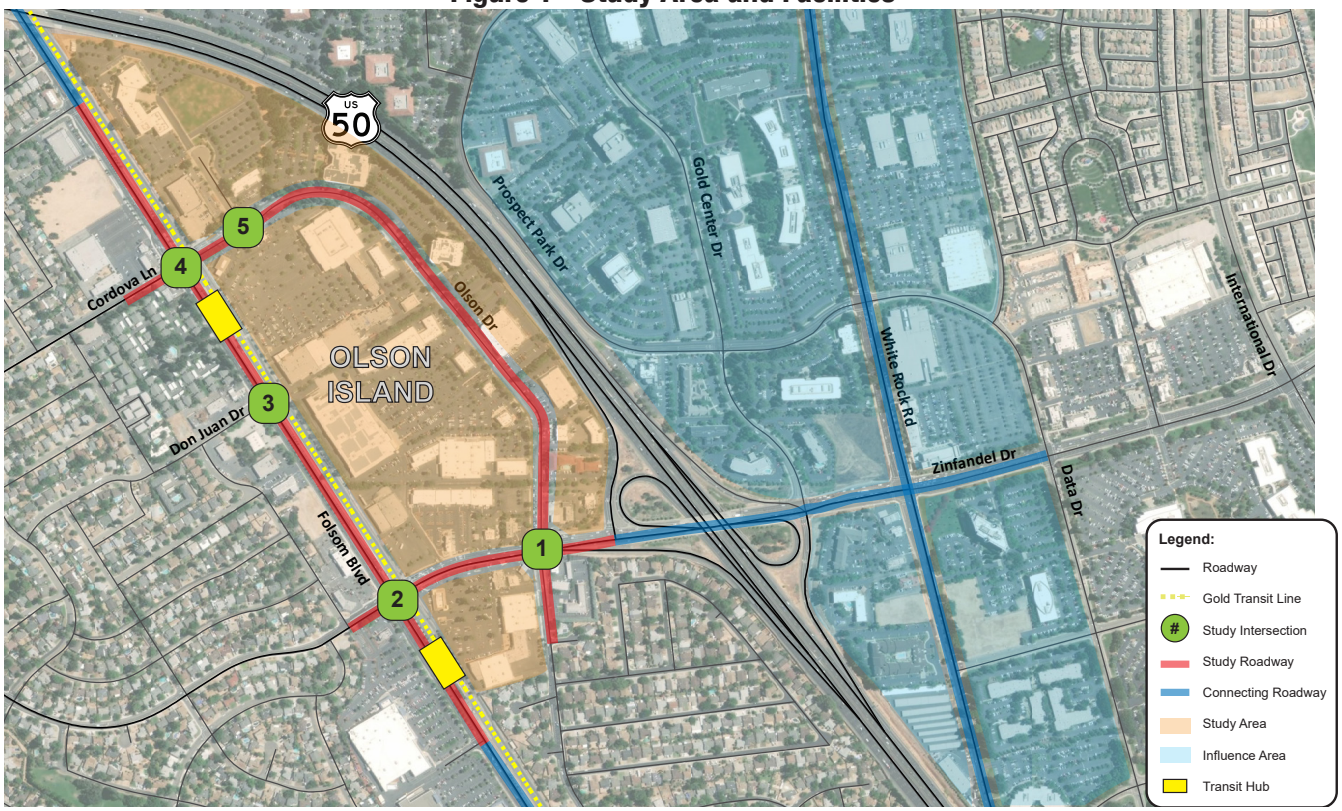
The current land use mix within this area is very diverse and includes: large and small retail; education, medical offices, hotel, banking, post office, and offices. In addition to its proximity to US-50, Olson Island is served by a light rail service (the Cordova Town Center Station on the Gold Line) as well as local bus service (the Cordova Town Center Station on Line 28). The diversity in existing transportation choices and land use provides opportunities for the City to create a multimodal transportation hub and potentially add additional development.

In order to proactively approach future development and redevelopment in the area, the City initiated a study to provide an opportunity for businesses and the community to maximize the opportunities that exist to provide transportation and land use solutions that improve quality of life, create economic opportunities, and provide transportation choices that improve access and mobility.

INTRODUCTION

This study includes a comprehensive list of recommended transportation treatment and improvement projects for the Olson Island Commercial Area located in the City of Rancho Cordova. As shown in **Figure 1** below, the study area has a diverse mix of land uses and has strategic transportation advantages, including proximity to US 50 Freeway, light rail service, and bus service, providing opportunities for the City to create a multimodal transportation hub. These recommended improvements focus on prioritizing multimodal connections, Smart Mobility Infrastructure, and improving traffic operations and mobility. The potential treatment options were selected based on input from the public, existing traffic patterns, and anticipated investment in the Olson Island Commercial district.

Figure 1 - Study Area and Facilities



PROJECT PURPOSE

The purpose of the study is to provide recommendations for transportation, accessibility, circulation, and safety improvements for drivers, bicyclists and pedestrians in the Olson Drive and Zinfandel Drive corridor between White Rock Road and Folsom Boulevard. The City desires redevelopment options that support active transportation, corridor operations, and ensure multimodal transportation options for citizens who depend on safe and reliable transportation options throughout the project area. The performance measure guidelines from the Smart Mobility Framework were chosen to evaluate recommended improvements for this study. The study was constructed to meet the requirements of the California Department of Transportation's (Caltrans) Sustainable Communities Grant Program and other similar programs which fund local and regional multimodal transportation and land use planning projects that further the region's Regional Transportation Plan (RTP) Sustainable Communities Strategy (SCS), contribute to the State's GHG reduction targets, and assist in achieving the Caltrans Mission and Grant Program Overarching Objectives.

THE CALTRANS GRANT PROGRAM OVERARCHING OBJECTIVES ARE:

Sustainability: More efficient transportation to preserve our air and reduce fossil fuel consumption

Mobility: Reduce delay and provide alternate modes of travel and increased connectivity.

Economy: Using our transportation system to bring more jobs and services to Rancho Cordova

Preservation: To make better use of our infrastructure and delay or prevent the need to add capacity

Safety: To reduce injuries and fatalities on our transportation system

Social Equity: Ensuring that the transportation system works for all users regardless of income, age, gender, and social status

Health: Providing more opportunity for people to live healthy and have active lifestyles

Innovation: Taking advantage of new technologies to enhance our transportation system

These objectives are supported by comprehensive and robust performance measures, making them easily applicable to other grant applications outside of Caltrans.

PUBLIC OUTREACH

OUTREACH PROCESS

Stakeholder outreach for this project focused on two distinct groups: (1) businesses and property owners included within the study area, and (2) the public at large. Stakeholder outreach activities included:

- Two rounds of business and property owner focused meetings during the Spring and Fall of 2019;
- Two public open houses that occurred on May 16, 2019 and October 17, 2019;
- One open house that specifically targeted businesses and property owners on December 18, 2019.
- Two rounds of online surveys (that were also provided in hard copy format at open houses) during the Spring and Fall of 2019.

The focus of the outreach was split between two distinct efforts. First, outreach during Spring 2019 focused on educating participants on the study and the range of potential improvements being considered for the purpose of soliciting input on opportunities and challenges from outreach participants. Second, efforts during Fall 2019 were focused on sharing different improvement alternatives that responded to the feedback provided for the purpose of prioritizing and understanding interest and support for various alternatives.

Employees from businesses, property owners, and public interests that participated included the following:

- ANH Investments, Inc.
- Bed Bath & Beyond
- California Inn
- Chevron
- Korean Plaza/KP Market
- Marshalls
- Rancho Cordova Chamber of Commerce
- Rancho Cordova Police Department
- San Joaquin Valley College
- Sneath Commercial Properties
- Walmart

FIRST PHASE OUTREACH - SPRING 2019

The project team solicited input on opportunities and challenges. Outreach during this period included individual business and property meetings, a public open house, and an online survey.

SURVEY

The public survey conducted included a total of 19 questions tailored to gather input related to who travels to the project area, and why, how often, and how they get there. A summary of the results of the survey indicated that a vast majority of respondents visit the commercial area either a few times a week or every day, and over 90% of them drive there.

About 63% of respondents expressed they have difficulty traveling to, from, or around the Olson Drive/ Zinfandel Drive commercial area due to traffic congestion, turning at driveways, and pedestrian activity.

When asked what type of travel they want the City of Rancho Cordova to prioritize improving, most respondents indicated that cars/driving were their highest priority. However, many responses indicated that bicycling and walking were also important for improvement considerations. Survey results indicated that less congestion, being able to visit without driving, improvements to traffic flow within parking lots, and better wayfinding/signage would be of the highest benefit to the study area. The survey results were reiterated by the participants at the pubic open house on May 16, 2019.

Business and property owner feedback included:

- Support for a Mobility Hub including interest in the City looking into bike/scooter-share.
- Recognition that better alignment and driveway consolidation could improve traffic operations.
- Interest in promoting businesses profile that improves the attractiveness outside of daytime operations.
- Interest in considering widening and other capacity enhancing options to move traffic along Olson.
- Concerns over pedestrian safety, particularly as it relates crossing Olson during lunch and other busy periods.
- Concern over issues related to vagrancy particularly as it relates to Regional Transit Operations nearby
- Concern over the impact traffic congestion is having on access to business and the need to address it.
- Support for working with other business and property owners to address challenges and maximize opportunities.
- Recognition that on-site circulation is fragmented and impacting traffic operations on Olson.

SECOND PHASE OUTREACH - FALL 2019

The project team solicited input regarding the interest and support for various alternatives.

SURVEY

The public survey was distributed by the City and contained fewer questions than the public survey conducted in Spring 2019. The follow-up survey had six questions that were focused on the reaction to the recommended improvements. Feedback from the survey included:

- Strong support for congestion reduction and internal circulation improvements
- Strong support for improvements for autos particularly those that reduce congestion/delay and improve circulation.
- Concern for/questions about roundabouts
- Support for bike/ped improvements if they are not at the expense of increase auto congestion

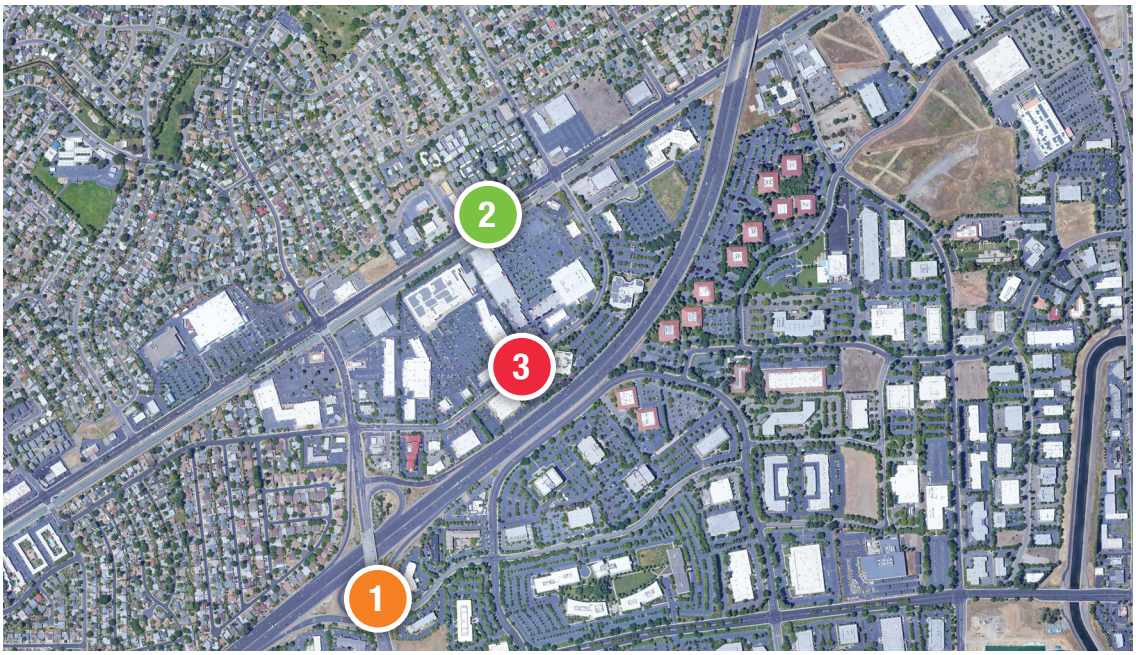
Business and property owner feedback to proposed improvement options included:

- Support for a Mobility Hub including interest in the City looking into bike/scooter-share if personal safety can be assured.
- Strong support for congestion reduction and internal circulation improvements.

- Questions about whether roundabouts are the right treatment and whether residents would be comfortable navigating them.
- Strong support for pedestrian safety improvements particularly in consideration of SJVC students and connectivity across Olson.
- Strong support for wayfinding, branding of the area, and beautification efforts including paver treatments and vegetation.
- Support for bike/ped improvements in so far as they are not at the expense of increase auto congestion. Also, concerns regarding personal safety with those improvements
- Support for driveway consolidation, transit hub if personal safety can be assured, and better connectivity to businesses on the south side
- Concern for/Questions about Driveway consolidation, roundabouts, widening, and traffic circles Continued support for the mobility hub

EXISTING CONDITIONS

Data pertaining to the existing conditions of Olson Drive and adjacent facilities in the City of Rancho Cordova were gathered in February of 2019. The following information summarizes the existing conditions of the Study Area. Additional information can be found in the **Olson Drive and Zinfandel Drive Corridor Study – Existing Conditions Memorandum.**



TRANSPORTATION CONDITIONS

Due to the variety of major employment centers and commercial/retail at and adjacent to the site, there is a large pull of activity into this area. An evaluation of the existing transportation facilities and conditions provided an overview of the major constraints and opportunities of the area.

ROADWAY NETWORK

There are three major corridors that provide access to/within the study area:

1 ZINFANDEL DRIVE

Two-lane facility north of Folsom Boulevard

Four-lane facility north of US-50

Six-lane facility south of US-50 to Baroque Drive

Class II bike lanes north of Gold Center Drive and south of Data Drive

Continuous sidewalks north and south of US-50 ramps

Speed limit is 35 miles per hour (mph)

2 FOLSOM BOULEVARD

Four-lane facility with center medians

Class II bike lanes

Continuous sidewalks

Speed limit is 40 mph

3 OLSON DRIVE

Local two-lane facility

Continuous sidewalks

No bike facilities on Olson Drive

Speed limit is 35 mph

30 driveways providing access to the site

VOLUMES

A combination of turning movement counts and 48-hour roadway segment counts for vehicle, bicycle, and pedestrians were collected along Olson Drive and adjacent facilities for the peak-periods in December 2018 (Friday-Saturday, December 14th, 15th, and 22nd, respectively).

As shown in **Table 1**, while Olson Drive is classified as a local two-lane roadway, ADT volumes on Olson Drive east of Zinfandel Drive is comparable to volume on Zinfandel Drive and is higher than volume on Folsom Boulevard, which are both classified as major four-lane roadways.

Table 1 - Roadway ADT

Location		Friday	Saturday
		ADT*	ADT
1	Olson Drive E/O Zinfandel Drive	21,154	20,546
2	Olson Drive S/O Folsom Blvd	12,619	11,330
3	Zinfandel Drive N/O Olson Drive	23,311	18,955
4	Folsom Blvd Bet. Zinfandel Drive & Don Juan Drive	12,775	11,438

**Average of Friday-December 14 and Friday-December 22, 2018.*

Zinfandel Drive at Olson Drive intersection has a heavy northbound right turn volume onto Olson Drive, and a heavy westbound left turn volume onto Zinfandel Drive. In addition, the Folsom Boulevard/Cordova Lane at Olson Drive intersection has a heavy westbound left turn volume, and a heavy northbound right turn volume. This suggests that the majority of trips accessing The Olson Commercial Site come from the south and the east.

Pedestrian activity along Olson Drive was observed for mid-block crossings. For analysis purposes, Olson Drive was separated into 16 zones and studied during 2-hour peak periods. Thirty mid-block crossing where observed during these time frames. Most of pedestrian midblock crossings occur in zones approximately located between the Chevron gas station and Jamba Juice. On average, 1 to 4 pedestrians cross Olson Drive midblock, with a maximum of 10 pedestrian crossing reported, during the 2-hour peak-periods. Only one bicyclist was reported as crossing Olson Drive during the peak 2-hour period (near the Prospect Point office building).

↘ TRANSIT

Currently, there are three transit routes serving the study area. The Sacramento Regional Transit (RT) Bus Route 28, the Sacramento RT Gold Line (light rail train), and the Rancho CordoVan Service (local shuttle service).

Through an analysis of boardings and alights in light rail and/or bus service described above, it was determined that approximately one-third of all transit trips during Friday peak 2-hour periods, and one-fourth of all transit trips during Saturday peak 2-hour periods, originate or end within the Olson Commercial Site. Approximately 200 passengers per hour board or alight from transit services in the Olson Island area during the peak period.

↘ ON-SITE PARKING

During peak traffic periods (Fridays between 4 and 6pm, and Saturdays between 12noon and 2pm), observational parking occupancy data was collected within the Olson Commercial Site. As shown in **Figure 2**, it was observed that parking occupancy is highest near the major retail sites including: Target, Marshalls, and KP International Market, but still high in the remaining commercial areas. In comparison, parking occupancy is lowest near office sites outside of typical work hours.

COLLISION HISTORY

Three intersections were studied closely to observe any collision trends, due to their proximity to the Olson Commercial Site. The intersections included:

Zinfandel Drive at Olson Drive

Zinfandel Drive at Folsom Boulevard

Folsom Boulevard/Cordova Lane at Olson Drive

Over the most recently available six-year period, there was a total of 152 collisions (excluding freeway collisions), the majority (113) of which occurred between 2016-2018. More than half of all collisions resulted in an injury and/or severe injury. The only fatality (pedestrian) occurred at the intersection of Folsom Boulevard at Olson Drive. **Figure 3** displays the collision locations in the vicinity of the study area during the six-year period.

Additionally at these intersections, the analysis proved:

- Most collisions resulted from broadside (36%), rear end (31%), and sideswipes (14%)
- Most collisions occurred at the Zinfandel Drive at Olson Drive intersection (51%)
- Most bicycle/pedestrian collisions occurred at the Zinfandel Drive at Folsom Boulevard intersection (44%)

SPECIFICALLY ALONG OLSON DRIVE, MOST COLLISIONS WERE CATEGORIZED AS BROADSIDE AND WERE CAUSED BY A VEHICLE RIGHT-OF-WAY VIOLATION (70%).

Figure 2 - Parking Utilization

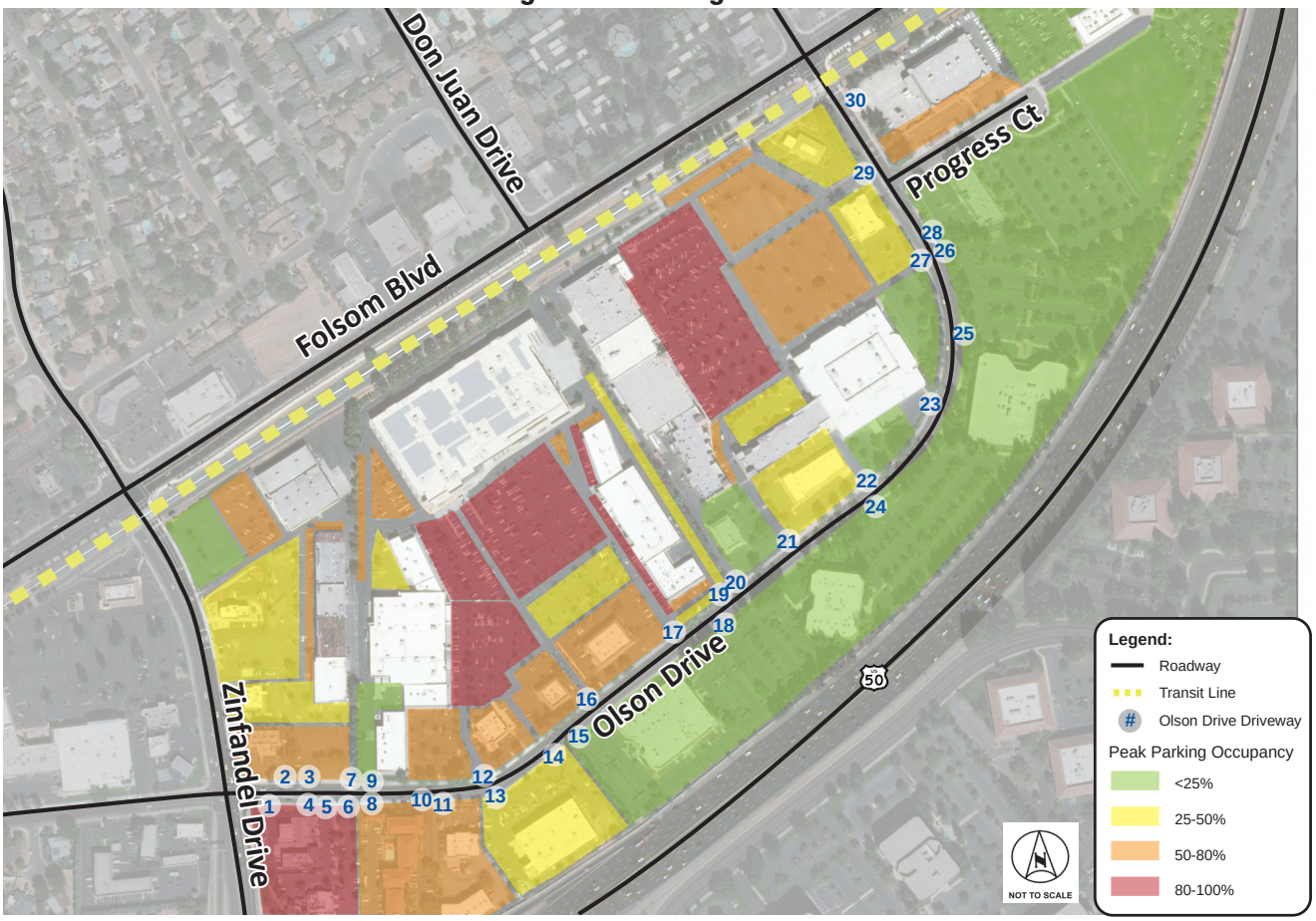


Figure 3 - Collision Severity (2012 - 2018)

ANALYSIS - OPTIONS EVALUATED

PERFORMANCE MEASURES:

- **Level of Service (LOS)** – A letter grade performance evaluation for intersections based on how much time is lost by the average driver passing through it. LOS is a qualitative measure that ranges from A (best) to F (worst) and represents the driver's perception of how bad congestion is at an intersection or along a roadway segment.
- **Delay** – The amount of time the average driver loses due to intersection congestion.
- **Travel Time** – The amount of time it takes to get between Folsom Boulevard and Zinfandel Drive along Olson Drive with a specific configuration.
- **Vehicle Miles Traveled** – The reduced number of vehicle miles due to existing trips moving from vehicles to transit, bicycles, or walking.
- **Safety** – The expected reduction of vehicle collisions due to operational or geometrical changes to the roadway or intersection.
- **Bicycle** – Estimated daily bicycle users through the potential project.
- **Pedestrian** – Estimated daily pedestrians through the potential project.
- **Bicycle Level of Stress** – A numerical score describing conditions for cyclists. One is a low stress facility suitable for children, elderly, and infrequent riders. Four is a higher stress facility likely to only be used by experienced riders. The measure evaluates traffic speed, level of protection from traffic, and number of conflicts such as driveways and intersections.
- **Environmental Justice/Social Equity** – This is a measure of the proportion of trips using the project that originate in the transportation disadvantaged areas of the City, primarily to the west of the project site. Impacts are reported as low, median and high. High impact projects are estimated to have over 20% of trips from transportation disadvantaged areas of the City, medium is between 10% and 20%, low is less than 10%.

GLOSSARY OF TERMS

ADT	Average Daily Traffic
AMP	Asset Management Plan
ATP	Active Transportation Program
BLS	Bicycle Level of Stress
Caltrans	California Department of Transportation
CTC	California Transportation Commission
FAST	Fixing America's Surface Transportation
EJ	Environmental Justice
GHG	Greenhouse Gas
HSIP	Highway Safety Improvement Program
IIP	Interregional Improvement Program
ITIP	Interregional Transportation Improvement Program
LOS	Level of Service
RIP	Regional Improvement Program
RT	Regional Transit
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SAC	Stakeholder Advisory Committee
SB 1	California Senate Bill 1
SCS	Sustainable Communities Strategy
SHOPP	State Highway Operation and Protection Program
STIP	State Transportation Improvement Program
VMT	Vehicle Miles Traveled

RECOMMENDED IMPROVEMENT OPTIONS SHEETS

The following recommended improvement options could improve local mobility and transportation mode choice for those visiting the Olson Island site. Better and more equitable mobility will in turn promote additional investment and business development activity. Based on the priorities of the City of Rancho Cordova, residents and stakeholders, recommended improvements were developed relating to the following six categories:

VEHICLE

TRANSIT

ACTIVE TRANSPORTATION

FREIGHT

NEIGHBORHOOD IDENTITY

ECONOMIC DEVELOPMENT

THE FOLLOWING RECOMMENDED IMPROVEMENT DESCRIPTIONS INCLUDE AN ASSESSMENT OF HOW WELL THE PUBLIC WOULD SUPPORT THE IMPROVEMENT OBJECTIVES. **THOSE THAT BEST SUPPORT THE CITY'S GOALS WERE COLLECTED INTO A FINAL PLAN PACKAGE.**

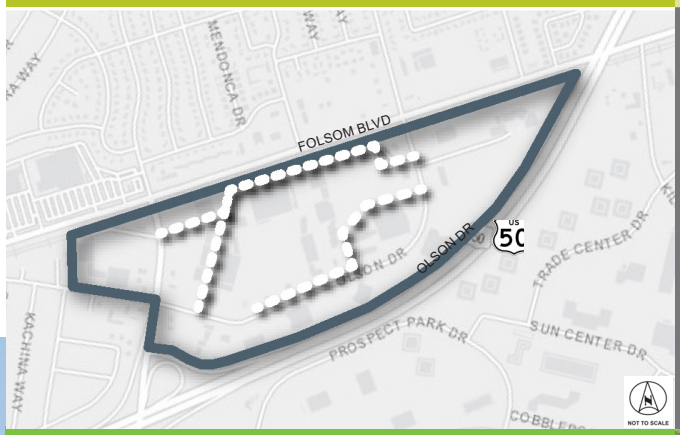
VEHICLE

OLSON ISLAND CIRCULATION ROAD

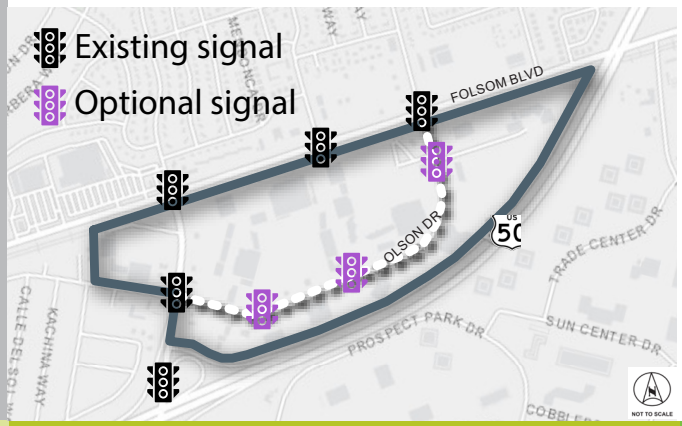
Access to the Olson Island site is limited by the rail corridor along its north side, which requires employees and customers to use either Zinfandel Drive or Olson Drive to access. Olson Drive has less vehicle capacity than Folsom Boulevard and is often congested as vehicles enter and exit adjacent properties. A local circulation road through the Olson Island site, connecting Zinfandel Drive through Olson Island to Olson Drive on the east side of the site, would provide additional route options and reduce the number of vehicles on Olson Drive, reducing congestion and improving overall business access. This internal circulation road will allow cars and pedestrians to access multiple commercial sites in the Olson area without having to get back on to Olson Drive. In addition, an internal circulation road would provide other benefits such as safety, circulation, and air quality benefits.

RELIABLE MOBILITY, REDUCE DELAY

Will provide an alternative route for traffic to bypass congestion on Olson Drive, reducing congestion and improving corridor safety.



ROSEVILLE GALLERIA EXAMPLE



OLSON DRIVE CAPACITY EXPANSION

Olson Drive could be reconfigured to a four-lane roadway with a median that would limit left-turns to key driveways. Minor driveways would become right-in, right-out reducing vehicle conflict points, improving safety, and providing more traffic capacity along Olson Drive. Optional signals could be located at the driveway north of Golden 1 Credit Union, the driveway next to Supercuts, and the driveway south of Panda Express. These signals would be spaced at least 700 feet apart which is generally acceptable in an urban environment.

SAFETY (CRASH REDUCTIONS)

Olson Drive Corridor ↓32%

TRAVEL TIME ZINFANDEL FROM OLSON

Alternative	EB	WB
Before:	104 s	128 s
After w/o Signals:	90 s	112 s
After w/ Signals:	148 s	159 s

EJ PROPORTION OF BENEFIT

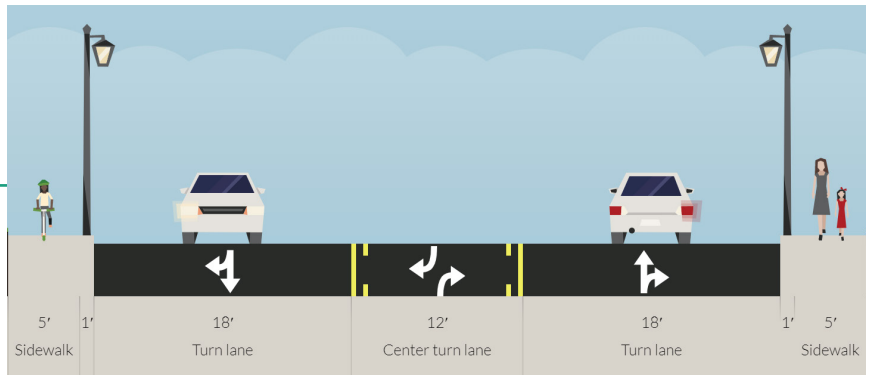
— 25% of Users

BICYCLIST COMFORT LEVEL

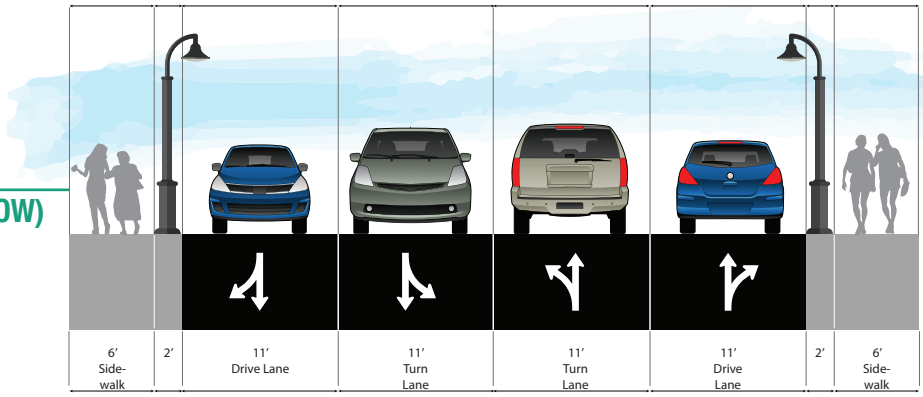
Before: LOW 1 — HIGH

After: LOW 1 — HIGH

OLSON DRIVE EXISTING MOST CONSTRAINED CROSS SECTION (60' ROW)



OLSON DRIVE FOUR LANE OPTION (60' ROW)



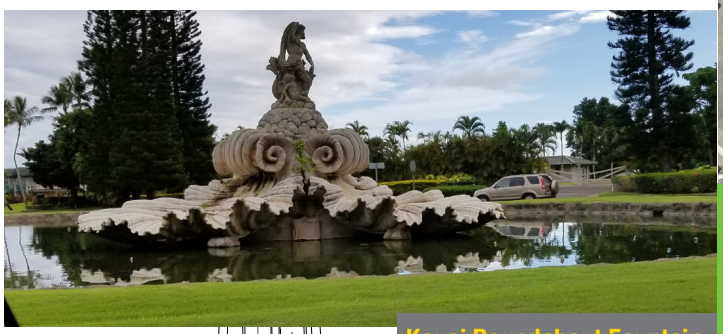
Right-In Right-Out
RIRO Driveway

VEHICLE

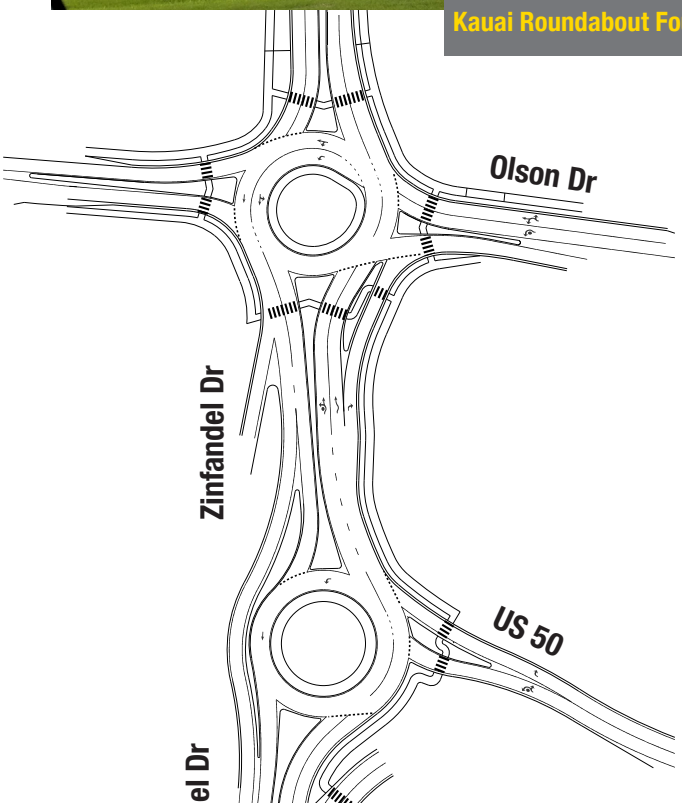
ROUNDABOUTS

Zinfandel Drive is an important gateway to Rancho Cordova's retail and economic center. A roundabout at Zinfandel Drive and Olson Drive would slow traffic as it enters the area, but reduce stopping and idling associated with signals, providing a reduction in greenhouse gases and would also reduce the severity of, and potentially number of collisions. The roundabout would also provide the opportunity for a City branded marquee entrance to the district with wayfinding signage and decorative elements. Due to its proximity to the ramps at US 50, the corridor would operate better if the US 50 ramp terminals were converted to roundabouts as well. The Federal Highway Administration has evaluated roundabouts for pedestrian safety and determined that when designed correctly, pedestrian and bicycle safety at roundabouts is better than at signalized and stop controlled intersections.

In addition, Roundabouts are being installed by Caltrans at interchange locations throughout the state given their inherent benefits. However, each interchange is unique and an Interchange Control Evaluation (ICE) is required at any interchange intersection that is to be modified. The ICE requires roundabouts be compared with signals or stop control to determine the best control method at the intersection.



Kauai Roundabout Fountain



INTERSECTION DELAY AND LOS

Total Network with both Roundabouts
Average Delay: 17.8 seconds LOS B
Worst-lane Delay: 54.8 seconds LOS D

Olson/Zinfandel
Before Delay:
47.3 seconds LOS D
After Delay:
25.1 seconds LOS C

US 50/Zinfandel
Before Delay:
16.3 seconds LOS B
After Delay:
7.9 seconds LOS A

BICYCLIST COMFORT LEVEL

Olson/Zinfandel Intersection

Before: LOW 1 — HIGH
After: LOW 1 — HIGH

Zinfandel/US 50 Intersection

Before: LOW 1 — HIGH
After: LOW 1 — HIGH

Roseville, CA

BENEFITS INCLUDE:

- Improved Circulation
- Reduced congestion and delay
- Improved safety for bicyclists and pedestrians
- Improved aesthetics
- Creates a gateway entry

EJ PROPORTION OF BENEFIT

— 15% of Users

SAFETY (CRASH REDUCTIONS)

Olson/Zinfandel Intersection ↓67%

Zinfandel/US 50 Intersection ↓63%

BENEFITS INCLUDE:

- Improved Circulation
- Improved vehicle safety
- Reduced congestion
- Reduced delay at the following intersections:

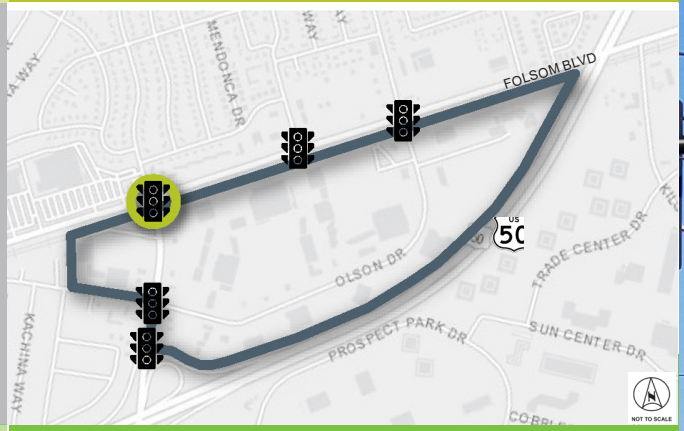
Folsom/Zinfandel
Delay: 36.5 seconds

Olson/Zinfandel
Delay: 42.6 seconds

Folsom/Olson
Delay: 18.0 seconds

EJ PROPORTION OF BENEFIT

— 25% of Users



SAFETY (CRASH REDUCTIONS)

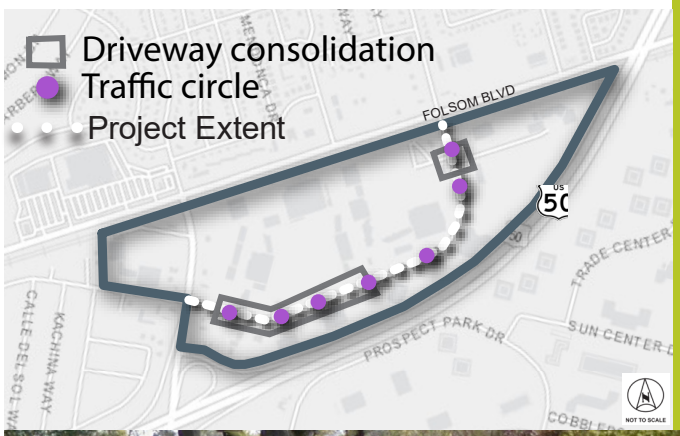
Zinfandel/US 50 Intersection	↓13%
Zinfandel/Olson Intersection	↓17%
Folsom/Zinfandel Intersection	↓17%
Folsom/Olson Intersection	↓17%
Folsom/Don Juan Intersection	N/A

SIGNAL TIMING IMPROVEMENTS

Signal timing improvements such as a change in signal operations from fully-actuated to coordinated or adaptive/dynamic, can be used to better serve the demand of the area. Due to the high peak traffic volume and high traffic variability day to day, adaptive signal timing, which is dynamically responsive to accommodate changing traffic needs, could reduce signal delays along Olson Drive and Zinfandel Drive by allowing the signals to respond to real time traffic conditions where demand variation can be dynamic. Signal timing improvements along Folsom Boulevard and Zinfandel Drive could be quickly and easily updated to help move traffic in and out of the area. Signal updates would continue to be linked with the rail corridor to allow unimpeded movement of Gold Line trains.

OLSON DRIVE OPERATIONAL MODIFICATION

Driveway's along Olson Drive could be consolidated to reduce the number of vehicle conflicts. Where possible, the driveways on both sides of Olson Drive could be lined up and converted to traffic circles, which would improve corridor safety, circulation, and reduce stopping that blocks through traffic. The location map below shows examples of locations where driveways could be consolidated, and traffic circles could be installed to reduce speeds and increase the ability for vehicles to enter and exit driveways. While roundabouts are used as traffic control in place of traffic signals or stop signs, traffic circles are used to reduce speeds, improve safety and usually have stop signs at the minor street or driveway approaches.



SAFETY (CRASH REDUCTIONS)

Olson Drive Corridor ↓32%

EJ PROPORTION OF BENEFIT

— 25% of Users

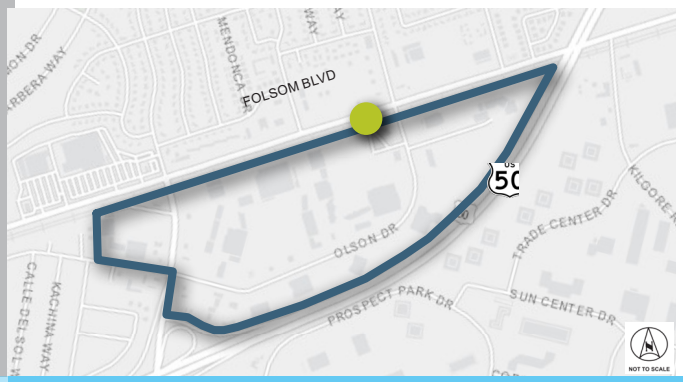
BICYCLIST COMFORT LEVEL

Before (LOW – HIGH): 1

After (LOW – HIGH): 4

PROPOSED LOCATIONS

- Lumber Liquidators Driveway
- Petsmart Western Driveway
- Driveway East of Subway
- SJVC Western Driveway
- SJVC Middle Driveway
- Golden 1 Southern Driveway
- Progress Court Intersection



TOWN CENTER TRANSIT HUB

CORDOVA TOWN CENTER TRANSIT HUB

A portion of the parking area near the Cordova Town Center station could be converted to Park and Ride for transit users. The hub could also be equipped with secure bicycle storage, bike share/scooter stations to make it easier for transit users to access local retail and services, electric vehicle charging stations, and a drop-off / pick-up area for transportation network companies such as Uber and Lyft. The existing bus bays along Folsom Boulevard could be served by more CordoVan routes. These amenities would encourage more transit use, reducing greenhouse gases and congestion, and would bring more people onto the Olson Island site daily, increasing potential foot traffic for local businesses.

BENEFITS:

- The existing bus bays along Folsom Boulevard could be served by more CordoVan routes
- These amenities would encourage more transit use
- Reduce greenhouse gases and congestion
- Bring more people onto the Olson Island site daily, increasing potential foot traffic for local businesses.

TRANSIT

CORDOVAN LUNCH SHUTTLE

A modified or new CordoVan route could be established to transport people from the major job centers south of US 50 to Olson Island for lunch. This service could use the autonomous shuttle that recently operated at the White Rock business park and would reduce the number of vehicles moving between the sites during the lunch peak and could increase the number of lunch time patrons at Olson Island eateries. The service would run at high frequencies for a limited period during each weekday. This service could be expanded in the future to include on-demand micro transit.

BENFITS:

- Improved access and increased patrons
- Reduce congestion and delay
- Improved circulation
- Improved accessibility
- Utilization of new technology options

EJ PROPORTION OF BENEFIT

15% of Users

NEW CORDOVAN ROUTE (SHOWN IN RED) TO CONNECT THE OFFICE PARK AREA TO THE SOUTH WITH THE NEW MULTIMODAL HUB. THIS ROUTE WOULD OPERATE EVERY 15 MIN DURING THE PEAK LUNCH HOUR(S)

NORTH-SOUTH OLSON ISLAND TRAIL

A new Class I bicycle and pedestrian route could be established to connect the existing network of facilities through and across Olson Island. The City is currently improving the Zinfandel Drive interchange to add a low-stress pedestrian separated route across US 50 connecting to the office parks south of US 50 to Olson Island. The City is currently in the process of designing an exclusive pedestrian/bike overcrossing structure on Zinfandel Drive connecting White Rock Road to Olson Drive. This would make active transportation a more viable option for many Olson Island customers and employees that do not currently have a direct route to access the site.

A long term option would be to construct a direct non-vehicular bridge over US 50 connecting Prospect Park Drive to the south and Olson Drive to the north connecting the employment center to businesses.

AFFECTED BY IMPROVEMENT DAILY

241 Pedestrians

482 Bicyclists

71,000 Annual VMT Reduction

BICYCLIST COMFORT LEVEL

	LOW			HIGH
Before	1			
After				4

ACTIVE TRANSPORTATION

EAST-WEST OLSON ISLAND TRAIL

A Class I facility can be constructed connecting Zinfandel Station to Cordova Town Center Station along the south side of the rail corridor enhancing the ease of comfort of transit users access various business in Olson Island. This trail would also provide more direct active transportation access to lower income communities west of the site for jobs in and around Olson Island.

AFFECTED BY IMPROVEMENT DAILY

300 Pedestrians

600 Bicyclists

89,000 Annual VMT Reduction

BICYCLIST COMFORT LEVEL

Before — LOW 1 — HIGH

After — LOW — HIGH 4

OLSON DRIVE BICYCLE TRAIL

The two-lane configuration of Olson Drive allows room to build a trail along Olson Drive for bicycles that would be separated from traffic by a physical barrier that could be landscaped and planted for shade and neighborhood character. This trail would connect existing bike lanes along Olson Drive with those on Cordova Lane, providing better direct active transportation connections for lower income communities west of Zinfandel Drive.

AFFECTED BY IMPROVEMENT DAILY

309 Pedestrians

618 Bicyclists

92,000 Annual VMT Reduction

BICYCLIST COMFORT LEVEL

Before — LOW 1 — HIGH

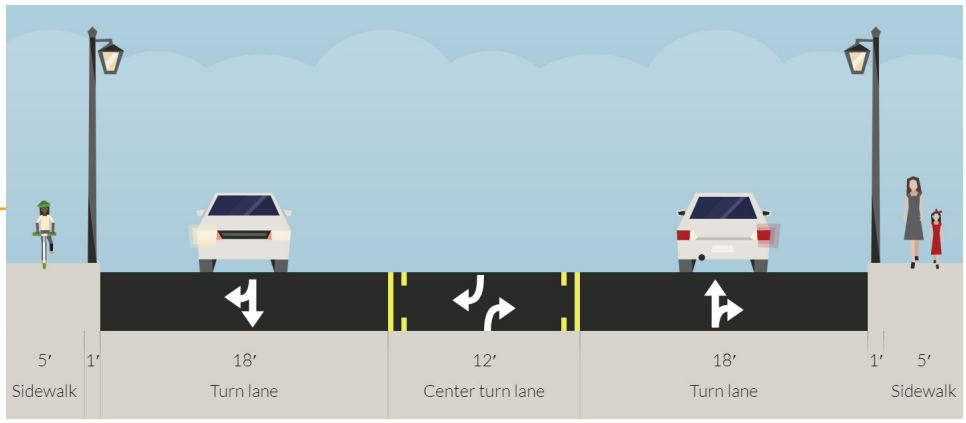
After — LOW — HIGH 4

EJ PROPORTION OF BENEFIT

— 25% of Users

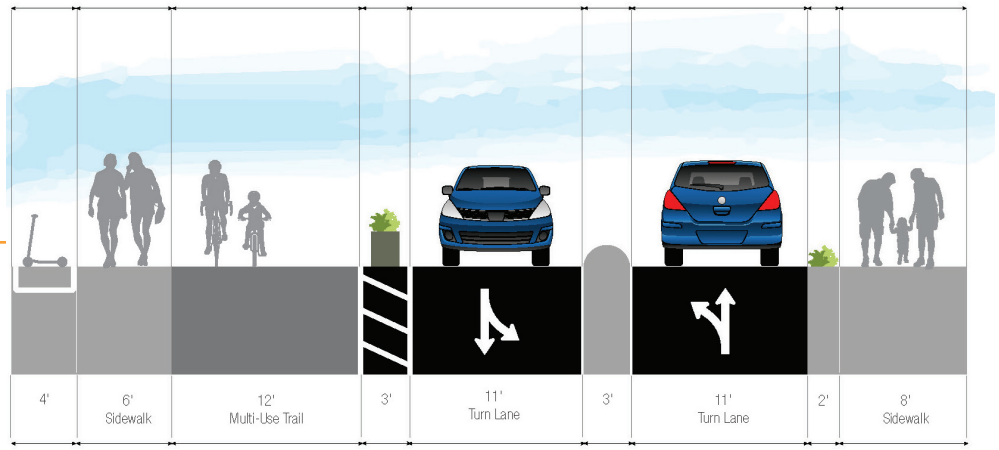
OLSON DRIVE EXISTING

MOST CONSTRAINED CROSS SECTION (60' ROW)



OLSON DRIVE

TWO LANE WITH BIKE PATH OPTION (60' ROW)



ACTIVE TRANSPORTATION THROUGH THE ZINFANDEL DRIVE/US 50 INTERCHANGE

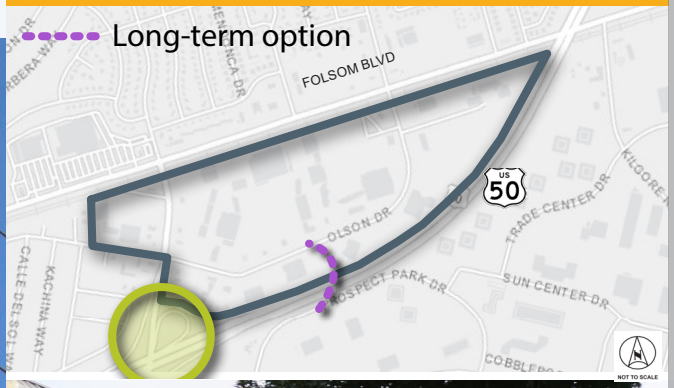
While improvements to this interchange are on-going, the interchange is currently lacking in a defined pedestrian route and ramps interrupt the sidewalk network and bicycle lanes do not continue over the overpass. While pedestrian improvements are being finalized, interim signage and markings could be added in the near-term to better direct pedestrians and bicycles across the highway while limiting conflicts with vehicles. As shown in the figure to the right, a long-term option would be to construct a non-motorized bridge connecting Prospect Park Drive with Olson Drive.

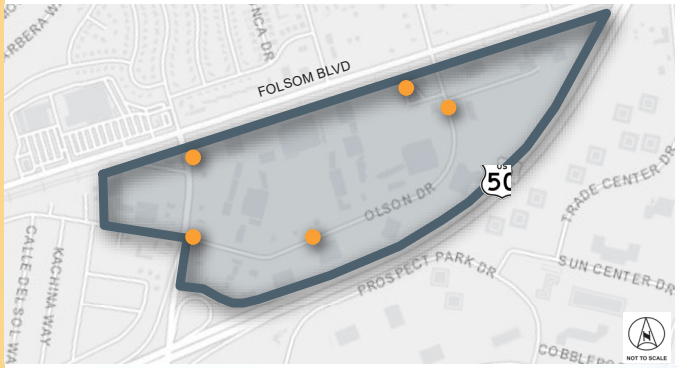
AFFECTED BY IMPROVEMENT DAILY

156 Pedestrians

311 Bicyclists

36,000 Annual VMT Reduction





WAYFINDING

Signage at key access points and junctions could be installed at pedestrian scales to direct visitors to key businesses and services. Due to the size of the Olson Island site, it may be off-putting for pedestrians unfamiliar with the area to find a specific business by foot. Examples of pedestrian wayfinding are shown below. In addition, wayfinding signs along Zinfandel Drive and Folsom Boulevard could help direct vehicles to the Olson Commercial area.

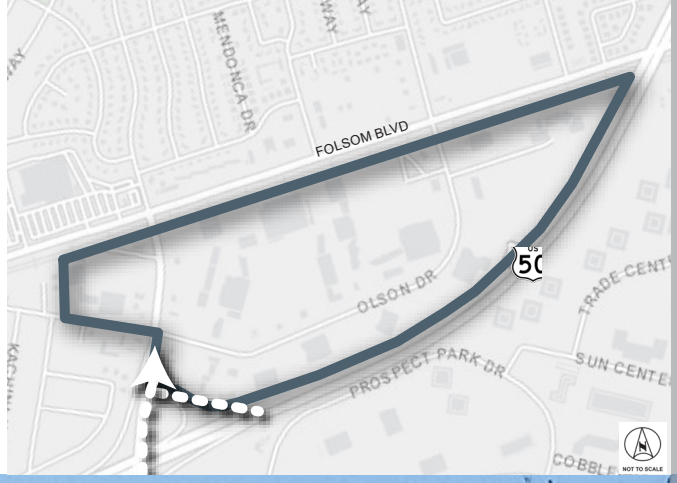
Addison, TX

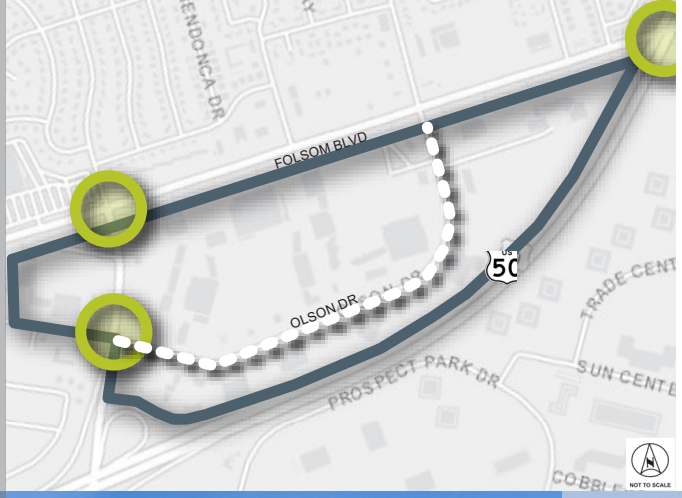
Roseville, CA

Folsom, CA

DESIGNATED FREIGHT ROUTES

Rancho Cordova could establish specific freight routes to access the site, limiting the circulation of large delivery trucks along Olson Drive. Freight traffic would use US 50, Zinfandel Drive and Folsom Boulevard before accessing Olson Drive. This would limit the heavy vehicles to only right turns in and out of the main commercial area and allow the City to harden infrastructure at key locations, while limiting wear and tear on other more decorative locations.



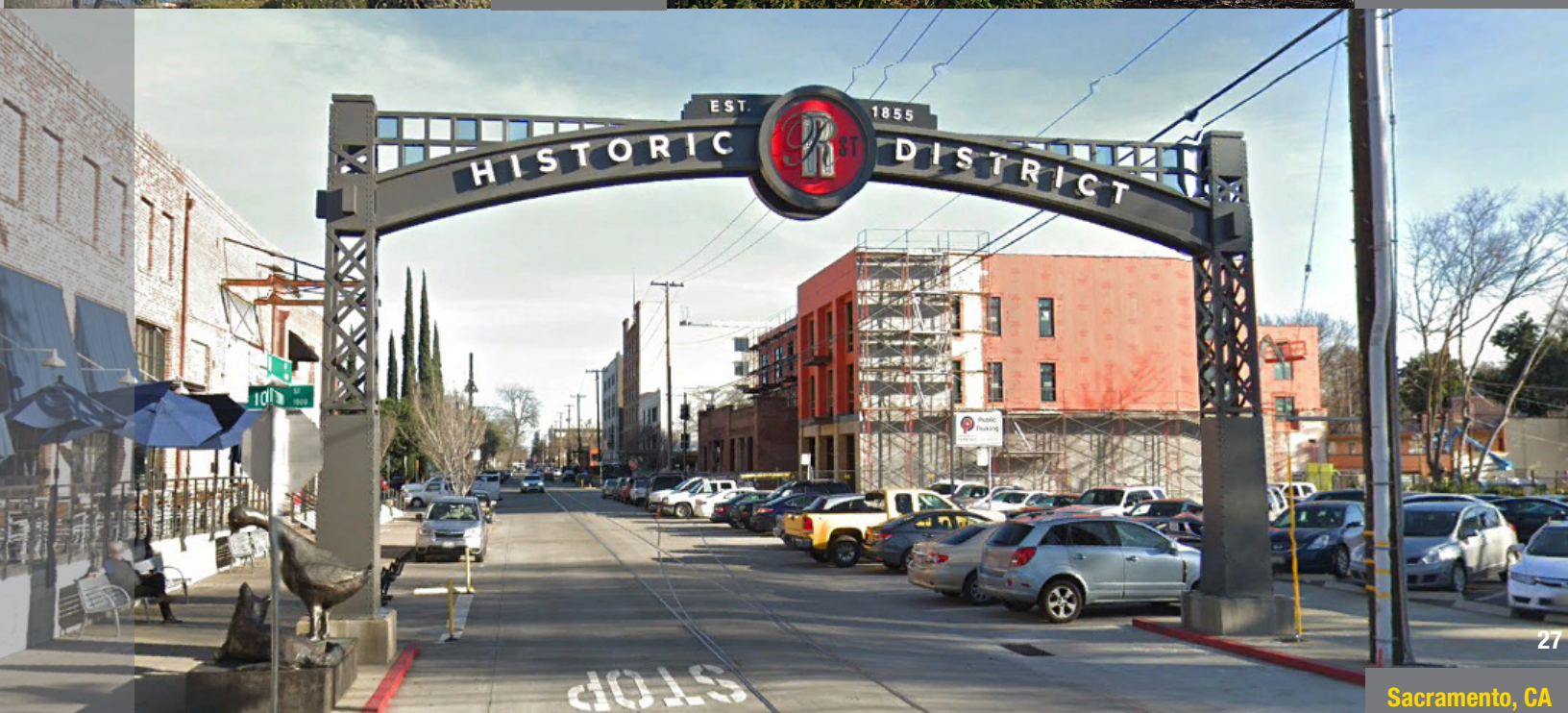


GATEWAY ARCHITECTURE

Gateway architecture at the entrance to the Olson Drive Commercial Area could help provide the area with an identity and attract more patrons. The City could establish gateway signage or a decorative structure near the Folsom Boulevard / Zinfandel Drive intersection and/or along Zinfandel Drive north of US 50 to establish a City Center identity. This would ensure that residents and visitors know they have entered a specialized district and might spur additional development interest. The City could host a design contest at local high schools to develop a gateway mural or welcome sign for the district. Gateway architecture could be added to roundabouts as well.

Folsom, CA

Citrus Heights, CA



Sacramento, CA

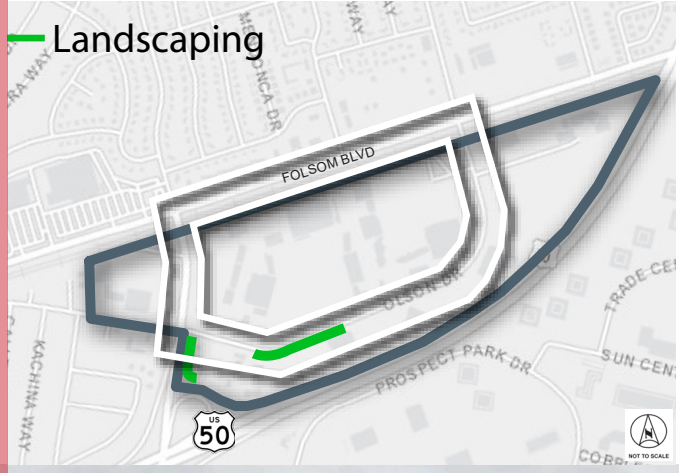
DECORATIVE CROSSWALKS

Stamped pavement or brickwork in crosswalks around Olson Island would help to develop the impression of a pedestrian friendly environment and would also indicate a more established urban neighborhood. While the City currently does not allow unsignalized mid-block crossings, installing decorative crosswalks with Rectangular Rapid Flashing Beacons (RRFDs, shown below) or HAWK signals would provide safe crossing points along Olson Drive for pedestrians.

RRFD Example

Sacramento, CA

Washington, DC



STREET VEGETATION

Additional street trees such as the Red Maple or the Autumn Gold Ginkgo can be planted along the corridors around Olson Island to provide more shade, and when mature, overhang the streets to enhance the look and feel of the neighborhood. The trees should be selected with City identity in mind and they should be selected from the City's Master Tree List and comply with the state's water efficiency ordinance. Trees could be provided in tree wells or landscaping strips dependent upon right-of-way. In addition, this may require coordination with property owners based on tree location.

ECONOMIC DEVELOPMENT

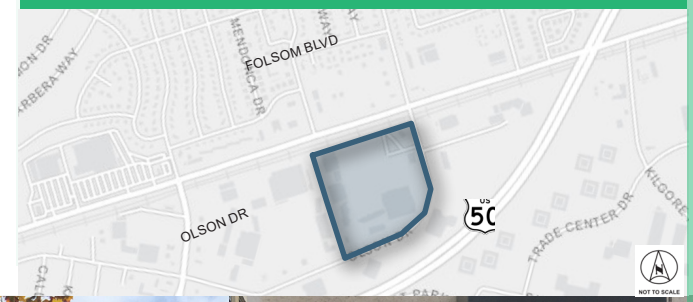
EVENT SPACE

The Olson Island site has significant potential as a neighborhood hub. A portion of the parking area on the site could be converted to a green / event space that could be used to host outdoor shows, movie screenings, art walks, farmers markets, or other City sponsored activities. These events would bring additional foot traffic to Olson Island businesses and would be another opportunity for the City of Rancho Cordova to celebrate its identity and share its culture. Activating spaces for all users that requires no financial barrier to entry is shown to benefit disadvantaged communities at a higher proportion than non-disadvantaged communities. Examples are shown below.

SOCIAL EQUITY

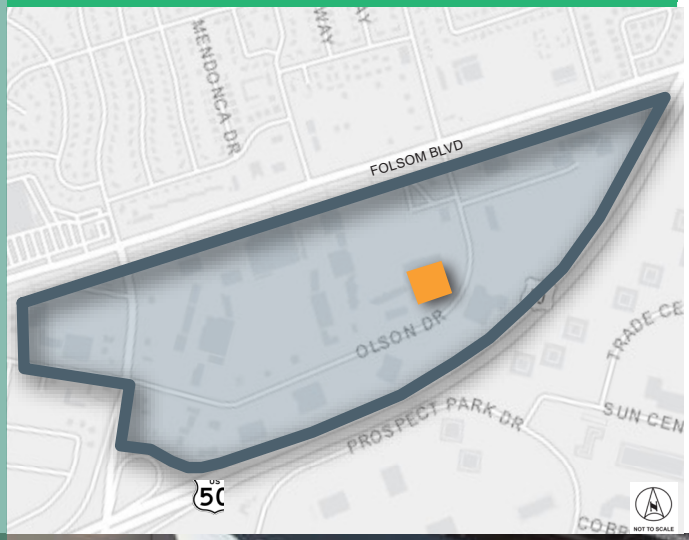
EJ Impact Proportion: High

EVENT SPACE



Roseville, CA

Fort Collins, CO



BUSINESS DIVERSIFICATION

The City could update the Folsom Boulevard Specific Plan or develop a new Specific Plan for the Olson Island Opportunity site to establish new zoning and land use guidance that would allow for more diverse businesses. These new businesses would be intended to compliment and not compete with the existing uses. These new business could include sit-down restaurants, a movie theater, breweries, or gyms on the Olson Island site (as shown in the examples below), to extend the time with active businesses, and to attract more visitors of different age groups with varying interests. The potential for increased density is high with significant under-utilized parking on both sides of Olson Drive and currently vacant retail space.

Rancho Cordova, CA

PERFORMANCE SUMMARY

Below is a summary of the impacts and resultant benefits from each of the recommended improvements described previously. This includes delay reductions/circulation improvements, safety improvements, and the environmental justice impacts.

	Reliable Mobility					Health & Safety		Social Equity
	Delay (sec)	BLS		Daily Bicycle Users	Daily Pedestrian Users	Crash Reduction	Annual VMT Reduction	EJ Impact Proportion
		Before	After					
Vehicle								
Roundabouts	33	4	4	600	10	36%		Medium
Adaptive Signal Timing	Reduce delay by 10%					17%		High
Olson Drive Capacity Expansion	"After without Signals: 101 After with Signals: 154"	4	4			68%		High
Olson Drive Operational Modification		4	4			68%		High

Transit	Total Employees	% Transit Users	% Using CordoVan	Employees on CordoVan	Distance	Annual # of Work Days	Annual VMT Reduction	
CordoVan Lunch Shuttle	7,578	3.16%	50%	120	0.5 mi	250	15,000	

Active Transportation								
North-South Olson Island Trail		4	1	482	241		71,000	
East-West Olson Island Trail		4	1	600	300		89,000	
Olson Drive Bicycle Trail		4	1	618	309		92,000	High
Active Transportation through the Zinfandel Drive/US 50 Interchange				311	156		36,000	

FUNDING OPPORTUNITIES

↘ CALTRANS ACTIVE TRANSPORTATION PROGRAM

Caltrans Active Transportation Program (ATP) is a statewide funding program, created in 2013, consolidating several federal and state programs. The ATP funds projects that encourage increased mode share for walking and bicycling, improve mobility and safety for non-motorized users, enhance public health, and decrease greenhouse gas emissions. Projects eligible for this funding include:

- Bicycle and pedestrian infrastructure projects
- Bicycle and pedestrian planning projects (e.g. safe routs to school)
- Non-infrastructure programs (education and enforcement)

THIS PROGRAM FUNDING IS PROVIDED BI-ANNUALLY. THE ATP CALL FOR PROJECTS TYPICALLY COMES OUT IN THE SPRING. **INFORMATION ON THIS PROGRAM AND CYCLES CAN BE FOUND ONLINE AT: HTTP://WWW.DOT.CA.GOV/HQ/LOCALPROGRAMS/ATP/**

↘ SUSTAINABLE TRANSPORTATION PLANNING GRANTS

Caltrans' Sustainable Communities grant is meant to encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission. The Grant application deadline for the FY 2021-22 Grant cycle will most likely be in Fall 2020, with grant announcements anticipated for Spring 2021.
Additional information can be found online at:
https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants

↘ HIGHWAY SAFETY IMPROVEMENT PROGRAM

The Highway Safety Improvement Program (HSIP) is a Federal program housed under Fixing America's Surface Transportation (FAST) Act. This program apportions funding as a lump sum for each state, which is then divided among apportioned programs. These flexible funds can be used for projects to preserve or improve safety conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, and other project types. Examples of safety improvement projects eligible for this funding include:

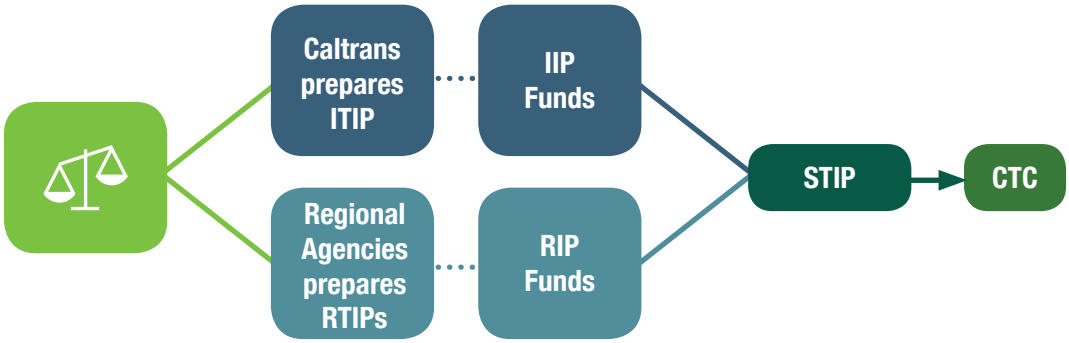
- **New or upgraded traffic signals**
- **Pedestrian warning flashing beacons**
- **Upgraded guard rails**
- **Marked crosswalks**

California's local HSIP focuses on infrastructure projects with national recognized crash reduction factors. Normally HSIP call-for-projects is made at an interval of one to two years. The applicant must be a city, a county, or a tribal government federally recognized within the State of California.

Additional information regarding this program at the Federal level can be found online at:
https://safety.fhwa.dot.gov/hsip/.
California specific HSIP information – including dates for upcoming call for projects - can be found at:
http://www.dot.ca.gov/hq/LocalPrograms/hsip.html.

➘ STATE TRANSPORTATION IMPROVEMENT PROGRAM

The State Transportation Improvement Program (STIP) provides state and federal gas tax money for improvements on the state highway system. The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded primarily from state and federal gas taxes. STIP programming occurs every two years. The programming cycle begins with the release of a proposed fund estimate, followed by California Transportation Commission (CTC) adoption of the fund estimate. The fund estimate serves to identify the amount of new funds available for the programming of transportation projects. Once the fund estimate is adopted, Caltrans and the regional planning agencies prepare transportation improvement plans for submittal. Caltrans prepares the Interregional Transportation Improvement Program (ITIP) using Interregional Improvement Program (IIP) funds, and regional agencies prepare Regional Transportation Improvement Programs (RTIPs) using Regional Improvement Program (RIP) funds. The STIP is then adopted by the CTC.



➘ STATE HIGHWAY OPERATION AND PROTECTION PROGRAM

The State Highway Operation and Protection Program (SHOPP) focuses on safety and maintenance projects. SHOPP includes State Highway safety and rehabilitation projects, seismic retrofit projects, land projects, building projects, landscaping, operational improvements, bridge replacement, and the Minor Program. The Minor Program is a
one-year program reserved for relatively low-cost capital projects that are SHOPP eligible.

CALTRANS IS THE OWNER-OPERATOR OF THE STATE HIGHWAY SYSTEM AND IS RESPONSIBLE FOR ITS MAINTENANCE.

UNLIKE STIP PROJECTS, SHOPP PROJECTS MAY NOT INCREASE ROADWAY CAPACITY. SHOPP USES A FOUR-YEAR PROGRAM OF PROJECTS, ADOPTED SEPARATELY FROM THE STIP CYCLE.

The California SB-127 will potentially be an additional funding source that the City should track. The bill was enrolled as of September 13, 2019. The asset management plan (AMP) would be used to guide selection of projects for the SHOPP and prioritize the implementation of safe and connected facilities for pedestrians, bicyclists, and transit users on all projects in the program, where applicable. This AMP would include complete streets elements, including pedestrian, bicycle, and transit facilities on the state highway system that are not required by ADA.

Commencing with the 2022 State Highway Operation and Protection Program, when undertaking a specified capital improvement project on a state highway or on a local street crossing a state highway that is funded through the State Highway Operation and Protection Program, to include new pedestrian and bicycle facilities, or improve existing facilities, as part of the project, consistent with specified requirements.

Additional information can be found online at:
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB127

➘ CALIFORNIA SENATE BILL 1 (SB 1)

SB 1 is a landmark transportation investment to rebuild California by fixing neighborhood streets, freeways and bridges in communities across California and targeting funds toward transit and congested trade and commute corridor improvements.

California's state-maintained transportation infrastructure will receive roughly half of SB 1 revenue: $26 billion. The other half will go to local roads, transit agencies and an expansion of the state's growing network of pedestrian and cycle routes. Each year, this new funding will be used to tackle deferred maintenance needs both on the state highway system and the local road system, including:

Bike and Pedestrian Projects **$100 million**

› This will go to cities, counties and regional transportation agencies to build or convert more bike paths, crosswalks and sidewalks. It is a significant increase in funding for these projects through the Active Transportation Program (ATP).

Local Planning Grants **$25 million**

› Addresses community needs by providing support for planning that may have previously lacked funding; Good planning will increase the value of transportation investments.

➘ CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The CMAQ program as continued through the Fixing America's Surface Transportation Act (FAST Act) funds transportation projects and programs that reduce congestion and improve air quality and are likely to contribute to the attainment or maintenance of a national ambient air quality standard and are included in the Metropolitan Planning Organization (MPO)'s current transportation plan and transportation improvement program (TIP). FHWA apportions funds as a lump sum for each state as authorized through the FAST Act. CMAQ is one of six programs (including the National Highway Performance Program (NHPP), the Surface Transportation Block Grant Program (STBG), the Highway Safety Improvement Program (HSIP), and the National Highway Freight Program (NHFP)) that are apportioned each year. Projects eligible for this funding include:

- Transit
- Transportation system management and operations
- Electric vehicle infrastructure
- Multimodal traveler information
- Bicycle and pedestrian improvements

Additional information regarding this program at the Federal level can be found online at:
https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm

➘ SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBG)

Similar to CMAQ, the Surface Transportation Block Grant (STBG) Program under the FAST Act directs FHWA to apportion funding as a lump sum for each State, then divides that total among apportioned programs. Funds are flexible and can be used for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, and more. Projects eligible for this funding include:

- Transit capital projects
- Roadway improvements
- Community improvements
- Transit safety improvements

IMPLEMENTATION PLAN

The recommended improvement options provided in this report were developed exclusively from each other to address the needs and challenges identified through the initial data analysis and public input process. Some recommendations complement others and can work cohesively through implementation, while others are more suited to being interim or quick solutions while further evaluating a challenge or pending funding.

The recommendations resulting from this study are broken into three time periods for implementation, short-term, medium-term, and long-term improvements. Long-term improvements require further study, significant investment and an implementation plan of their own. This study recommends pursuing the short-term options and evaluating the medium- and long-term options for funding and further technical review.

Options include:

- **Pursue short-term:** Landscaping, Monument/Branding Wayfinding Signage Improvements, and Internal Circulation.
- **Evaluate medium-term:** Signal Timing Improvements, Pedestrian/Bikeway Improvements, Driveway Consolidation Areas, Pedestrian Mid-block Crossing, and CordoVan Autonomous Shuttle.
- **Evaluate long-term:** New Signals, Roundabouts or Traffic Circles along Olson Drive, Transit Hub, and Micro Transit Improvements, and Roadway Improvements.

The location of the recommendations are shown on the following map. Short-Term recommendations are shown in green, Medium-Term recommendations are shown in blue, and Long-Term recommendations are shown in orange. Each recommended improvement is grouped by the options as listed above, a description of the recommended improvement, and a planning level cost-estimate based on comparable projects in California. Note that all costs are planning level costs, and not suitable for budgeting. They should be used only as order-of-magnitude costs for the purposes of furthering discussion and the assessment of these potential projects. Actual required engineering or planning studies as well as forecasted construction costs may vary significantly from those shown should be determined prior to adding these projects to any formal programs. More technical analysis is required to study and evaluate how the recommended options will work in combination with each other. The technical appendices include in this report indicate how the project work individually based on the evaluation criteria.

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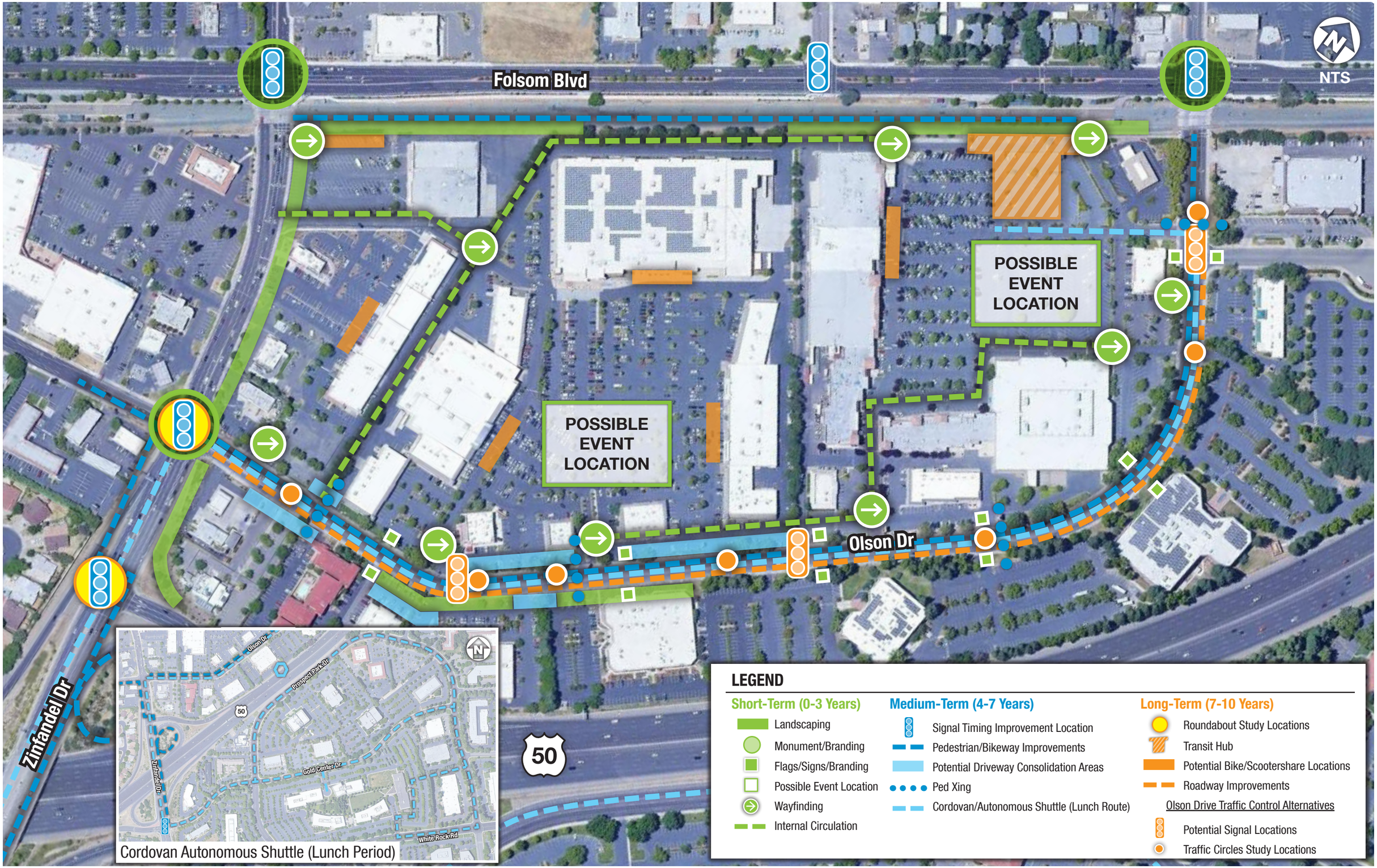
Implementation Plan Map

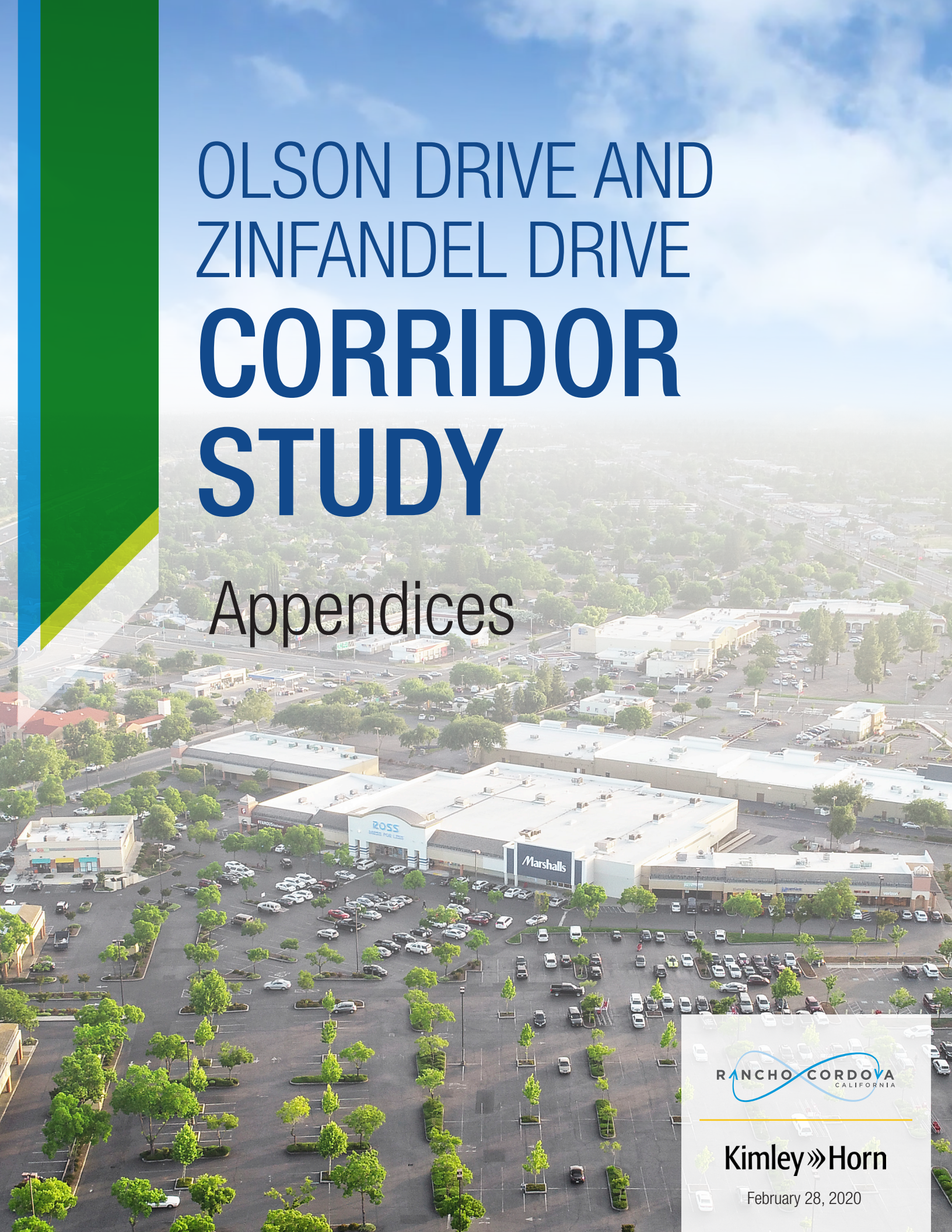


Recommended Improvement Options

IMPROVEMENT	DESCRIPTION	COST ESTIMATE
Short-Term (0-3 Years)		
Landscaping	• General landscaping including vegetation planting • Vegetation along Folsom Boulevard is recommended to be low lying as to not interfere with visibility or security considerations	• Approximately $400,000. Assumes $50/square-foot for 8,000 square-feet of landscaping at up to a 3-foot depth. • Intended to be within City right-of-way or an established easement
Monument/Branding	• Includes artwork, signage, and similar items such as flags, vegetation, etc.	• Approximately $150,000. Assumes $50,000 or more per location at three (3) major locations.
Flags/Signs/Branding	• Installed only on existing light poles	• Approximately $12,000 based on $1,000 per installation at up to twelve (12) locations.
Possible Event Location	• Locations where there can be on-going community activities such as farmer's markets, Christmas markets, and other seasonal events • Includes event security, advertising on free City/local websites, and clean up	• Approximately $2,500 per day per event and that events are less than 4 hours in duration.
Wayfinding	• There are two types of signs considered, on-site (internal circulation) and external (adjacent to City roadways)	• Approximately $5,000. Assumes $500 or more per location at up to ten (10) locations.
Internal Circulation	• Intended to not reduce net parking or result in significant impacts or infrastructure needs	• Approximately $20,000 for striping, $180,000 for lighting, $50,000 for demolition and reconstruction. This excludes any electrical work. $50,000 for planning and design.
Medium-Term (4-7 Years)		
Signal Timing Improvement Location	• Signal timing improvements at up to five (5) locations	• Approximately $25,000. Includes evaluation of adaptive signal timing, but does not include implementation
Pedestrian/Bikeway Improvements	Two major trail enhancements are anticipated: • North-South Olson Island Trail includes a Near-Term (adjacent to Zinfandel) and Long-Term (separated from roadway) option. • East-West Olson Island Trail runs parallel to the light-rail tracks	North-South Trail: • Approximately $500,000 for design and construction of Near-Term option • Approximately $3.5 million for Long-Term option East-West Trail: • Approximately $200,000 for design and construction
Potential Driveway Consolidation Areas	• Includes consolidation of up to ten (10) locations	• Approximately $150,000 for planning, design, and construction related to the consolidation of up to ten (10) driveways at approximately $10,000 each.
Ped Xing	• Includes construction of crosswalks and vehicle warnings (Rectangular Rapid Flashing Beacons, RRFDs) or signals (High-Intensity Activated crossWalK beacon, HAWK) • It is anticipated that decorative pavers or other amenities be included to maintain a consistent branding theme	• Approximately $375,000 assuming three (3) crossings at $125,000 per crossing for design and construction.
Cordovan/Autonomous Shuttle (Lunch Route)	• Operates during midday to bring local residents and workers (particularly those south of US 50) to Olson Island for dining and shopping • Depending on available technology this could be autonomous at some future year	• Approximately $250,000 assuming 3-hour operation for 5 days per week and 52 weeks per year. • Excludes those costs related to autonomous operation which may differ from having a driver-based shuttle
Long-Term (7-10 Years)		
Roundabout	• Includes two roundabouts along Zinfandel Drive, one at Olson Drive and one at the US 50 westbound ramps	• Approximately $7 million assuming approximately $1 million for design, $5 million for construction, and 10-percent for administrative costs.
Mobility Hub	• Includes park and ride facilities, bike lockers, TNC parking, and EV charging locations in conjunction with other improvements that make transferring between travel modes attractive at this location. The mobility hub will have an added economic benefit in terms of naturally driving visitors to nearby retail and restaurants. Could also include bike/scooter share facilities as described in the next item.	• TBD. The cost could be limited to signage and striping if the development of the mobility hub relies on third parties to provide EV charging and other amenities given that the major transit facilities (bus and LRT) already exist at the location. Ground leases or other considerations could require ongoing costs as well as security and maintenance of the site.
Potential Bike/Scooter Share Locations	• Dependant on cooperation agreements reach with bike share/scooter share providers. One or more locations on site could improve access opportunities for residents and workers south of US 50, resulting in an economic benefit.	• TBD. Depending on the agreement reach with a bike share and/or scooter share provider this could range from a no-cost solution for the City or Property Owners to a significant cost.
Potential Roadway Improvements	• Could include a widening option to re-stripe Olson Drive to include two travel lanes in either direction and eliminate the existing two way left turn lane. • Also could include the construction of a physical barrier for vehicles traveling to and from Progress Court, replacing the existing bollards at the Olson Drive intersection at Prospect Court.	• Approximately $120,000 assuming 3,350 linear feet of restriping at $5/linear-foot including design and construction. • Approximately $200,000 to construct the physical median barrier for vehicles attempting to turn in and out of Progress Court from/to Olson Drive
<u>Olson Drive Traffic Control Alternatives</u> Potential Signal Locations	• Includes a new, 8-phase signal at up to three locations along Olson Drive. Not to be constructed in conjunction with traffic circles	• Approximately $1.05 million assuming $350,000 per signal including design and construction.
Traffic Circles Study Locations	• Intended to slow traffic and result in other traffic calming results while providing traffic control at driveway locations. Not to be constructed in conjunction with traffic signals on Olson Drive.	• Approximately $2.1 million assuming $300,000 per traffic circle including design and construction.

OLSON DRIVE AND ZINFANDEL DRIVE CORRIDOR STUDY

Appendices



RANCHO CORDOVA
CALIFORNIA

Kimley»Horn

February 28, 2020

APPENDIX A -

EXISTING CONDITIONS AND PRELIMINARY EVALUATION MEMORANDUM

Kimley»Horn

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Makinzie Clark

Re: **Olson Drive and Zinfandel Drive Corridor Study**
Existing Conditions Memorandum

Date: February 27, 2019

This memorandum summarizes the existing conditions observed during field visits and documents results of data collection efforts for Olson Drive and adjacent facilities in the City of Rancho Cordova. This memorandum will inform subsequent project efforts for the *Olson Drive and Zinfandel Drive Corridor Study* (the "study"), including the identification of opportunities and constraints associated with various project alternatives. The goal of the study is to provide recommendations that improve access, circulation, and safety along and between the Olson Drive and Zinfandel Drive corridors, with specific emphasis on mobility improvements for the Olson Commercial Site.

Study Area

The Olson Commercial area is a retail and office site with primary access along Olson Drive in the City of Rancho Cordova, California. Olson Drive is bounded by Zinfandel Drive to the west and Folsom Boulevard to the north/east and parallels US-50 to the south. The "study area" is considered to include the Olson Commercial Site and areas immediately adjacent to the site and its primary access roadways and transportation facilities.

The centrality of the Olson Commercial Site in the city with access provided via major roadways and transit lines makes it a primary location for commercial activity. In addition, the concentration of employment centers along Zinfandel Drive south of US-50 makes the Olson Commercial Site particularly attractive as a commercial destination for workers in the city. Due to the interaction between employment centers south of US-50 and the retail and office sites within the Olson Commercial Site, the "study influence area" is considered to extend south along Zinfandel Drive from US-50 to approximately Data Drive, and along White Rock Road near major employment centers. The Olson Commercial Site study area, influence area, and study facilities are presented in **Exhibit 1**.

Study Area Commercial and Employment Centers

The Olson Commercial area has the following major retail stores that serve as retail anchors for the site:

- Target
- Ross Dress for Less
- Marshalls
- Michael's
- Grocery Outlet
- KP International Market (Koreana Plaza)

A variety of other retail sites include a gas station, fast food and sit-down restaurants, medical offices, shoe stores, pet stores, banks, among others. The Olson Commercial Site study area also has a hotel (Red Roof), a college (San Joaquin Valley College), a post office, and a church (River City Christian).

Exhibit 1
Project Area & Study Facilities

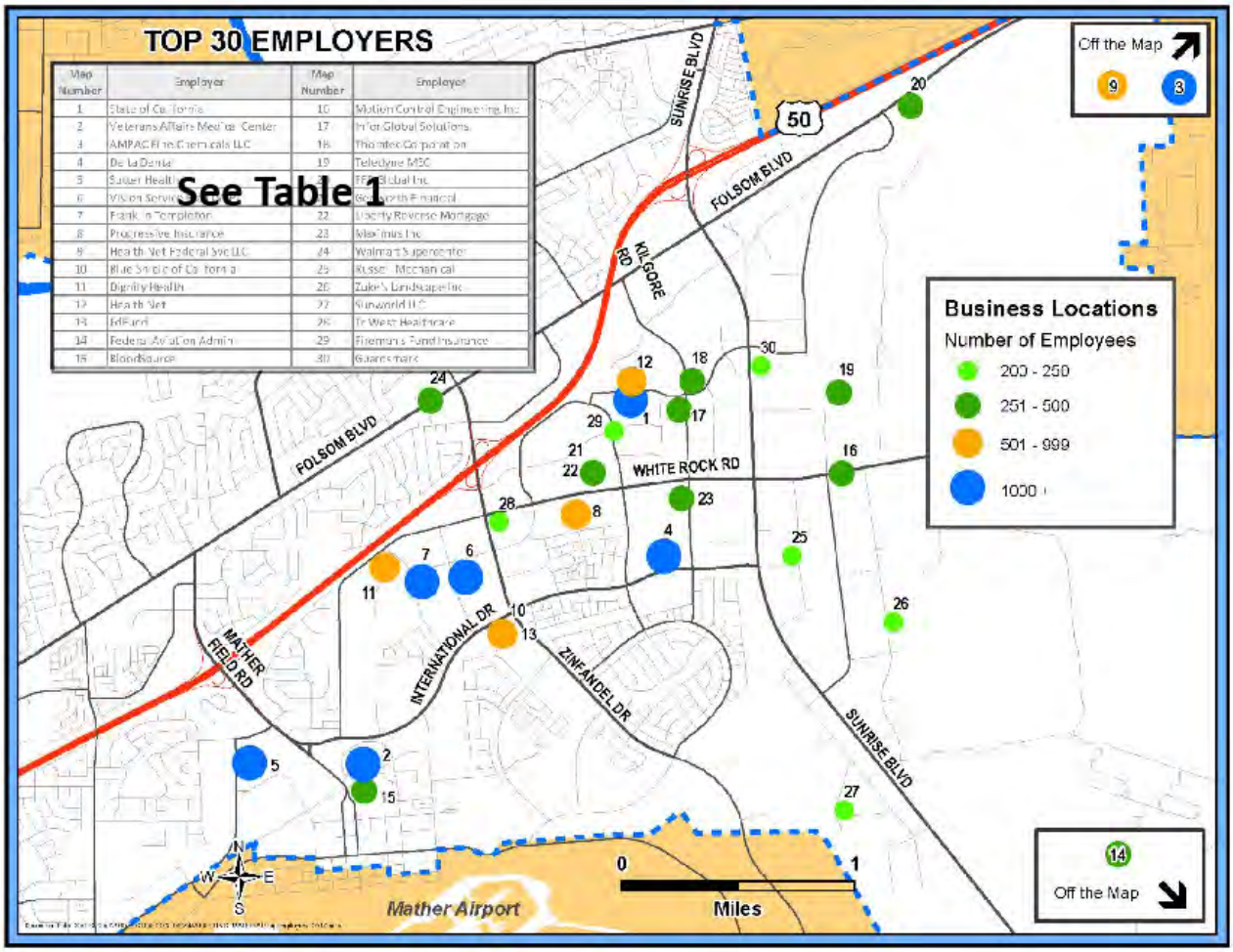
Influence Area Employment Centers

Major employers in Rancho Cordova are located along White Rock Road, Gold Center Drive, and Prospect Park Drive (see **Exhibit 2** and **Exhibit 3**). Some major employers with over 500 employees include: Vision Service Plan (VSP); Progressive Insurance; Health Net, and Dignity Health.

Exhibit 2 – Top Employers in Rancho Cordova

Map #	Employer	Map #	Employer	Map #	Employer
1	State of California	11	Dignity Health	21	Genworth Financial
2	Veterans Affairs Medical Center	12	Health Net	22	Liberty Reverse Mortgage
3	AMPAC Fine Chemicals LLC	13	EdFund	23	Maximus Inc
4	Delta Dental	14	Federal Aviation Admin	24	Walmart Supercenter
5	Sutter Health	15	BloodSource	25	Russell Mechanical
6	Vision Service Plan (VSP)	16	Motion Control Engineering Inc.	26	Zuke's Landscape Inc
7	Franklin Templeton	17	Infor Global Solutions	27	Sunworld LLC
8	Progressive Insurance	18	Thoratec Corporation	28	TriWest Healthcare
9	Health Net Federal Svc LLC	19	Teledyne MEC	29	Fireman's Fund Insurance
10	Blue Shield of California	20	FFP Global Inc	30	Guardsmark

Exhibit 3 – Top Employers in Rancho Cordova



Source: https://www.selectranchocordova.org/why-rancho-cordova/top-employers

Study Area Transportation Facilities

The following summarizes the existing transportation facilities that provide access to the study area:

- *Zinfandel Drive* is a major road that provides cross-town connectivity for residential, commercial, and employment areas north and south of US-50. Zinfandel Drive extends south to Douglas Road, providing connections to regional roadways in Sacramento County (State Route 16, Grant Line Road, and Sunrise Boulevard). Zinfandel Drive is a two-lane facility north of Folsom Boulevard, a four-lane facility north of US-50, and a six-lane facility south of US-50 to Baroque Drive. Class II bike lanes are provided on Zinfandel Drive north of Gold Center Drive and south of Data Drive; however, there are no painted markings between Olson Drive and Folsom Boulevard in the northbound direction. There are continuous sidewalks on Zinfandel Drive north and south of US-50 ramps. The speed limit is 35 miles per hour (mph) in the study area.
- *Folsom Boulevard* is major road that parallels US-50 providing cross-town connectivity from the western to the northeastern city boundaries, and connects City of Sacramento, County of Sacramento, City of Rancho Cordova, and City of Folsom. Folsom Drive is a four-lane facility with center medians in the study area. Class II bike lanes and continuous sidewalks are provided along Folsom Boulevard in the study area. The speed limit is 40 mph in the study area.
- *Olson Drive* is a local two-lane roadway that runs between Mills Park Drive and Folsom Boulevard and intersects Zinfandel Drive just north of US-50 westbound ramps. There are continuous sidewalks but no bike facilities on Olson Drive. The speed limit is 35 mph, with advisory signs ranging from 20 to 30 mph for sharp turns.

The following summarizes the existing transit routes that provide access to the study area:

- *Sacramento Regional Transit (RT) Bus Route 28* runs from the town of Fair Oaks to the intersection of Folsom Boulevard at Butterfield Way, with stops at: Sunrise Mall, Fair Oaks Boulevard at Madison Avenue intersection, Sunrise Boulevard at Zinfandel Drive intersection, Cordova Town Center (near the Olson Drive at Folsom Boulevard intersection), Mather Field/Mills Station, and Butterfield Station.
- *Sacramento RT Gold Line* is a light rail train that runs from Historic Folsom to the Sacramento Valley Station, with stops within the cities of Folsom, Rancho Cordova, and Sacramento. The Gold Line runs parallel to Folsom Boulevard through the City of Rancho Cordova and has two stops near the Olson Commercial Site: Zinfandel Station and Cordova Town Center Station.
- *Rancho CordoVan Service* is a local shuttle service that provides access to light rail at the Zinfandel Regional Transit Light Rail Station via three routes (Sunridge, Kavala, and Villages of Zinfandel). The routes connect to the Zinfandel Station via Sunrise Boulevard, Folsom Boulevard, Prospect Park Drive, and Olson Drive.

Existing Transportation Conditions

This section summarizes the existing (2018) transportation conditions within the Olson Commercial study area. **Appendix A** provides traffic data count sheets. Traffic volumes are presented in **Exhibit 4**.

Data Collection

Based on a review of historical data, it was determined that the December weekend (Friday-Saturday) peak travel periods are the highest annually. December Friday peak travel periods along Olson Drive occur during the PM peak hour period (4pm – 6pm). December Saturday peak travel periods along Olson Drive occur during the mid-day peak-period (12pm– 2pm).

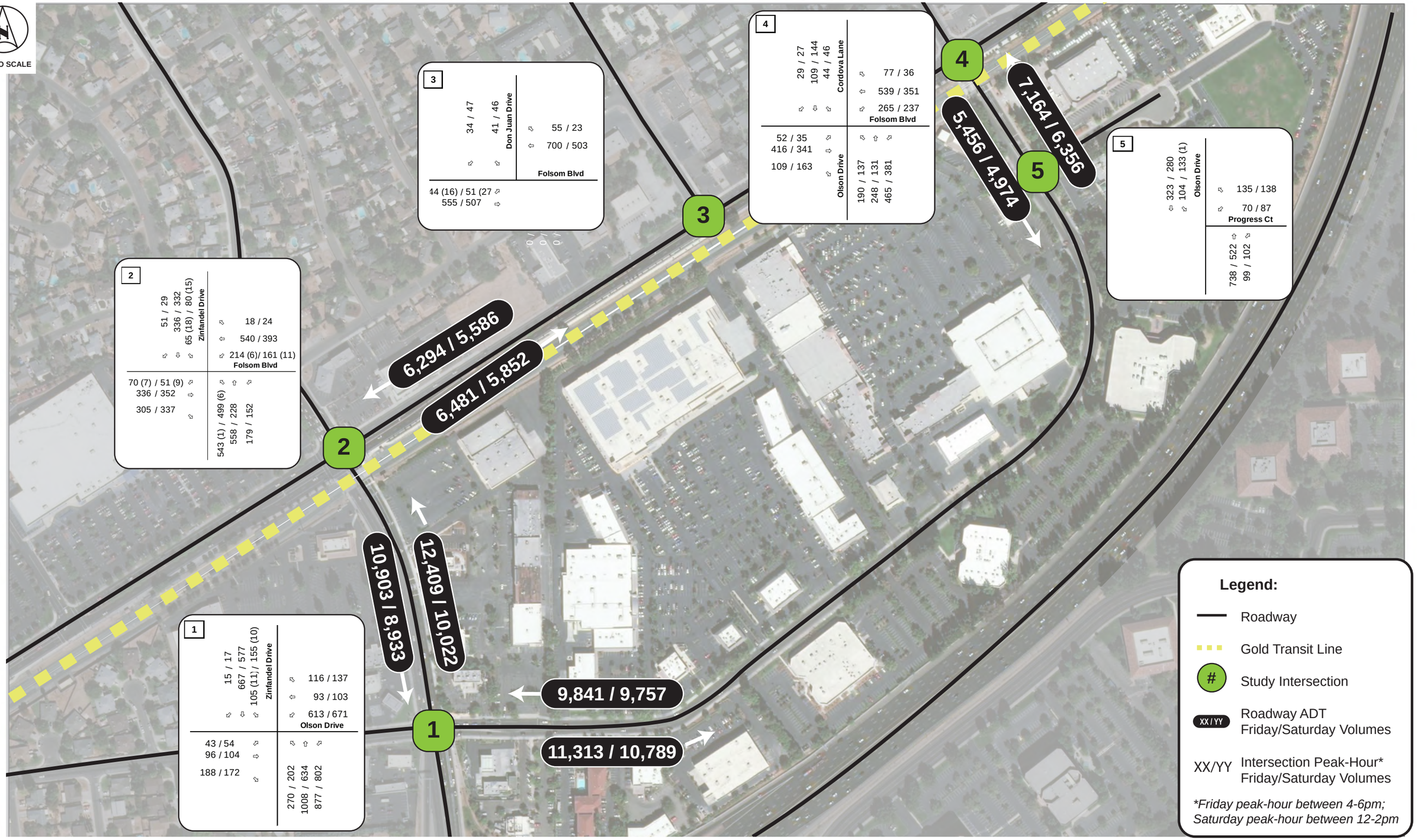


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Exhibit 4

Existing (2018) Traffic Volumes

Vehicle, bicycle, and pedestrian data were collected along Olson Drive and adjacent facilities for the abovementioned peak-periods in December 2018 (Friday-December 14, Saturday-December 15, and Saturday-December 22). Specifically, peak-period intersection turning movement counts (including bicycle and pedestrian activity) were collected at 30 driveways located on Olson Drive, and at five adjacent intersections, as follows:

1. Olson Drive/Zinfandel Drive
2. Zinfandel Drive/Folsom Blvd
3. Folsom Blvd/Don Juan Drive
4. Folsom Blvd/Olson Drive/Cordova Lane
5. Olson Drive/Progress Court

In addition, four 48-hour roadway segment counts, vehicle classification, and speeds were collected at the following locations:

1. Olson Drive, east of Zinfandel Drive
2. Olson Drive, south of Folsom Blvd
3. Zinfandel Blvd, north of Olson Drive
4. Folsom Blvd, between Zinfandel Drive and Don Juan Drive

Alternative Transportation Data Collection

Bicycle and pedestrian data was collected in conjunction with the intersection turning movement counts. In addition, bicycle and pedestrian activity was recorded for midblock crossing counts along Olson Drive. Midblock crossings occur when pedestrians or bicycles cross roadways at midblock locations rather than at established intersections. One midblock crossing count refers to one pedestrian or bicyclist crossing Olson Drive at a location without an intersection.

Transit activity was recorded at the Zinfandel Station and the Cordova Town Center Station, and bus activity was recorded at the Folsom Blvd/Zinfandel Drive stop and the Folsom Blvd/Olson Drive stop. Specifically, general trends in light rail and/or bus boarding and alighting were recorded to identify passengers coming from or leaving the Olson Drive study area.

Roadway Average Daily Traffic (ADT)

Exhibit 5 presents the ADT volumes for the study roadway facilities. As shown, while Olson Drive is classified as a local two-lane roadway, ADT on Olson Drive east of Zinfandel Drive is comparable to volume on Zinfandel Drive and is higher than volume on Folsom Boulevard, which are both classified as major four-lane roadways.

Exhibit 5 – Roadway ADT

Location		Friday	Saturday
		ADT*	ADT
1	Olson Drive E/O Zinfandel Drive	21,154	20,546
2	Olson Drive S/O Folsom Blvd	12,619	11,330
3	Zinfandel Drive N/O Olson Drive	23,311	18,955
4	Folsom Blvd Bet. Zinfandel Drive & Don Juan Drive	12,775	11,438

**Average of Friday-December 14 and Friday-December 22, 2018.*

Intersection Turning Movement Counts (TMC)

Intersection turning movement volume counts were collected during the Friday and Saturday 2-hour peak-hour periods at five intersections adjacent to the Olson Commercial Site. As shown in **Exhibit 4**, the Zinfandel Drive at Olson Drive intersection has a heavy northbound right turn volume onto Olson Drive, and a heavy westbound left turn volume onto Zinfandel Drive. In addition, as shown in **Exhibit 4**, the Folsom Boulevard/Cordova Lane at Olson Drive intersection has a heavy westbound left turn volume, and a heavy northbound right turn volume. This suggests that the majority of trips accessing The Olson Commercial Site come from the south and the east. **Exhibit 6** presents the total peak-hour turns into/out of the Olson Commercial area sites.

Exhibit 6 – Intersection Peak-Hour Turns Onto/Off-Of Olson Drive

Location		Turns onto Olson Drive	Turns off-of Olson Drive
1	Olson Drive / Zinfandel Drive	1078 / 1061	822 / 911
2	Zinfandel Drive / Folsom Blvd	n/a	n/a
3	Folsom Blvd / Don Juan Drive	n/a	n/a
4	Folsom Blvd / Olson Drive / Cordova Lane	483 / 544	903 / 649
5	Olson Drive / Progress Court	n/a	n/a

Note: Turns presented as "XXX / XXX" represent peak-hour "Friday / Saturday" volumes, respectively.

Olson Drive Driveway Counts

There are 30 driveways providing access to the Olson Commercial Site on either side of Olson Drive (see **Exhibit 8**). **Exhibit 7** presents the total in and out movements at each driveway along Olson Drive during the respective peak-hours (which represents the peak 1-hour during the 2-hour peak-periods as follows: Friday 4-6pm and Saturday 12-2pm). As shown, the majority of movements result from eastbound vehicles turning into the Olson Commercial area sites, or vehicles turning out of the Olson Commercial Site traveling westbound. In addition, the driveways with the most vehicular activity during their respective peak-hours include the following:

- Target Driveway north of Olson Drive (#12) (Saturday peak-hour: 236 IN/146 OUT)
- Subway Driveway north of Olson Drive (#16) (Saturday peak-hour: 232 IN/253 OUT)
- W. Town Center Driveway north of Olson Drive (#17) (Saturday peak-hour: 255 IN/242 OUT)
- W. Koreana Plaza Driveway north of Olson Drive (#21) (Saturday peak-hour: 208 IN/180 OUT)
- Northern Koreana Plaza Driveway west of Olson Drive (#27) (Friday peak-hour: 102 IN/252 OUT)

Olson Drive Midblock Crossings

Bicycle and pedestrian activity at midblock locations along Olson Drive was recorded for 16 zones, as shown in **Exhibit 8**. Most of pedestrian midblock crossings occur near zones 2-5 (approximately located between the Chevron gas station and Jamba Juice) during the 2-hour peak-period on Friday evening and Saturday afternoon. On average, 1 to 4 pedestrians cross Olson Drive midblock, with a maximum of 10 pedestrian crossing reported, during the 2-hour peak-periods. Only one bicyclist was reported as crossing Olson Drive during the peak 2-hour period (in zone 7 near the Prospect Point office building).

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Exhibit 7 – Olson Drive Driveway Peak-Hour* Turning Movement Volumes

	Driveway	FRIDAY (Peak 1-hour between 4-6pm)					SATURDAY (Peak 1-hour between 12-2pm)				
		IN: EB/NB	IN: WB/SB	OUT: EB/NB	OUT: WB/SB	Total	IN: EB/NB	IN: WB/SB	OUT: EB/NB	OUT: WB/SB	Total
1	Western Chevron Dwy S/O Olson Dr	35	0	1	0	**36**	42	0	3	0	**45**
2	Taco Bell Dwy N/O Olson Dr	0	32	0	9	**41**	0	31	0	14	**45**
3	Western Lumber Liquidators Dwy N/O Olson Dr	0	2	0	43	**45**	1	4	0	34	**39**
4	Eastern Chevron Dwy S/O Olson Dr	3	8	35	12	**58**	3	12	33	18	**66**
5	Western Hooters Dwy S/O Olson Dr	0	0	3	4	**7**	1	1	3	5	**10**
6	Eastern Hooters Dwy S/O Olson Dr	0	0	1	3	**4**	0	0	1	1	**2**
7	Eastern Lumber Liquidators Dwy N/O Olson Dr	12	13	5	33	**63**	16	15	2	38	**71**
8	Red Roof Dwy S/O Olson Dr	16	3	9	10	**38**	7	4	7	7	**25**
9	Radio Shack Dwy N/O Olson Dr	2	1	0	3	**6**	2	3	0	3	**8**
10	Western The Ups Store Dwy S/O Olson Dr	49	4	0	0	**53**	54	2	0	0	**56**
11	Eastern The Ups Store Dwy S/O Olson Dr	2	0	7	14	**23**	0	0	10	16	**26**
12	Target Dwy N/O Olson Dr	209	13	1	152	**375**	211	25	3	143	**382**
13	Western Pet Smart Dwy S/O Olson Dr	31	13	31	11	**86**	58	16	55	9	**138**
14	Eastern Pet Smart Dwy S/O Olson Dr	5	14	53	9	**81**	3	23	64	18	**108**
15	Olson Plaza 10910 Dwy S/O Olson Dr	14	5	7	9	**35**	29	7	8	13	**57**
16	Subway Dwy N/O Olson Dr	119	28	30	115	**292**	187	45	44	209	**485**
17	Western Rancho Cordova Town Center Dwy N/O Olson Dr	118	77	62	102	**359**	128	127	98	144	**497**
18	Prospect Point 2 Dwy S/O Olson Dr	11	8	32	9	**60**	13	3	10	12	**38**
19	Eastern Rancho Cordova Town Center Dwy N/O Olson Dr	9	78	32	16	**135**	9	15	24	15	**63**
20	Beams Dental Care Dwy N/O Olson Dr	12	3	5	24	**44**	12	2	2	16	**32**
21	Western Koreana Plaza Dwy N/O Olson Dr	143	26	19	137	**325**	200	8	15	165	**388**
22	MIddle Koreana Plaza Dwy N/O Olson Dr	23	35	9	10	**77**	4	4	3	0	**11**
23	Kohl's Rancho Cordova Dwy N/O Olson Dr	1	9	8	1	**19**	0	0	2	0	**2**
24	Western San Joaquin Valley College Dwy S/O Olson Dr	7	4	45	35	**91**	3	3	2	2	**10**
25	Middle San Joaquin Valley College Dwy E/O Olson Dr	9	6	22	47	**84**	1	4	2	3	**10**
26	Northern San Joaquin Valley College Dwy E/O Olson Dr	0	4	40	4	**48**	0	68	8	0	**76**
27	Northern Koreana Plaza Dwy W/O Olson Dr	78	24	198	54	**354**	3	2	0	5	**10**
28	Mints Euro Asian Cuisine Dwy E/O Olson Dr	7	4	3	1	**15**	1	3	2	0	**6**
29	US Bank Dr-UP ATM Dwy W/O Olson Dr	0	143	0	59	**202**	0	183	0	68	**251**
30	US Postal Service Dwy E/O Olson Dr	9	2	16	1	**28**	6	1	2	3	**12**

Note: Shaded red cells indicate higher values by scale.
**Peak-hours during the peak 2-hour periods vary by driveway.*

Exhibit 8
Maximum Two-Hour Peak-Period Midblock Crossings

Transit Activity

As stated above, general trends in light rail and/or bus boarding and alighting were recorded to identify passengers coming from or leaving the Olson Drive study area. Exhibit 9 presents the maximum of bus or light rail train boardings or alightings during the 2-hour peak-period on Friday evening and Saturday afternoon. As shown, approximately one-third of all transit trips during Friday peak 2-hour periods, and one-fourth of all transit trips during Saturday peak 2-hour periods, originate or end within the Olson Commercial Site.

Exhibit 9 – Peak-Period Transit Boarding/Alighting

	Station	Bus/Train Direction (East or West)	Bus (Boarding)		Bus (Alighting)		Train (Boarding)		Train (Alighting)	
			From Olson Island	Other Passengers	To Olson Island	Other Passengers	From Olson Island	Other Passengers	To Olson Island	Other Passengers
Friday 12/21/18 2-hour Peak Period	Zinfandel Drive Transit Station	E	3	4	0	2	0	18	15	82
		W	0	0	0	0	42	75	3	21
	Cordova Town Center Transit Station	E	1	3	0	0	7	7	31	41
		W	0	0	0	0	11	29	4	2
Saturday 12/15/19 2-hour Peak Period	Zinfandel Drive Transit Station	E					5	12	7	64
		W					8	49	8	27
	Cordova Town Center Transit Station	E					0	5	13	12
		W					10	15	0	4

Collision History

This section presents the six-year (2012-2018) collision history within the Olson Commercial study area. Exhibit 10 presents a heat map of all collisions, and Exhibit 11 presents a heat map of bicycle and pedestrian collisions, within the Olson Commercial study area (excluding freeway collisions), representing frequency of collisions by location. Collision data was provided by Statewide Integrated Traffic Records System (SWITRS) and Transportation Injury Mapping System (TIMS).

Olson Commercial Site Collision Trends

In order to identify collision trends specific to transportation facilities adjacent to the Olson Commercial Site, the following analysis was conducted for collisions occurring at or between the following intersections: Zinfandel Drive at Olson Drive, Zinfandel Drive at Folsom Boulevard, and Folsom Boulevard/Cordova Lane at Olson Drive. During the six-year period between 2012 and 2018 (excluding freeway collisions):

- Most collisions resulted from broadside (36%), rear end (31%), and sideswipe (14%) accidents.
- Most collisions occurred at the Zinfandel Drive at Olson Drive intersection (51%).
- Most bike/ped collisions occurred at the Zinfandel Drive at Folsom Boulevard intersection (44%).
- The only fatality occurred at the intersection of Folsom Boulevard at Olson Drive (pedestrian).
- More than half of all collisions resulted in an injury and/or a severe injury.
- There was a total of 152 collisions, the majority (113) of which occurred between 2016-2018.

Along Olson Drive, specifically:

- Most collisions were broadside collisions caused by a vehicle right-of-way violation (70%).
- Other collisions include head-on, hit object, and rear end collisions.
- Other collision causes include improper turning and unsafe speed.

Exhibit 10
Collision Frequency

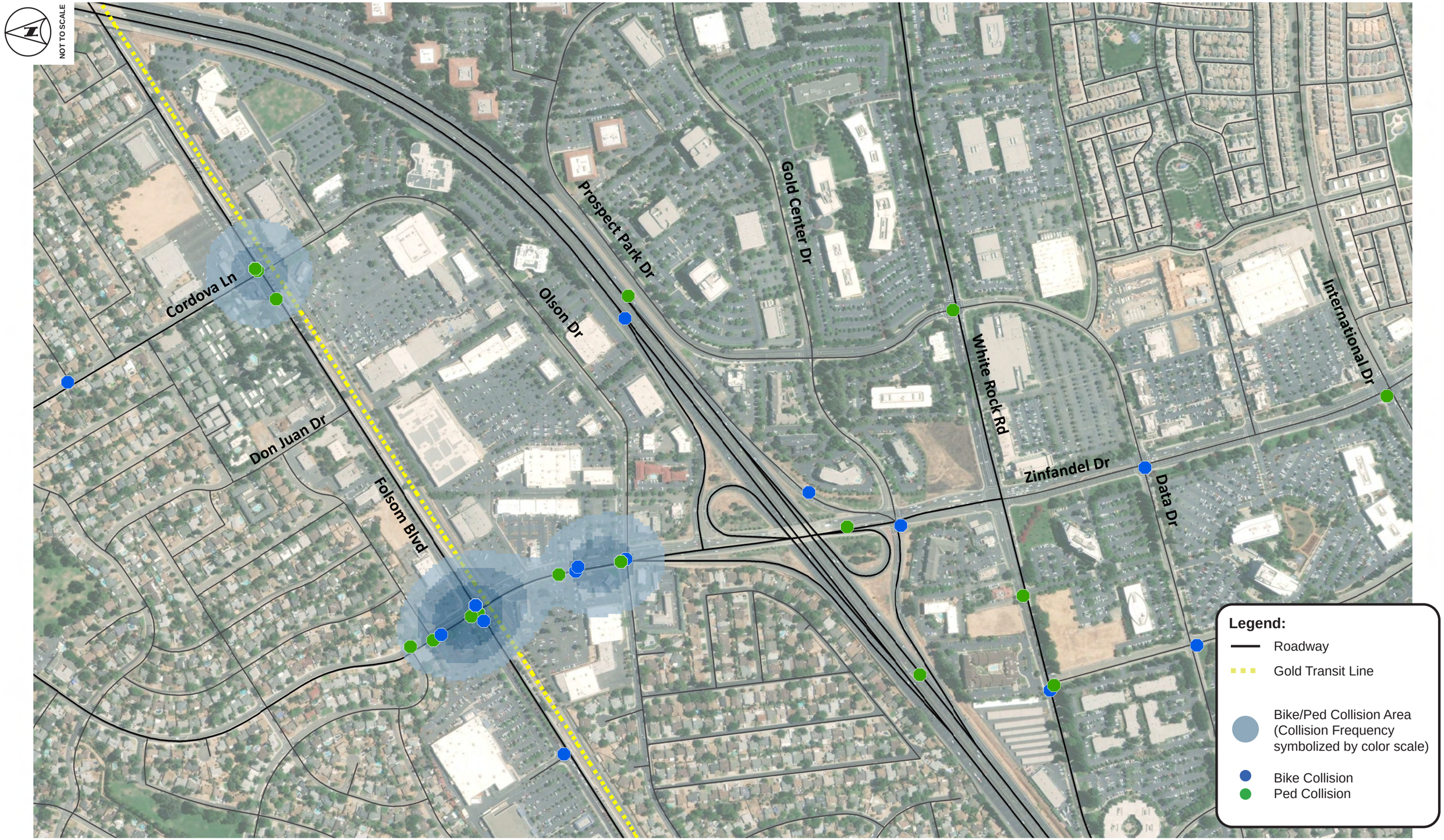


Exhibit 11

Bicycle and Pedestrian Collision Frequency

Exhibit 12 shows the breakdown of collisions by type and severity as a percentage of the total collisions within the abovementioned analysis area. Exhibit 13 presents the breakdown of collision types and frequencies at the abovementioned intersections.

Exhibit 12 – Collision Type and Severity Trends

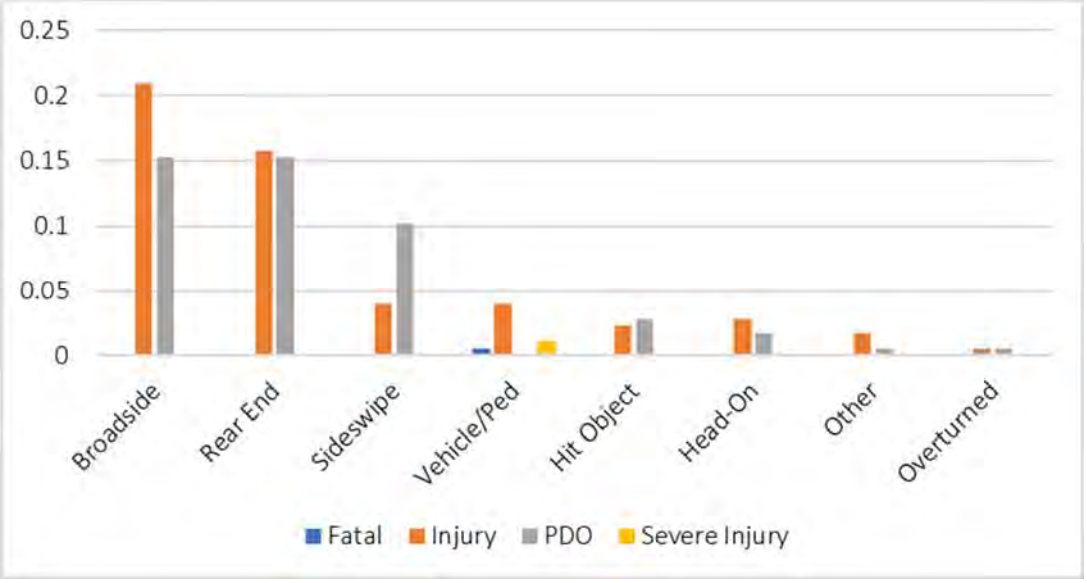
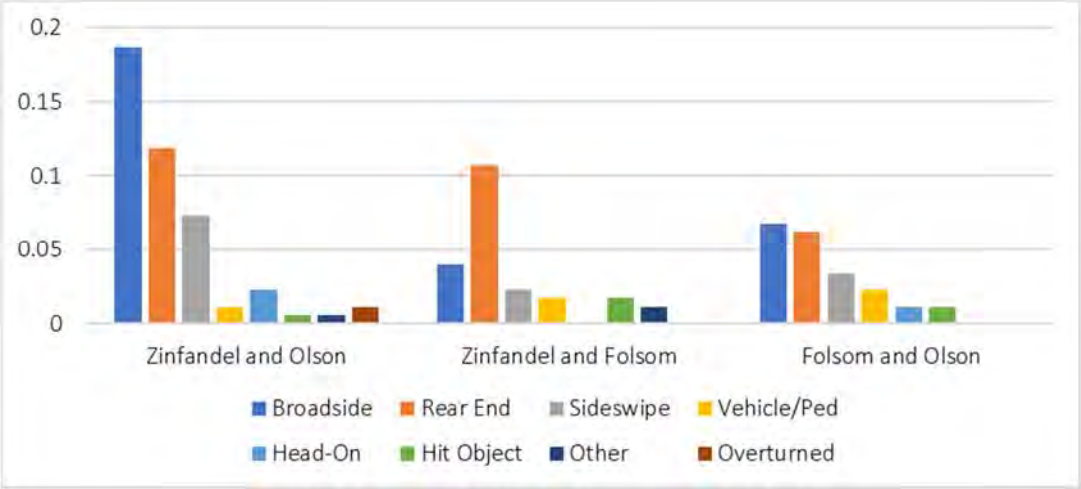


Exhibit 13 – Collision Type by Location



On-Site Parking Occupancy

During peak traffic periods (Fridays between 4 and 6pm, and Saturdays between 12noon and 2pm), especially during peak seasonal periods (December), parking occupancy within the Olson Commercial Site is high for most parking lots. Not surprisingly, parking occupancy is highest near the major retail sites, including Target, Marshalls, and KP International Market; in addition, parking occupancy is lowest near office sites outside of typical work hours. Exhibit 14 presents the peak parking occupancy for the Olson Commercial Site.

Summary Findings

The following provides a summary of existing conditions for the Olson Commercial study area:

- ADT on Olson Drive east of Zinfandel Drive is comparable to volume on Zinfandel Drive and is higher than volume on Folsom Boulevard.
- The majority of trips accessing the Olson Commercial Site come from the south and the east.
- The majority of movements result from eastbound vehicles turning into the Olson Commercial Site sites, or vehicles turning out of the Olson Commercial Site traveling westbound.
- Most of pedestrian midblock crossings occur near zones 2-5 (approximately located between the Chevron gas station and Jamba Juice).
- Most collisions occurred at the Zinfandel Drive at Olson Drive intersection (51%).
- Most bike/ped collisions occurred at the Zinfandel Drive at Folsom Boulevard intersection (44%).
- Most collisions on Olson Drive were broadside collisions caused by a vehicle right-of-way violation (70%).
- Approximately one-third of all Friday and one-fourth of all Saturday peak-period transit trips originate or end at the Olson Commercial Site.
- Parking occupancy is highest near the major retail sites.

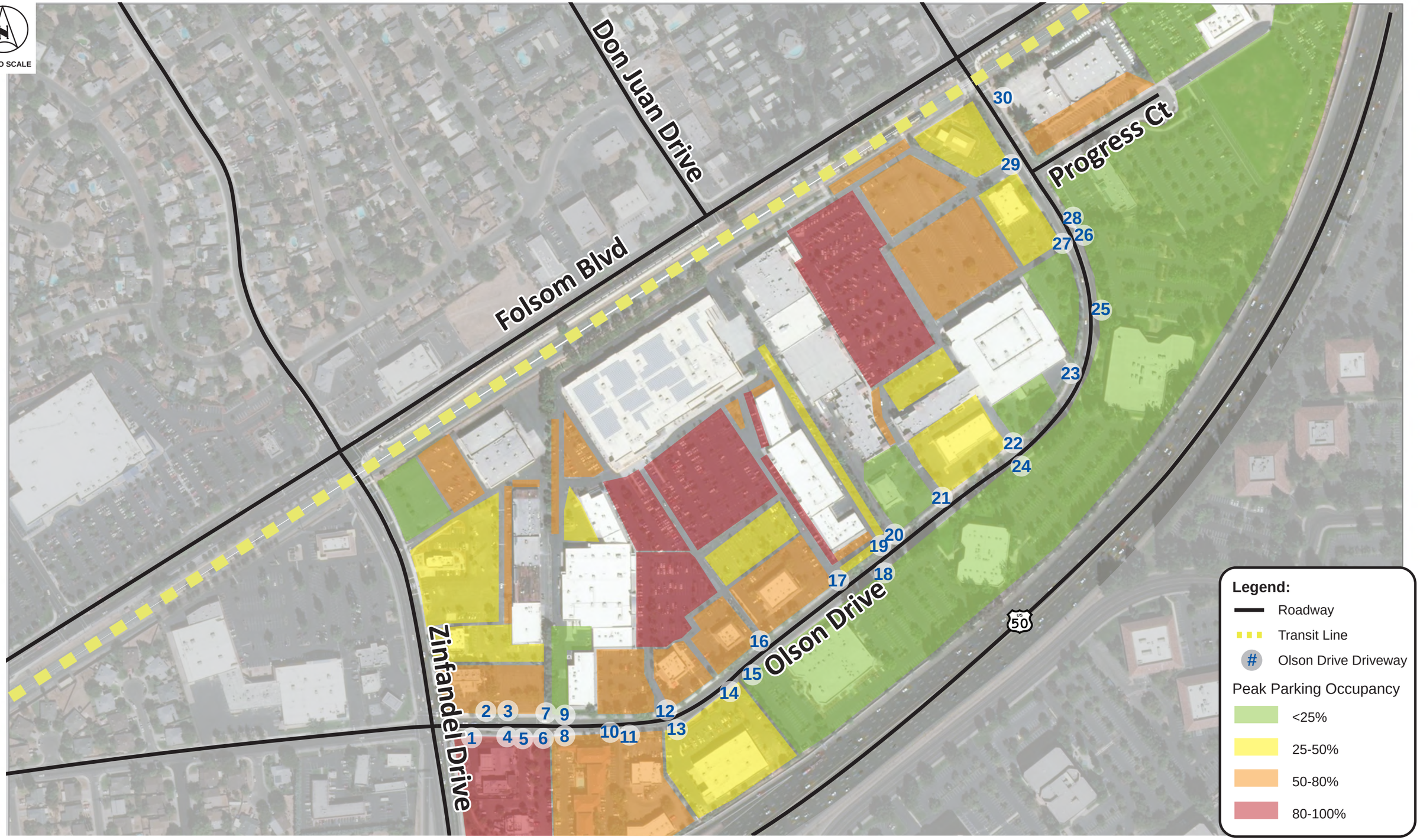
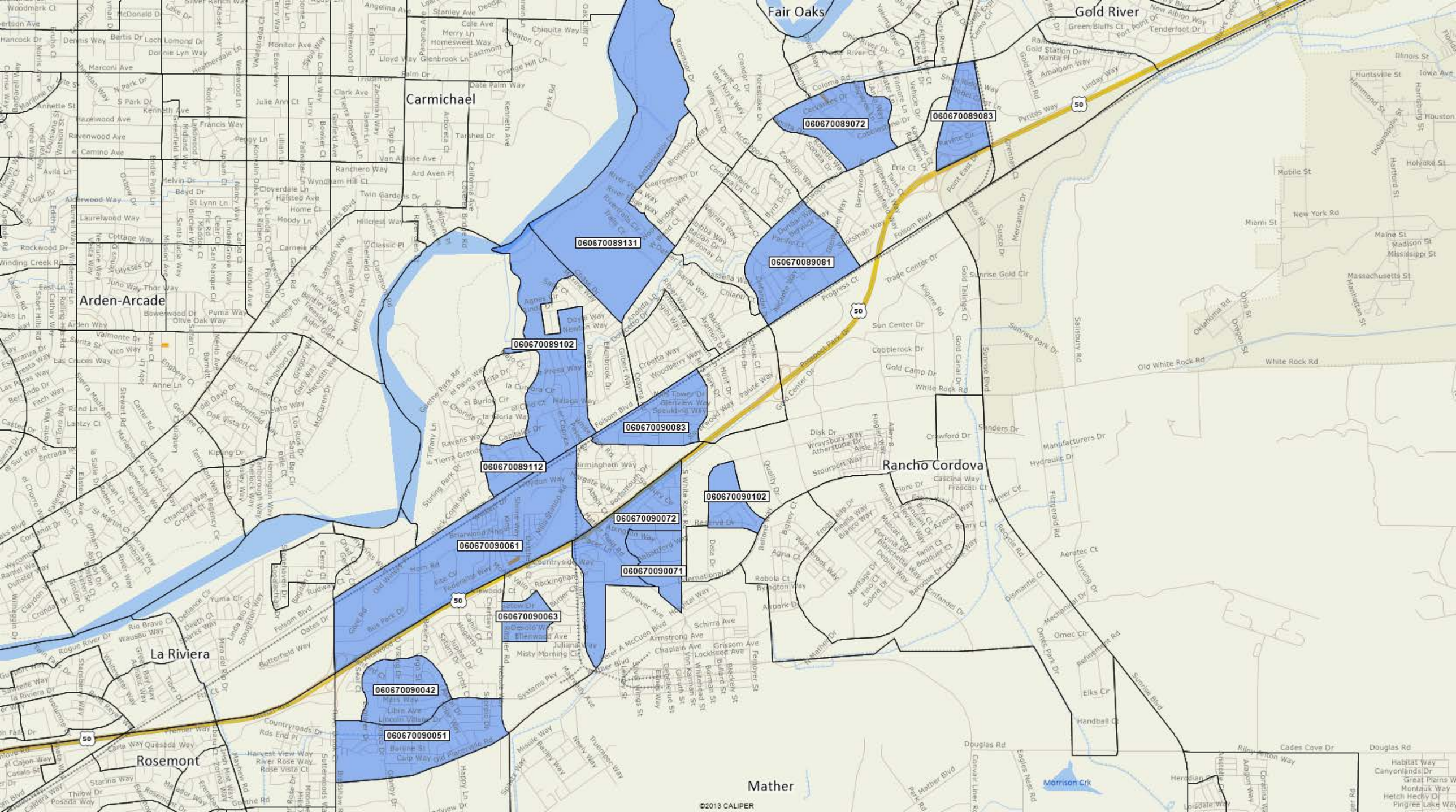


Exhibit 14
Peak Parking Occupancy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Arden-Arcade
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Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP
Makinzie Clark

Re: **The Corridor Enhancement and Circulation Study for Olson Drive**
Transportation Data Collection Memorandum

Date: November 28, 2018

As planned, data is being collected during December in order to capture the highest annual traffic conditions. This data will be used to inform the *Preliminary Technical Evaluation* which is anticipated to be submitted by the end of December 2018, and the *Existing Conditions & Preliminary Evaluation Memorandum* which is anticipated to be submitted by the end of January 2019 (for reference the schedule is provided as **Appendix A**). This memorandum summarizes the existing conditions data collection approach for Olson Drive and adjacent facilities.

Data Collection Approach

Vehicle, bicycle, and pedestrian data will be collected along Olson Drive and adjacent facilities. Specifically, peak-period intersection turning movement counts (including bicycle and pedestrian activity) will be collected at 30 driveways located on Olson Drive, and at five adjacent intersections, as follows:

1. Olson Drive/Zinfandel Drive
2. Zinfandel Drive/Folsom Blvd
3. Folsom Blvd/Don Juan Drive
4. Folsom Blvd/Olson Drive/Cordova Lane
5. Olson Drive/Progress Court

In addition, four 48-hour roadway segment counts, vehicle classification, and speeds will be collected at the following locations:

1. Olson Drive, east of Zinfandel Drive
2. Olson Drive, south of Folsom Blvd
3. Zinfandel Blvd, north of Olson Drive
4. Folsom Blvd, between Zinfandel Drive and Don Juan Drive

Exhibit 1 presents the abovementioned count locations. Bicycle and pedestrian midblock crossings on Olson Drive will also be collected.

Traffic Data

According to historical data, December weekday (Monday-Friday) peak travel periods along Olson Drive occur during the mid-day peak (12noon – 2pm) and the PM peak hour (4pm – 6pm). December weekend (Saturday and Sunday) peak travel periods along Olson Drive occur during the mid-day peak (12noon – 2pm). In addition, the highest vehicle volumes occur on Fridays and Saturdays.

Consistent with this data, all counts will be collected on Friday, December 14, 2018 and Saturday, December 15, 2018 during the following time periods:

- Olson Drive driveway counts will be collected between 4pm and 6pm on Friday, and 12noon and 2pm on Saturday.
- Intersection turning movement counts will be collected between 4pm and 6pm on Friday, and 12noon and 2pm on Saturday.
- Roadway segment counts will be collected during a 48-hour period on Friday and Saturday.

If there is a significant weather event, data collection will instead occur on Friday, December 21, 2018 and Saturday, December 22, 2018. Determination to alter collection dates will be made in consultation with City staff.

Alternative Transportation Data

As mentioned above, bicycle and pedestrian data will be collected in conjunction with the intersection turning movement counts, as well as midblock crossing counts along Olson Drive. In addition to bicycle and pedestrian activity, Kimley-Horn will observe light rail activity at the Zinfandel Station and the Cordova Town Center Station, and bus activity at the Folsom Blvd/Zinfandel Drive stop and the Folsom Blvd/Olson Drive stop, between 4pm and 6pm on Friday, and 12noon and 2pm on Saturday. Specifically, general trends in light rail and/or bus boarding and lighting will be recorded to identify passengers coming from or leaving the Olson Drive study area. Light rail and bus locations near the Olson Drive study area are shown in Exhibit 2.

Exhibit 1 – Count Locations

Exhibit 2 – Light Rail and Bus Stations

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

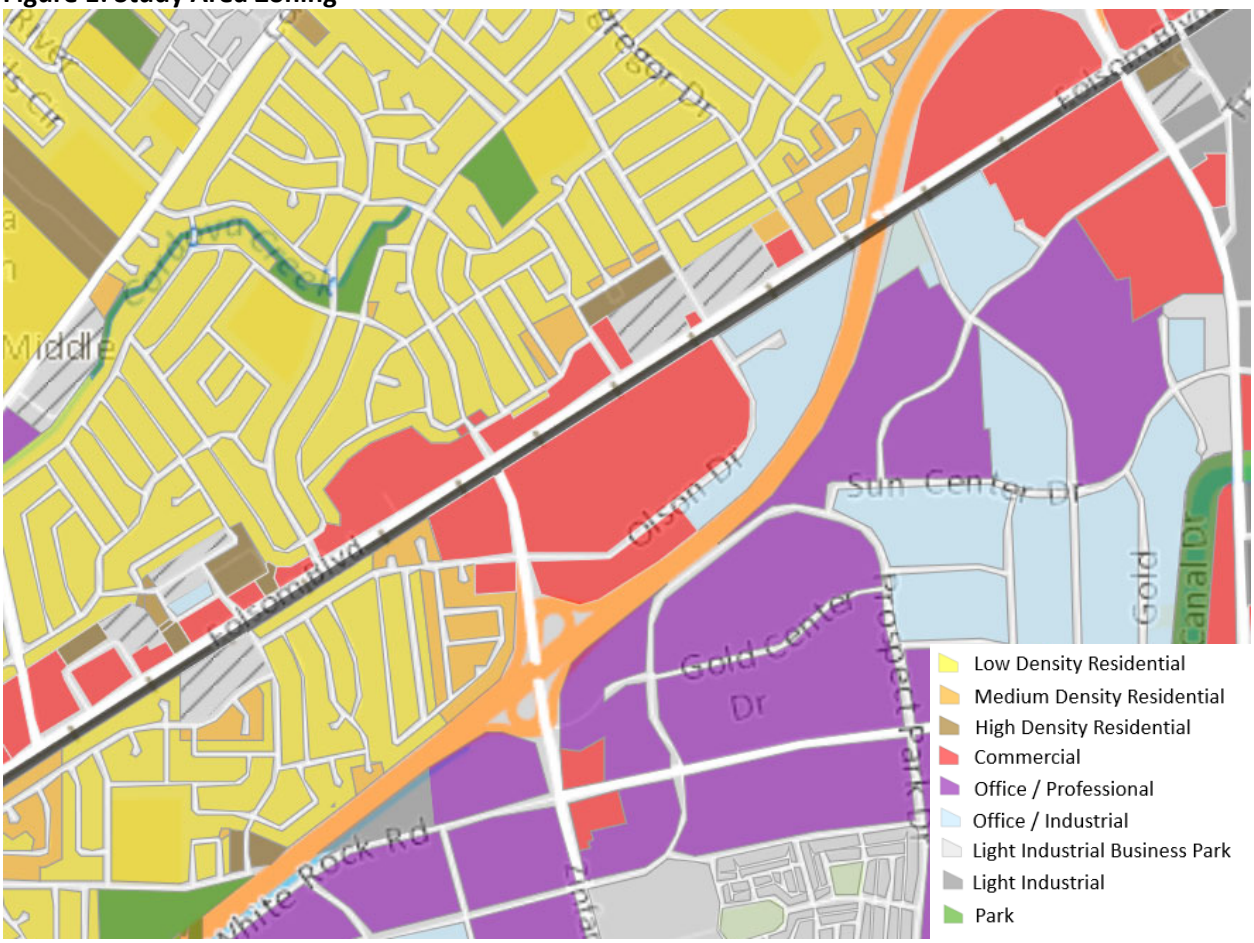
From: Michael Schmitt, AICP CTP, PTP, RSP
Darryl dePencier, ACIP, GISP, RSP

Re: The Corridor Enhancement and Circulation Study for Olson Drive
Demographics and Land Use

Date: January 27, 2020

This memorandum summarizes the local land use and demographics in the Olson Island Study Area. The site is located in Rancho Cordova's Downtown Overlay and is zoned for General Commercial. North and west of the commercial area is zoned for Single Family Residential, with higher density residential immediately west of Zinfandel Drive. Across US 50, the studies influence area includes Office Professional Mixed Use and Office Industrial Mixed Use zones. The zoning map is shown in **Figure 1**.

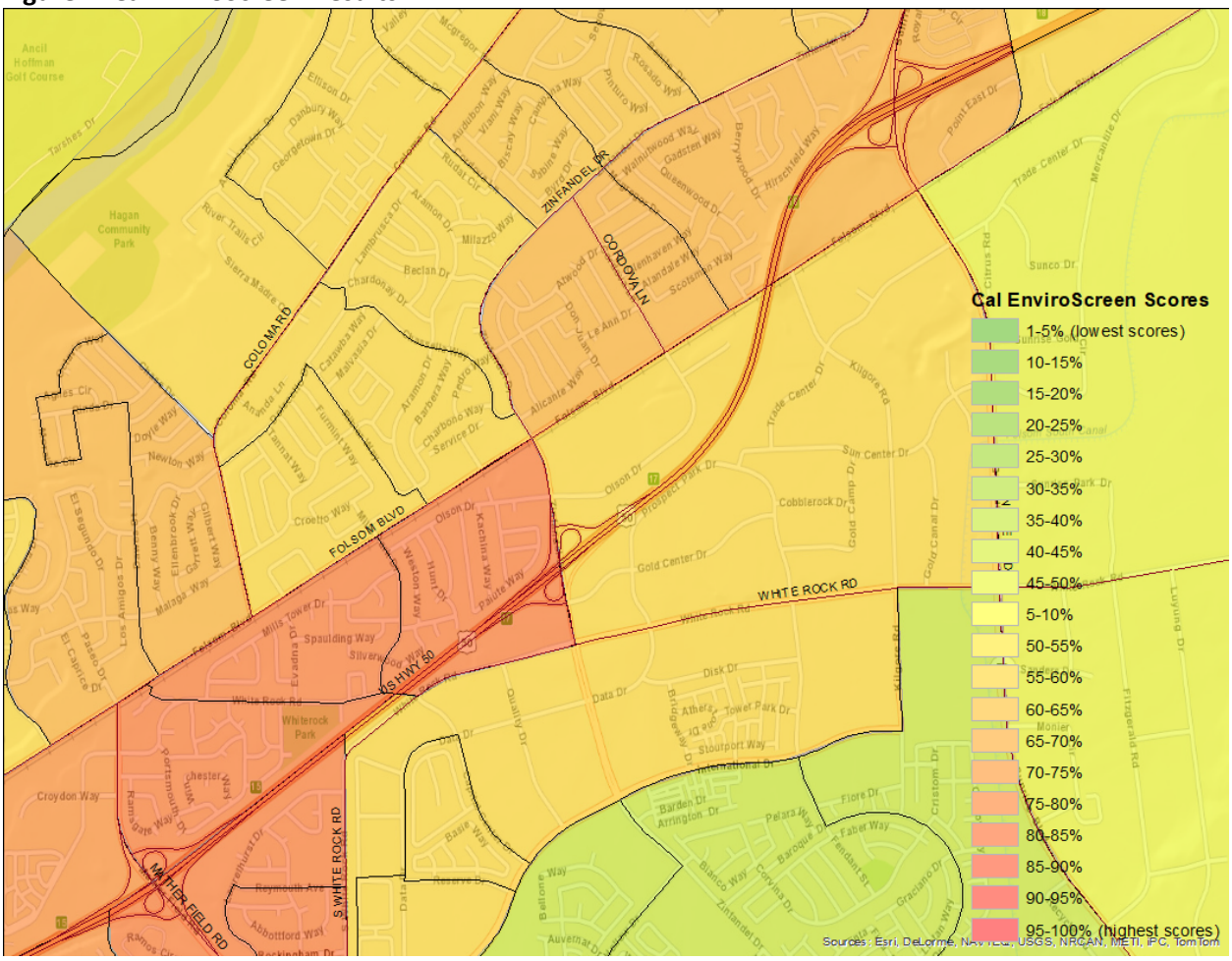
Figure 1: Study Area Zoning



Additional zoning layers indicate that Olson Island contains a housing needs area on its eastern side.

CalEnviroScreen shows the community to the west of the study area is disproportionately impacted by air pollution and is economically disadvantaged as shown in **Figure 2**.

Figure 2: CalEnviroScreen Results



According to the Longitudinal Employment / Housing Dynamic, employment near the study area is heavily concentrated south of US 50 as shown in **Figure 3**. **Figure 4** shows that the working population is distributed around the site to the north and west, consistent with zoning.

Figure 3: Employment Density

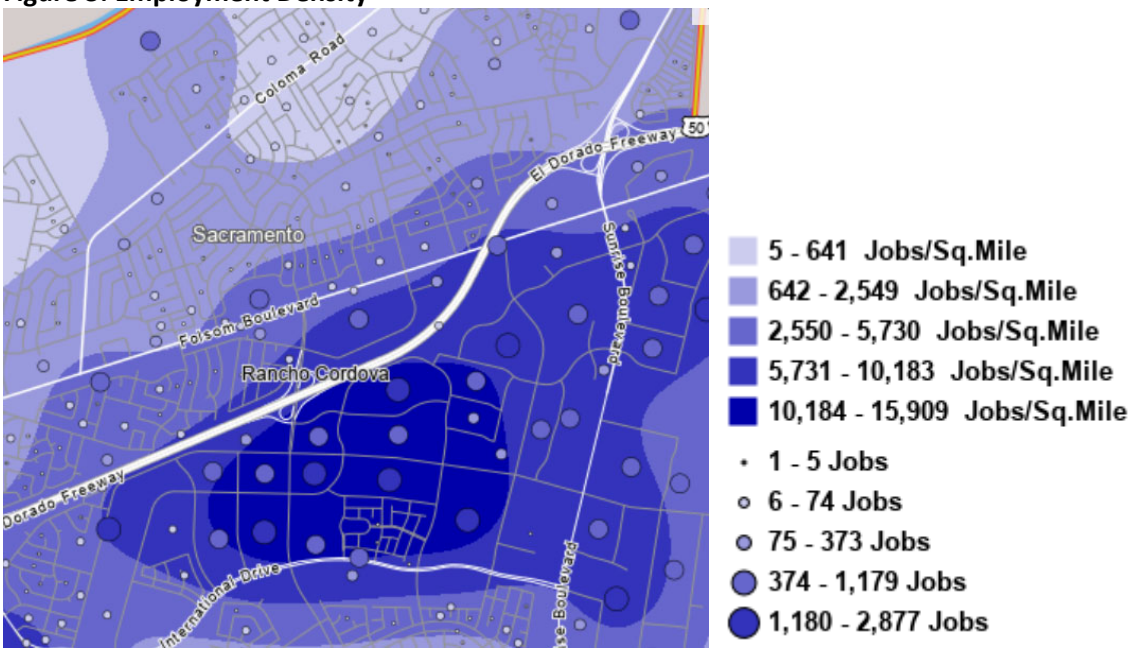
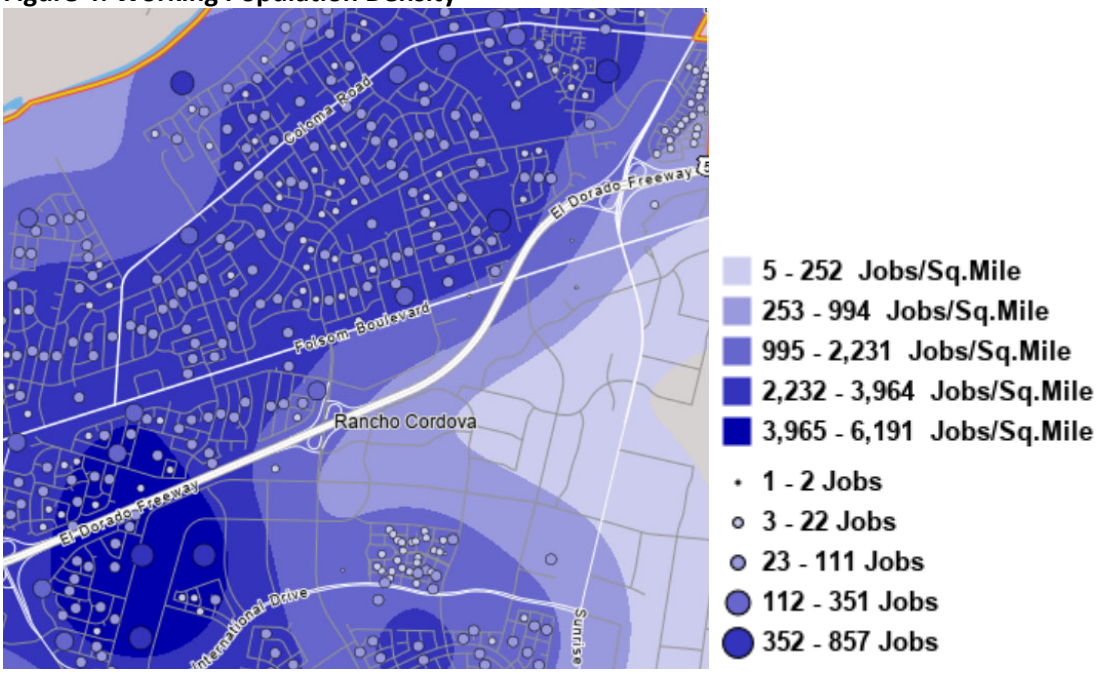


Figure 4: Working Population Density



These factors show that the Olson Island study area is well positioned to serve both residential areas and employment centers with effective transportation connections.

Kimley»Horn

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Chris Gregerson, P.E., T.E., PTOE, PTP

Re: **Olson Drive and Zinfandel Drive Corridor Study**
Site Reconnaissance Memorandum

This memorandum summarizes the site reconnaissance performed for the Olson Drive and Zinfandel Drive Corridor Study. In November 2018, Kimley-Horn completed site reconnaissance of the project study area with an understood focus to identify opportunities for improved circulation and safety both on-site and along the Olson Drive and Zinfandel Drive corridors. Obstacles such as encroached fences and trees in the City's right-of-way as well as sidewalk gaps and hazards that are observed were also noted.

A summary of the completed site reconnaissance is provided below:

- The majority of trips accessing the Olson Commercial Site come from the south and the east.
- The majority of movements result from eastbound vehicles turning into the Olson Commercial area (left turns), or vehicles turning out of the Olson Commercial Site traveling westbound (right turns)
- Most of pedestrian midblock crossings occur between the Chevron gas station and Jamba Juice
- Parking occupancy is highest near the major retail sites

Parking Occupancy Observations

During peak traffic periods (Fridays between 4 and 6pm, and Saturdays between 12noon and 2pm), especially during peak seasonal periods (December), parking occupancy within the Olson Commercial area is high for most parking lots. Unsurprisingly, parking occupancy is highest near the major retail sites, including Target, Marshalls, and KP International Market. In addition, parking occupancy is lowest near office sites outside of typical work hours.

APPENDIX B -

PUBLIC OUTREACH

1. STAKEHOLDER AND PUBLIC INVOLVEMENT OVERVIEW
2. ONLINE COMMUNITY SURVEY AND REPORT OF SURVEY FINDINGS

APPENDIX B1 -

STAKEHOLDER AND PUBLIC INVOLVEMENT OVERVIEW

Kimley»Horn

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Chris Gregerson, P.E., T.E., PTOE, PTP

Re: **Olson Drive and Zinfandel Drive Corridor Study**
Stakeholder and Public Involvement Overview

Date: February 19, 2020

This memorandum summarizes the outreach activities undertaken for the Olson Drive and Zinfandel Drive Corridor Study. Outreach for this project focused on two distinct groups: (1) businesses and property owners included within the study area, and (2) the public at large. Stakeholder outreach activities included:

- Two rounds of business and property owner focused meetings during the Spring and Fall of 2019;
- Two public open houses that occurred on May 16, 2019 and October 17, 2019;
- One open house that specifically targeted businesses and property owners on December 18, 2019.
- Two rounds of online surveys (that were also provided in hard copy format at open houses) during the Spring and Fall of 2019.

The following sections includes an overview of activities undertaken and feedback received.

Stakeholders

In early 2019, Kimley-Horn worked with the City to develop a contact list for those who may want to be included on the Stakeholder Advisory Committee (SAC). This list was finalized in February 2019 and Kimley-Horn reached out to individuals to ascertain their willingness to be involved in the project. Once a list of those who would like to be involved was finalized in March 2019, feedback calls were arranged in April and May 2019. The calls allowed Kimley-Horn to solicit feedback from business owners and other interested parties working and operating in the project study area regarding perceived issues such as transportation, safety, or others. The feedback from these calls is summarized below:

- The development of a Mobility Hub that combines transit, bike, TNCs such as Uber and Lyft, electric vehicle charging, and shareables such as bikes and scooters would be a big benefit to the area
    - The City is looking into bike/scooter-share
- Improving the alignment between driveways and parking would be helpful
    - It is difficult to get in/out of the parking lot, especially egress onto Olson Drive
- The parking lot has quality issues, and potential supply issues (re: future use in the Khols building)
    - The future Khols building use is of concern
- Bicycle and pedestrian improvements would be useful
    - Bike lockers/racks would be helpful, but need to be safe to prevent items being stolen

- Widening may be a solution to congestion on Olson Drive; however, it would potentially eliminate parking
- Technology solutions could help with congestion/access issues
- Master Parking Plan could be helpful that deals with parking angles and direction of drive aisles
- Focus on connection between property sites (internal circulation)
    - Issue with getting from properties back onto Olson Drive
- Access via Folsom (over rail)
- Focus on customer base as it relates to time of day Olson Island visitation
    - Lunch crowd comes from south of US 50
    - Customers come from the immediate residential areas
    - Dinner crowd dies
        - Economic impact to restaurants, especially
- Efforts like "Staying an Extra Hour in Rancho" campaign
    - Need amenities to encourage people to stay
- Speeding along Olson is an issue
- Queuing on Olson during commute times is an issue
- Three roundabouts should be installed
    - One around SJVC campus
    - One by the Starbucks
    - One by the post office
- Students and other pedestrians have to play "Frogger" to cross Olson because of the cars and speeding. No great pedestrian crossing infrastructure
- Interest in increasing traffic through Grocery Outlet drive-aisle to Target, etc. without having to use Olson Drive
- Amenities need updating
    - Signs are outdated
    - Use Sunrise @ 50 as an example of how to improve amenities
    - Need an 'urban feel'
- Vacancy plays an undesirable factor (99cent store area)
- Bike/ped access if difficult and dangerous
- Need bike racks in front of buildings
- Improve quality of life
- Improve access + attractiveness

Follow up calls with members of the SAC were also held in October 2019 and November 2019 to inform them of the proposed projects and solicit feedback on those projects.

A SAC Open House was held on December 18, 2019 on-site within the Olson Island Retail Site. Representation at the event included Wal-Mart, the Rancho Cordova Chamber of Commerce, Bed Bath & Beyond, the California Inn, KP International Market, Marshalls, the Chevron station, and the Rancho Cordova Police Department. Feedback regarding proposed improvement options included:

- Support for a Mobility Hub including interest in the City looking into bike/scooter-share if personal safety
- can be assured.
- Strong support for congestion reduction and internal circulation improvements.
- Questions about whether roundabouts are the right treatment and whether residents would be

- comfortable navigating them.
- Strong support for pedestrian safety improvements particularly in consideration of SJVC students and
- connectivity across Olson.
- Strong support for wayfinding, branding of the area, and beautification efforts including paver
- treatments and vegetation.
- Support for bike/ped improvements in so far as they are not at the expense of increase auto
- congestion. Also, concerns regarding personal safety with those improvements
- Support for driveway consolidation, transit hub if personal safety can be assured, and better
- connectivity to businesses on the south side
- Concern for/Questions about Driveway consolidation, roundabouts, widening, and traffic circles
- Continued support for the mobility hub

Public Outreach

Two public meetings were held at the City of Rancho Cordova City Hall on June 29, 2019. The initial meeting was held to inform the public of the study, solicit feedback on potential issues to be addressed by the public, help inform the direction of potential solutions that could be implemented in both the near and long term, and obtain any other feedback to be provided by the public. Nine (9) members of the public attended the workshop that was held by Kimley-Horn and City staff. Four (4) surveys were completed by members of the public that attended and several other comments were received informally. A summary of the survey responses and comments received is located below:

- The sign at Olson and Zinfandel heading west to get on the freeway should indicate that the [number 2/outside left turn lane] is to get on the freeway only
- Better signage [should be installed] on westbound Olson when turning onto Zinfandel
- Realign the parking lots to flow traffic from the southern Target entrance to the driveway left of Target
- Reduce left turns [in and out of the commercial area], especially at the bend on Olson Drive near the Petsmart and Panda Express. As an alternative, these driveways can be closed all together
- Reconfigure the parking lot roads to move some traffic behind Target. Or use that area for a bike lane
- It is very difficult to turn left in and out of the commercial area at all locations
- Speed enforcement would be beneficial
- Additional side walks along all travel ways would be beneficial
- More shopping options would be seen as beneficial
- Bike paths are scary to drive next to
- More advanced notice (at least one week) should be required if a travel way is to be blocked off

The second public meeting was held on October 17, 2019 to inform the public of the proposed projects that would address the identified issues in the project area, describe the effectiveness of individual projects on addressing specific issues, and solicit feedback based on the public's opinion of the proposed solutions. In conjunction with this third public meeting, a new online survey was sent to the public with the presentation that was held at the second public meeting summarizing the proposed projects and how they will address identified issues in the project area. Five (5) members of the public attended the workshop that was held by Kimley-Horn and City staff. A presentation on the proposed projects to address issues in the project area was given by Kimley-Horn and the public was asked to provide feedback

on those projects on boards that were located throughout the meeting space. A summary of the comments received on the proposed projects is located below:

- Existing cyclists do not obey laws and there is concern they will not comply with a separated bike lane or bike trail if it were to be implemented
- There is concern over drivers' ability to navigate roundabouts
- Signal timing improvements received very positive feedback
- Traffic signals along Olson Drive were also seen as a very positive improvement
- One person stated a preference for mini roundabouts (traffic circles) in lieu of traffic signals along Olson Drive to lower speeds and improve the ability to turn in and out of the commercial area.
- Lighting along Olson Drive could be improved
- Additional street vegetation was perceived positively by one person
- All aesthetic improvement ideas were perceived very positively

Survey

The initial public survey conducted included a total of 19 questions tailored to gather input related to who travels to the project area, and why, how often, and how they get there. A summary of the results of the survey indicated that a vast majority of respondents visit the commercial area either a few times a week or every day, and over 90% of them drive there. About 63% of respondents expressed that they have difficulty traveling to, from, or around the Olson Drive/Zinfandel Drive commercial area due to traffic congestion, turning at driveways, and pedestrian activity. When asked what type of travel they want the City of Rancho Cordova to prioritize improving, most respondents indicated that cars/driving were their highest priority. However, many responses indicated that bicycling and walking were also important for improvement considerations. Survey results indicated that less congestion, being able to visit without driving, improvements to traffic flow within parking lots, and better wayfinding/signage would be of the highest benefit to the study area. The survey results were reiterated by the participants at the pubic open house on May 16, 2019.

Other feedback included:

- Support for a Mobility Hub including interest in the City looking into bike/scooter-share.
- Recognition that better alignment and driveway consolidation could improve traffic operations.
- Interest in promoting businesses profile that improves the attractiveness outside of daytime operations.
- Interest in considering widening and other capacity enhancing options to move traffic along Olson.
- Concerns over pedestrian safety, particularly as it relates crossing Olson during lunch and other busy periods.
- Concern over issues related to vagrancy particularly as it relates to Regional Transit Operations nearby
- Concern over the impact traffic congestion is having on access to business and the need to address it.
- Support for working with other business and property owners to address challenges and maximize opportunities.
- Recognition that on-site circulation is fragmented and impacting traffic operations on Olson.

The second public survey was distributed by the City in the Fall of 2019 and contained fewer questions than the public survey conducted in Spring 2019. The follow-up survey had six questions that were focused on the reaction to the recommended improvements. Feedback from the survey included:

- Strong support for congestion reduction and internal circulation improvements
- Strong support for improvements for autos particularly those that reduce congestion/delay and improve circulation.
- Concern for/questions about roundabouts
- Support for bike/ped improvements if they are not at the expense of increase auto congestion
- Business and property owner feedback to proposed improvement options included
- Support for a Mobility Hub including interest in the City looking into bike/scooter-share if personal safety can be assured.
- Strong support for congestion reduction and internal circulation improvement
- Questions about whether roundabouts are the right treatment and whether residents would be
- comfortable navigating them.
- Strong support for pedestrian safety improvements particularly in consideration of SJVC students and
- connectivity across Olson.
- Strong support for wayfinding, branding of the area, and beautification efforts including paver
- treatments and vegetation.
- Support for bike/ped improvements in so far as they are not at the expense of increase auto
- congestion. Also, concerns regarding personal safety with those improvements
- Support for driveway consolidation, transit hub if personal safety can be assured, and better
- connectivity to businesses on the south side
- Concern for/Questions about Driveway consolidation

APPENDIX B2 -

ONLINE COMMUNITY SURVEY AND REPORT OF SURVEY FINDINGS

Olson Drive and Zinfandel Drive Corridor Project – Community Survey

1. How often do you visit the Olson Drive/Zinfandel Drive Commercial Area (i.e. Target, KP Markets, etc.)?

2. How do you travel to the Olson Drive/Zinfandel Drive Commercial Area?

3. What is your primary destination in the Olson Drive/Zinfandel Drive Commercial Area?

4. What day of the week do you primarily travel to the Olson Drive/Zinfandel Drive Commercial Area?

5. What time of the day do you travel to the Olson Drive/Zinfandel Drive Commercial Area?

6. Do you work in the Olson Drive/Zinfandel Drive Commercial Area?

7. If you answered "Yes" to the previous question, how do you commute each day?

8. Do you have difficulty traveling to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

9. If you answered "Yes" to the previous question, what is the primary issue you encounter traveling to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

10. Would you make any changes to the way people are able to travel to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

11. If you answered "Yes" to the previous question, what changes would you make? Specifically, do you have any suggestions to improve travel in Olson Drive/Zinfandel Drive Commercial Area?

12. If the City of Rancho Cordova prioritized one type of travel to focus on improving, what would you choose for the City to focus on?

13. In your own words, what do you like most about the Olson Drive/Zinfandel Drive Commercial Area?

14. In your own words, what would attract you to shop more often at the Olson Drive/Zinfandel Drive Commercial Area?

15. In your own words, what are the things that you would most like to improve about the Olson Drive/Zinfandel Drive Commercial Area?

16. If you have any questions, comments, or concerns, please provide them here.

17. What is your age range? (Circle One)

    18 – 24

25 – 34

35 – 44

45 – 54

55 – 64

65 – 74

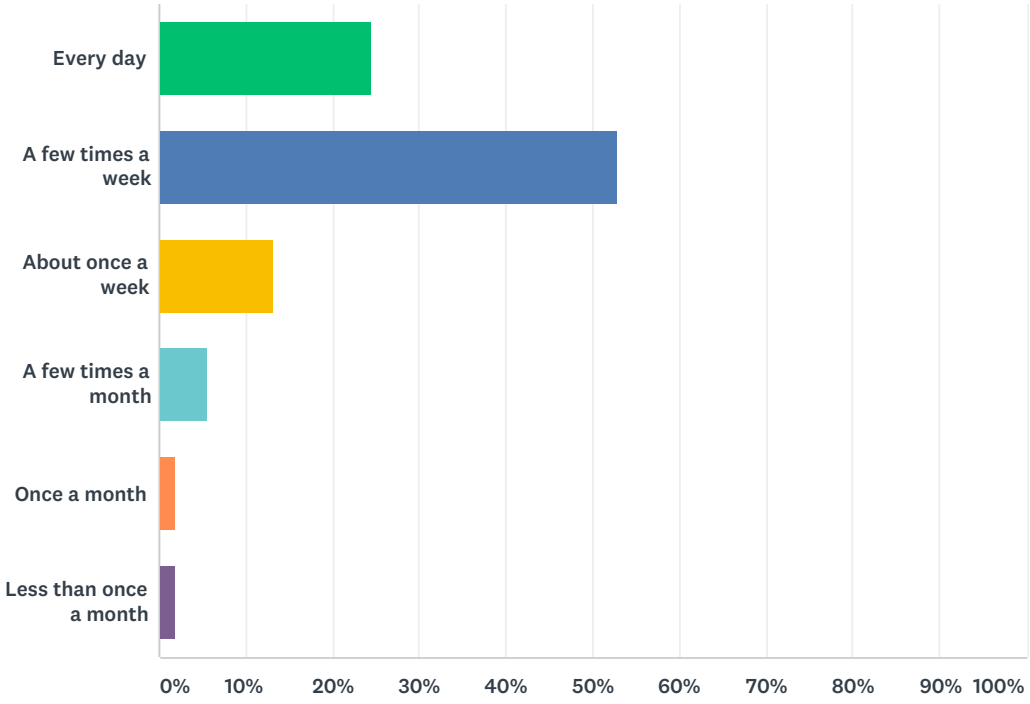
75 or older

18. Do you live in the City of Rancho Cordova?

19. Do you work in the City of Rancho Cordova?

Q1 How often do you visit the Olson Drive/Zinfandel Drive Commercial Area (i.e. Target, KP Markets, etc.)

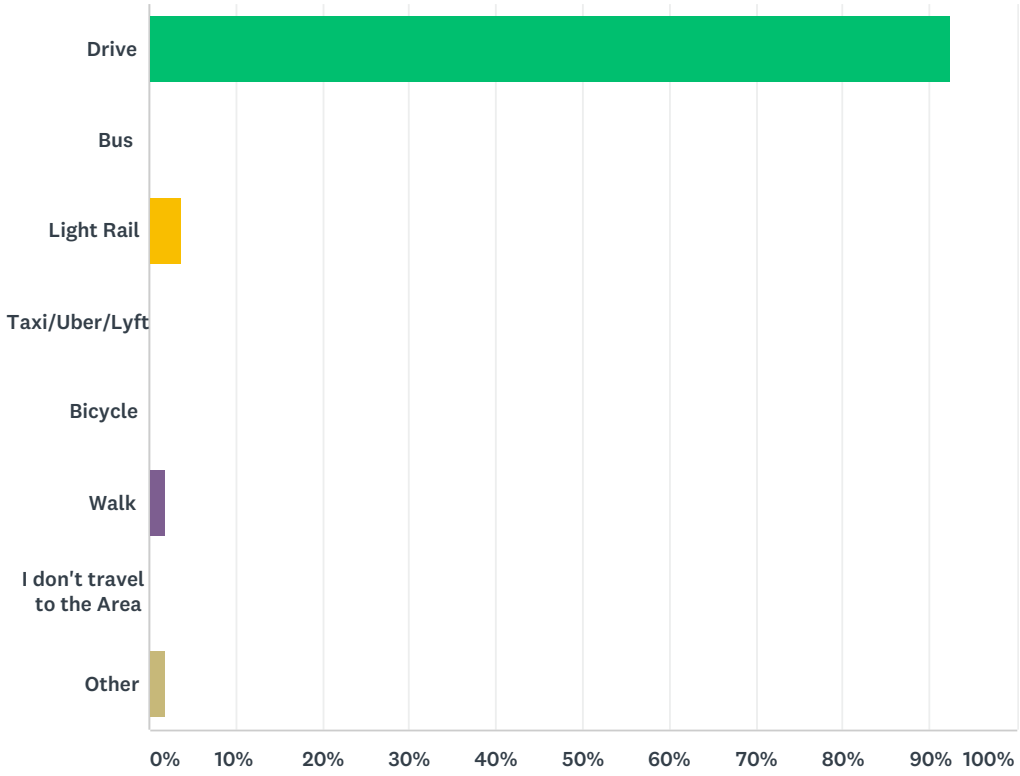
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Every day	24.53%	13
A few times a week	52.83%	28
About once a week	13.21%	7
A few times a month	5.66%	3
Once a month	1.89%	1
Less than once a month	1.89%	1
TOTAL		53

Q2 How do you travel to the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 53 Skipped: 0



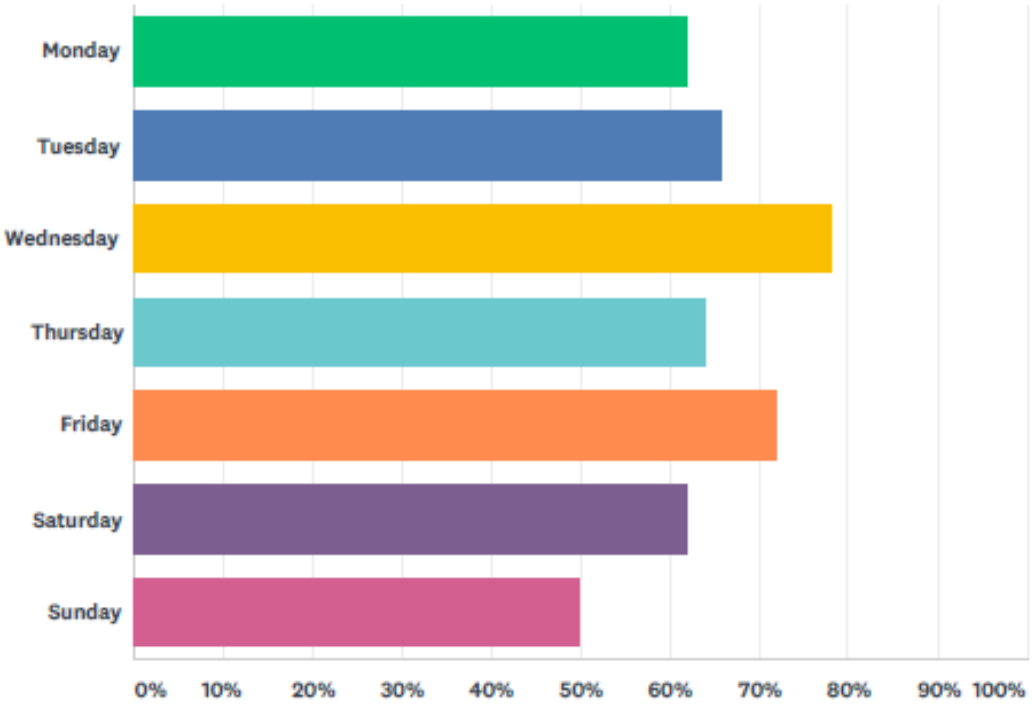
ANSWER CHOICES	RESPONSES	
Drive	92.45%	49
Bus	0.00%	0
Light Rail	3.77%	2
Taxi/Uber/Lyft	0.00%	0
Bicycle	0.00%	0
Walk	1.89%	1
I don't travel to the Area	0.00%	0
Other	1.89%	1
TOTAL		53

Q3 What is your primary destination in the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 51 Skipped: 2

Q4 What day of the week do you generally travel to the Olson Drive/Zinfandel Drive Commercial Area?

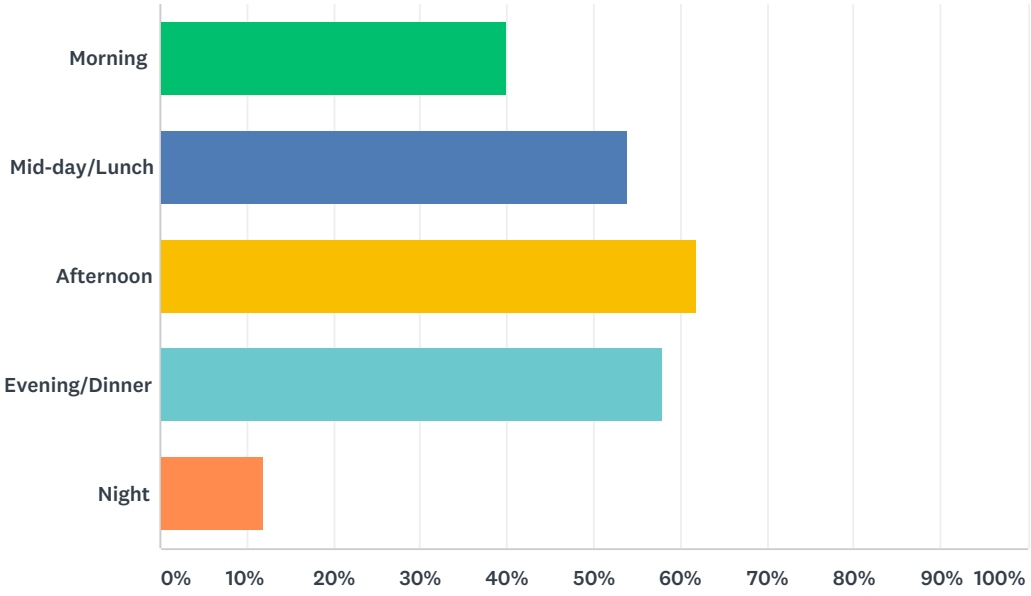
Answered: 50 Skipped: 3



ANSWER CHOICES	RESPONSES	
Monday	62.00%	31
Tuesday	66.00%	33
Wednesday	78.00%	39
Thursday	64.00%	32
Friday	72.00%	36
Saturday	62.00%	31
Sunday	50.00%	25
Total Respondents: 50		

Q5 What time of the day do you travel to the Olson Drive/Zinfandel Drive Commercial Area?

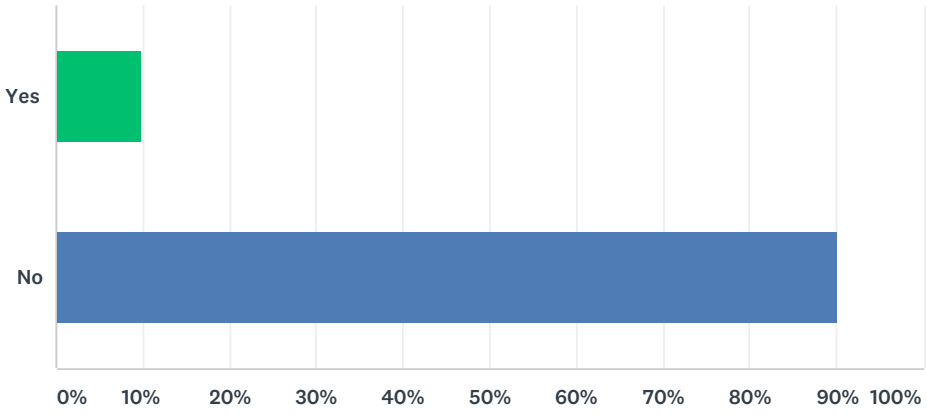
Answered: 50 Skipped: 3



ANSWER CHOICES	RESPONSES	
Morning	40.00%	20
Mid-day/Lunch	54.00%	27
Afternoon	62.00%	31
Evening/Dinner	58.00%	29
Night	12.00%	6
Total Respondents: 50		

Q6 Do you work in the Olson Drive/Zinfandel Drive Commercial Area?

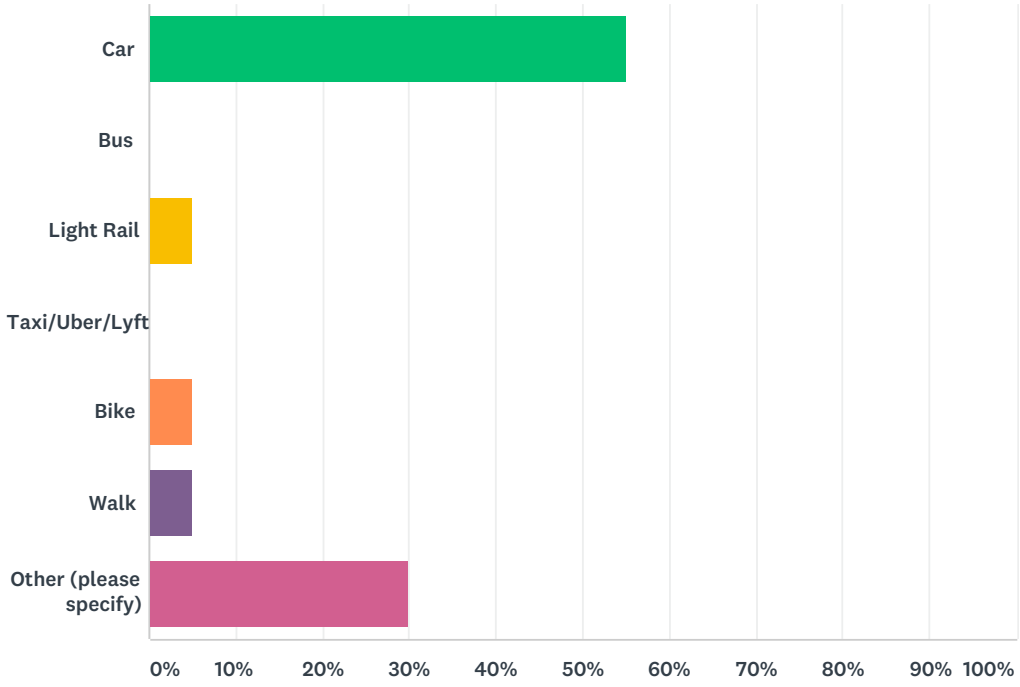
Answered: 51 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	9.80%	5
No	90.20%	46
TOTAL		51

Q7 If you answered "Yes" to the previous question, how do you commute each day?

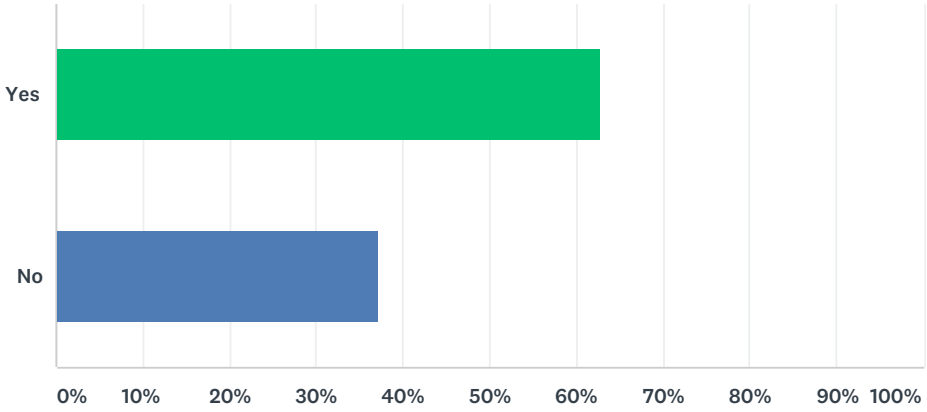
Answered: 20 Skipped: 33



ANSWER CHOICES	RESPONSES	
Car	55.00%	11
Bus	0.00%	0
Light Rail	5.00%	1
Taxi/Uber/Lyft	0.00%	0
Bike	5.00%	1
Walk	5.00%	1
Other (please specify)	30.00%	6
TOTAL		20

Q8 Do you have difficulty traveling to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 51 Skipped: 2



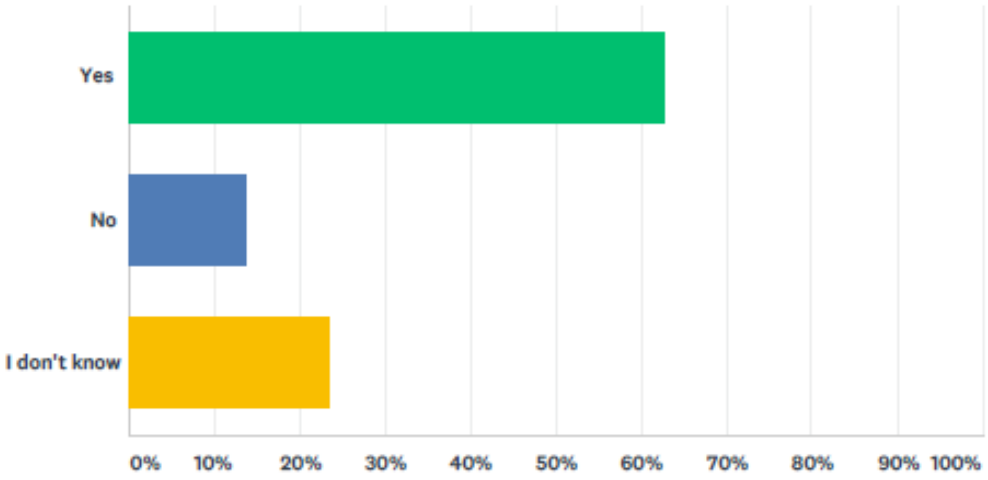
ANSWER CHOICES	RESPONSES	
Yes	62.75%	32
No	37.25%	19
TOTAL		51

Q9 If you answered "Yes" to the previous question, what is the primary issue you encounter traveling to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 37 Skipped: 16

Q10 Would you make any changes to the way people are able to travel to, from, or around the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 51 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	62.75%	32
No	13.73%	7
I don't know	23.53%	12
TOTAL		51

Q11 If you answered "Yes" to the previous question, what changes would you make? Specifically, do you have any suggestions to improve travel in the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 37 Skipped: 16

Q12 If the City of Rancho Cordova prioritized one type of travel to focus on improving, what would you choose for the City to focus on?

Answered: 41 Skipped: 12

Q13 In your own words, what do you like most about the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 39 Skipped: 14

Q14 In your own words, what would attract you to shop more often at the Olson Drive/Zinfandel Drive Commercial Area?

Answered: 42 Skipped: 11

Q15 In your own words, what are the things that you would most like to improve about the Olson Drive/Zinfandel Drive Commercial Area?

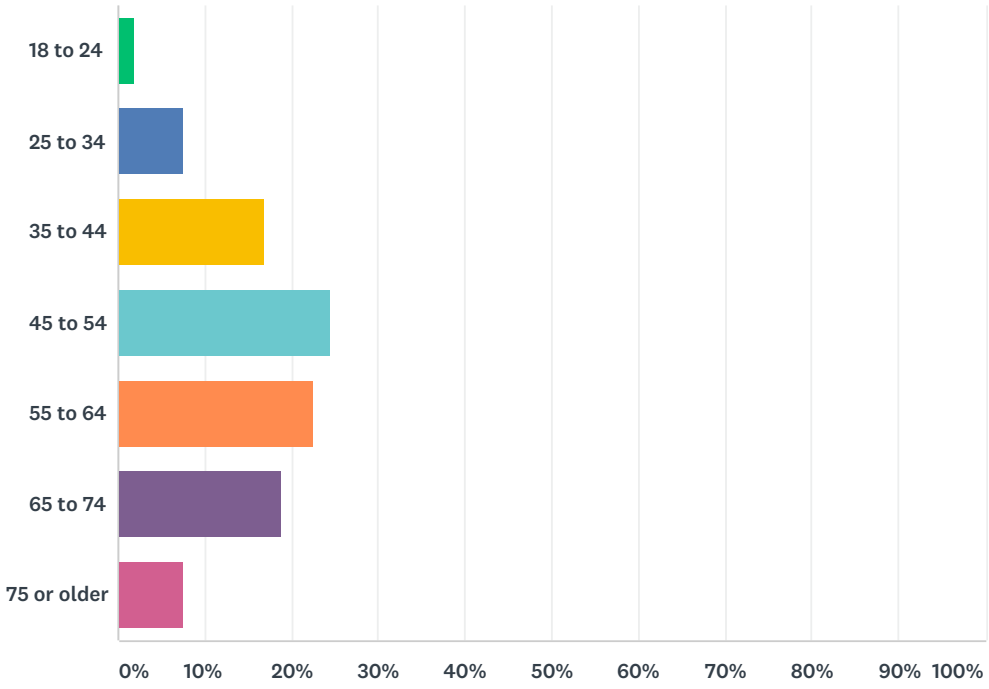
Answered: 43 Skipped: 10

Q16 If you have any questions, comments, or concerns, please provide them here.

Answered: 22 Skipped: 31

Q17 What is your age?

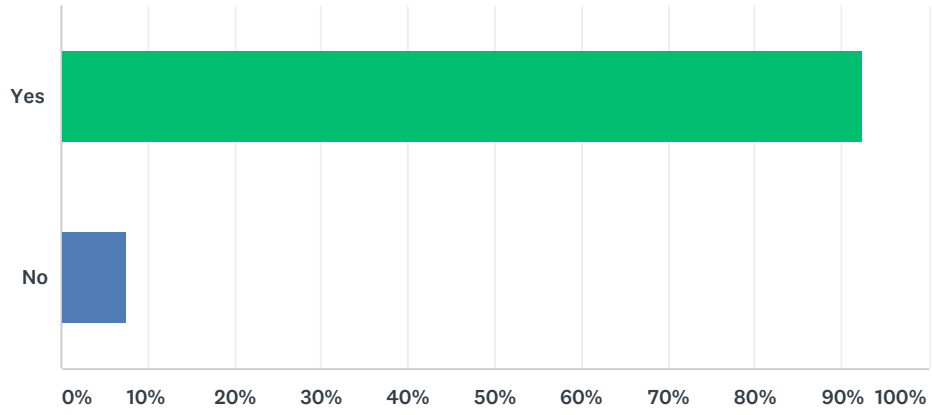
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
18 to 24	1.89%	1
25 to 34	7.55%	4
35 to 44	16.98%	9
45 to 54	24.53%	13
55 to 64	22.64%	12
65 to 74	18.87%	10
75 or older	7.55%	4
TOTAL		53

Q18 Do you live in the City of Rancho Cordova?

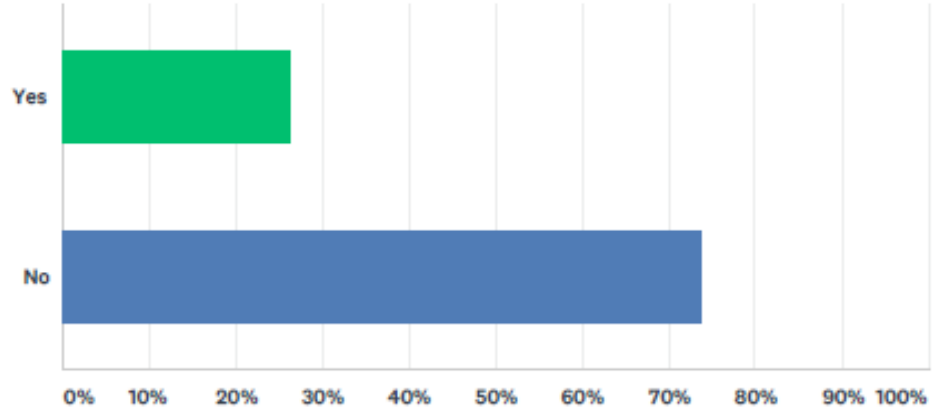
Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	92.45%	49
No	7.55%	4
TOTAL		53

Q19 Do you work in the City of Rancho Cordova?

Answered: 53 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	26.42%	14
No	73.58%	39
TOTAL		53

APPENDIX C -

NEW TRANSPORTATION TECHNOLOGY MEMORANDUM

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Darryl dePencier, ACIP, GISP, RSP

Re: The Corridor Enhancement and Circulation Study for Olson Drive
New Technology

Date: January 6, 2020

In the last few years, there has been a significant increase in the introduction of new transportation technologies. This has included the introduction of smart phone apps to secure on-demand transportation services, mainstream adoption of electric vehicles, the introduction of autonomous vehicles to our roadways, as well as a variety of online route and trip planning services. These emerging transportation technologies are resulting in a myriad of complex benefits and challenges that are just beginning to be fully understood. The changes to our travelling system will happen incrementally in the short and long term and will vary between infrastructure and vehicle operations.

The Institute of Transportation Studies at the University of California at Davis broadly identifies these technology trends as the "3 Revolutions" in transportation. The 3 Revolutions include:

- **Shared** – This includes a myriad of on-demand vehicle-sharing arrangements including Transportation Network Companies (TNCs) such as Uber and Lyft, car sharing services such as Zipcar, and increasing number of rideable share options.

- **Automated –** While there are varying degrees of automation already available on many new vehicles (adaptive cruise control, land departure and collisions warning systems, etc.), many car manufacturers have publicly shared that their self-driving cars will be available in only a few years away. The US Society of Automotive Engineers (SAE) have indicated that level 4 (the car can operate without human input for many roadway types and conditions) driverless cars appear on track to begin entering commercial fleets by the early 2020s. Large scale changes in automated vehicles on dedicated lanes will likely not occur until the market is saturated. Predictions range from 5 years to longer than 30 years.

- **Electric** – Electric vehicles use one or more electric motors for propulsion. Often that only applies to cars and trains, but increasingly there are bike and scooter options are available. When combined with renewable energy they are commonly accepted to improve air quality outcomes.

It is understood that these revolutions are interrelated and that both positive and negative outcomes will be strongly tied to the ultimate forms and combinations of these technology pairings. Although there is still much uncertainty as to how many of these technologies will affect transportation systems, it is clear than many are already/will have a profound impact. However, given that we do not have significant historical experience with many of these

technologies there are not broadly accepted ways to evaluate and interpret their impacts. Many jurisdictions are working on new transportation forecasting methods and tools to better predict their impacts, however in the absence of accepted tools a qualitative assessment as to their impact is still useful for planning purposes. Although the following discussion does not discuss all the emerging technologies that will likely impact the transportation system in Rancho Cordova, it does provide some context for how several emerging trends may impact the Scenario evaluations provided in this document. Major trends discussed in the following sections include:

- Transportation Network Company (TNC) Congestion and Transit Impacts
- Autonomous Vehicle Adoption
- Shared Mobility
- Electric Vehicle Adoption

TNC Congestion and Transit Impacts

The rapid growth of new mobility services, in particular TNCs, is dramatically affecting how local agencies are beginning to plan for the future of their transportation networks. Emphasizing their extreme growth, TNCs have more than doubled in number in the United States since 2012. TNCs transported 2.61 billion passengers in 2017, a 37 percent increase from 1.90 billion passengers in 2016. When combined with taxi service, the for-hire transportation sector is projected to have experienced a 241 percent increase over the past six years, surpassing the ridership of local bus services in the United States[1]. A recent study concluded that TNC services results in the addition of 2.8 new vehicle miles for each mile of personal driving removed[1]**Error! Bookmark not defined.**. This impact is significant when you consider that in an urban location like San Francisco, TNCs account for more than 20 percent of weekday local vehicle miles traveled (VMT).[2] The impact to transit has also been an increasing area of research and a recent University of California at Davis report also found that "Ride-hailing attracts Americans away from bus services (a 6% reduction) and light rail services (a 3% reduction)".[3]

If regulatory changes or market conditions do not change this trend, it is likely that TNCs may add additional congestion and reduce transit ridership in urban areas. As such it can be expected that the congestion forecasted for the UCS Scenarios (2035 Base, A, B, C, and E) may be worse than forecast and there may be less transit ridership than forecast given that TNCs are not represented in a meaningful way in the results of the analysis contained in this study.

Despite their challenges, TNC's have become a major component of first / last mile transit trips. For the Olson Island study, a TNC pick up and drop off area near the Cordova Town Center

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[1] *The New Automobility: Lyft, Uber and the Future of American Cities*, Schaller Consulting, July 25, 2018.
[2] https://www.sfcta.org/tncstoday
[3] Clewlow, Regina R. and Gouri S. Mishra (2017) Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-17-07

Station would help manage the flows of TNC traffic and reduce the amount of circulation needed to pick up and drop off passengers.

Autonomous Vehicle Adoption

It is anticipated that the impacts of Autonomous vehicles may be similar to TNCs - namely that they will increase congestion and result in a reduction in traditional transit ridership. Congestion impacts from autonomous vehicles may be greater than TNCs given the ability of drivers to use the time for tasks other than driving (thereby reducing the "cost" of driving) and that some individuals (children, elderly, disabled, others) may begin to make trips they previously could not give their reliance on others for mobility.

Autonomous vehicles are expected to significantly improve safety outcomes given the preponderance of human error as the primary cause of accidents. Multiple assessment of AV and Automated Driving Systems (ADSs) have suggested that they could reduce crashes by more than 90 percent by mid-century and the National Highway Traffic Safety Administration has said it believes these technologies "have the potential to significantly improve roadway safety".[4]

As such, in the absence of regulatory changes or unforeseen market conditions, it is likely that the congestion forecasted for all Scenarios (2035 Base, A, B, C, and E) may be worse than forecast and there may be less transit ridership than forecast given that Autonomous Vehicles are not represented in a meaningful way in the results of the analysis contained in this study. It is also likely that under circumstances where there was broad adoption there would be a marked improvement in safety, so crash rate estimates likely understate potential crash reduction from AV and ADSs technologies.

As autonomous vehicle technology improves and they are proven to operate safely in mixed traffic and complicated environments with less organized pedestrian traffic, autonomous shuttles could be used to greatly enhance mobility throughout the Olson Island area and to provide more convenient and less expensive connections with nearby neighborhoods and employment centers.

Shared Mobility

Shared mobility has dramatically expanded from cars to include other modes in the last couple of years. Major forms of shared mobility that are in use in California include:

- TNCs and Taxis – TNCs and taxis provide flexible on-demand transportation services that connect drivers with passengers at the request of passenger. The anticipated impact to the scenarios is discussed in the prior section on TNCs.

[4] AUTOMATED DRIVING SYSTEMS 2.0: A VISION FOR SAFETY, U.S. Department of Transportation, 2017

- Car Sharing - Car sharing allows people to rent shared vehicles for short periods of time, typically by the hour or minute. Car sharing, depending on the circumstances, likely does not impact the Scenario evaluations presented herein.
- Bike/Scooter Sharing - Bike/Scooter sharing allows people to rent shared mobility devices for short periods of time—typically by the hour or minute—and short-distance point-to-point trips. Bike and scooter share systems are often seen as an extension of the transit system, allowing users to easily and inexpensively complete the first or last mile of their trip. These types of systems could have a positive impact on Scenarios which emphasize transit options.
- Dynamic Carpooling - Dynamic carpooling is a real-time carpooling arrangement, typically made through mobile smartphone applications, that does not require pre-scheduling or a long-term participation commitment. Waze Carpool, a dynamic carpooling service, operates throughout California. To find a carpool match, commuters download the app, enter their origin, destination, and departure time. Riders have the flexibility to adjust their pick-up time each day to accommodate their schedule. While the diversion to pick up riders could have a localized VMT increase like TNCs, it is likely they would have a positive system wide impact on congestion and VMT.
- Dynamic Transit - Dynamic transit provides on demand, shared ride vehicles operated publicly or privately, typically with vans or small buses, that provide service on dynamically generated routes. Many transit agencies are beginning to test on-demand systems. These systems could positively impact transit ridership both by attracting new riders and as a method for addressing last mile trips.

As discussed above, depending on the specifics of the mode and circumstances, shared mobility options can reduce VMT and extend the reach of transit as is the case of bike/scooter sharing, or as is the case with TNCs, as discussed previously, they could negatively impact congestion and transit ridership.

Electric Vehicle Adoption

The transportation sector is responsible for approximately 36 percent of California's Green House Gas (GHG) emissions (50 percent when you include refineries) and more than 80 percent of NOx and particulate emissions. In conjunction with the continued addition of renewable energy sources as the basis for electrification, the positive impact of air quality will be significant. As the locations of charging stations continues to expand electric vehicles will also become increasingly easy to own and operate.

As of October 2017, California had 337,482 zero-emission vehicles (ZEV) representing 4.5% of the state's total fleet. Analysis indicates that state is on track to exceed its goal to have 1.5 million ZEV's on the road by 2025.[5]

Broader adoption of EVs than anticipated could dramatically improve air quality outcomes over those estimated for each of the Scenarios. However, the transportation system would likely

[5] The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis, Beacon Economics, January 2018

need to provide additional charging station locations to accommodate a significant increase in electric vehicles.

To ensure continued accessibility and to attract more customers to the Olson Island site, Electric vehicle charging stations should be provided at various locations around the Olson Island Site including the Cordova Town Center Station and near the major retailers. This will also provide more incentive for local residents and frequent visitors to Olson Island to embrace electric vehicle technology, improving air quality and reducing fossil fuel reliance.

Future Transportation Needs

New transportation options will continue to change the way we get around, and different modes will continue to be needed for different types of trips and different types of users. The projects developed for this study were designed to provide multi-modal enhancements to the transportation system in Rancho Cordova that improve mobility for all users. Consideration of evolving technologies should be weighed when evaluating project scenarios and the ultimate design of the system. It stands to reason that a transportation system that has been developed with evolving conditions in mind will have the resilience to last and serve for a much longer span of time.

APPENDIX D -

STRATEGIES FOR ADDRESSING COMMUNITY CONCERNS

Kimley»Horn

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Chris Gregerson, P.E., T.E., PTOE, PTP

Re: Olson Drive and Zinfandel Drive Corridor Study
Strategies for Addressing Community Concerns (FAQ)

This memorandum summarizes the strategies Kimley-Horn has undertaken to review concerns and issues brought up by the business and resident community in the survey and workshops for identifying and addressing those concerns. These strategies are outlined below in Frequently Asked Questions (FAQ) format.

How will the project obtain public concerns or concerns other individuals interested in the project such as business owners??

In consultation with the City, Kimley-Horn identified potential project stakeholders to establish the project's Stakeholder Advisory Committee (SAC). Kimley-Horn conducted two (2) SAC meetings for the primary purpose of gathering information, both historic and existing, and to provide an overview of the project at key milestones. In addition, Kimley-Horn conducted a community workshop to introduce the project to the public, define the purpose and scope of the project, and inform the public of opportunities to provide on-going input on development of the project. Finally, Kimley-Horn conducted a community workshop to present the Preliminary Draft Comprehensive Corridor Enhancement and Circulation Plan to the public to solicit feedback and comments.

How will the project address safety concerns?

Kimley-Horn and the City have collected existing information on crashes and other safety-related incidents and have proposed solutions based on industry-accepted techniques that produce quantifiable results.

How will the project address speeding?

Kimley-Horn and the City have worked together to provide a wide array of solutions that will address not only speed, but circulation and congestion along Olson Drive. These solutions include signals along Olson Drive, traffic circles (mini-roundabouts), additional capacity along Olson Drive, consolidation of driveways along Olson Drive and the implementation of an internal circulator road.

How will the project address the difficulty of making left turns to and from Olson Drive?

Kimley-Horn and the City have worked together to provide solutions that will address the difficulty of turning to and from Olson Drive. These solutions include signals along Olson Drive and the consolidation of driveways along Olson Drive and the implementation of an internal circulator road.

How will the project address pedestrian and bicycle issues?

Kimley-Horn and the City have worked together to provide solutions that will address pedestrian and bicyclist issues both observed and provided by the public and SAC. These include marked crosswalks along Olson Drive and separated bike lanes/trails.

APPENDIX E -

SUMMARY OF HEALTH AND SAFETY BENEFITS

Kimley»Horn

Memorandum

To: Rupa Somavarapu, M.S., P.E.
City of Rancho Cordova

From: Michael Schmitt, AICP CTP, PTP, RSP
Darryl dePencier, AICP, GISP, RSP

Re: The Corridor Enhancement and Circulation Study for Olson Drive
Health and Safety Benefits

Date: January 6, 2020

Health and Safety impacts were evaluated for hours of new active transportation time, reduced greenhouse gas and criteria pollutants, and reduced traffic collisions. Project elements that had the most potential for these impacts were included in the analysis.

New Hours of Active Transportation

New bicycle and pedestrian connection projects are most likely to encourage more walking and bicycling in the study area. Calculations were made using methods described in *NCHRP Report 552: Guidelines for Analysis of Investment in Bicycle Facilities* which assessed the likely number of daily trips that would use the facility, how many vehicle miles traveled they would replace, and how much induced transportation there might be.

Active transportation trips were assumed to be an average of 20 minutes for errands and connections to transit. Recreational trips would be longer, but the average of 20 minutes was used to form a conservative foundation for the estimate. Table 1 includes the estimated new hours of activity.

Table 1: Estimated New Hours of Active Transportation Activity by Project

	Annual VMT Reduction	Daily Induced Cyclists	Daily Induced Peds	Avg. Trip Time	New Annual AT Hours
North - South Trail	71,000	482	241	20	5,277,900
East - West Trail	89,000	600	300	20	6,570,000
Olson Drive Trail	92,000	618	309	20	6,767,100
Interchange AT Connectivity	36,000	311	155.5	20	3,405,450

Reduction in Greenhouse Gases and Criteria Pollutants

The estimated reduction in VMT was input into the California Air Resource Board's software EMFAC to determine likely reduction in air pollution resulting from vehicular traffic. Table 2 shows the expected annual decrease in tons per year.

Table 2: Estimated Reduction in Air Pollution

	Tons per Year									
	CO_2	**CH_4**	**N_2O**	**ROG**	**TOG**	**CO**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**	**SO_X**
North - South Trail	10,322	0.39	0.50	1.4	2.1	37.3	10.5	1.6	0.7	0.1
East - West Trail	12,939	0.49	0.62	1.8	2.6	46.8	13.1	2.0	0.9	0.1
Olson Drive Trail	13,375	0.50	0.64	1.9	2.7	48.4	13.6	2.1	1.0	0.1
Interchange AT Connectivity	5,234	0.20	0.25	0.7	1.0	18.9	5.3	0.8	0.4	0.1

Reduction in Vehicular Crashes

Several projects are expected to improve traffic safety and reduce crashes. Crash reduction factors were acquired from the Local Roadway Safety Manual and the Crash Modification Factor Clearinghouse. Six years of crash data was analyzed to determine likely crash reductions. **Table 3** shows the anticipated crash reductions associated with project elements.

Table 3: Estimated Crash Reductions

Project	Crash Type	Before	CRF	After
Roundabout at Olson and Zinfandel	All	94	0.67	31
Roundabout at Zinfandel and US 50 WB	All	8	0.67	3
Adaptive signal timing on Folsom and Zinfandel	All	-	0.17	-
US 50 & Zinfandel	All	8	0.17	7
Zinfandel & Olson	All	94	0.17	78
Folsom & Zinfandel	All	52	0.17	43
Folsom & Olson	All	52	0.17	43
Consolidate driveways along Olson Island	All	28	$e^{0.0232(Y-X)}$ 0.333944103	19
Add 4-lane option for Olson	All	28	0.318	19
Class IV facility along Olson between Zinfandel and Folsom (connect with existing Class II on either end)	Veh/Bike	1	0.74	<1