

Appendix E

Outreach Documentation

Esplanade Corridor Safety and Accessibility Study

Stakeholder Interviews – June 2015

Global Issues

- Timing of the signals impacting drive speed and crossing patterns
- In the afternoon, the sun is problematic with sight distance
- ADA access crossing the streets.
- Bike Plan update – in progress.
- CANA – see neighborhood plan
- Need signage
- Need enforcement and red light cameras
- Timing traffic signals, anticipation, speeds, etc.
- Oleander/First
- First Avenue
- Roads are wide, roads are narrow...people, the road widths are not going to change substantially.
- ADA access is huge

Monday, June 15, 2015

Enloe Medical Center, Bill Sequine

Main hospital

Parking structure

Own and lease space

700,000 sf owned and lease, 30,000 of that leased, 20,000 people per day coming into 3 locations in the hospital. (So likely higher)

Conference Center – classes and training every day of the week. Use it for other purposes. Can be used for the public workshop.

Pedestrian crossing issues at 5th and 6th

Can 5th, 6th and NS street ...can they be closed

5th Street has a lower road base

Employee parking – 742 spaces in parking structure (200+ spaces on fourth floor are mostly empty, 150 surface spaces on 5th, 40 surface spaces on 6th, plus parking for conference center, plenty of bike storage secured. Some valet parking services for visitors.

1300 day shift employees at all locations, 2700 employees overall, 65 percent in the Esplanade area.

Some bikers, walkers, and transit users

They offer free bus passes

Patient parking, surface parking on 5th...plus parking structure (only physical designated parking)

Expansion plans – Moving ancillary services out and lower volume and higher need services back to the hospital. Don't expect to grow number of employees other than absorbing private groups. Looking to buy and acquire spaces. Want real estate to buffer from neighborhood.

Employees are coming in via 8th and Arcadian, coming in via 4th, some traffic on 7th, and lots of traffic on 5th.

No NB left-turn on 5th at Esplanade and Emergency Room at 5th.

Truck and deliveries – coming in on 4th and 5th. Loading dock on 5th, materials warehouse between 5th and 4th.

Good sidewalk access from 7th to the south.

Deal with these issues:

- Landscaping along the frontage roads...sight distance impacts near the hospital.
- Timing of the lights and the crosswalks.
- Public crossing at 5th due to bus stop and classes and convention center
- Need directional signage for the hospital from First, trees create solid wall, can see the hospital building. Need directional signage along the Esplanade where to turn. Way finding challenge. Leads to traffic passing the hospital.
- Mitigations which pushes traffic from the neighborhood onto the Esplanade.
- Would be welcome to meter managed parking.

School District, Julie Kissel

High School – closed campus for freshman

School bus drop off – on campus back on Lincoln, special Ed buses on Sac pull out.

Student Parking – 30% parking. One student designated lot, almost full...Students Park all over the neighborhood to sneak out.

Staff parking lots both Lincoln and Sac and in front of school

Parent drop off everywhere – illegally waiting on Lincoln in the afternoon. Getting across 1st Avenue (on both sides of Esplanade) is difficult because it is free flow on 1st Avenue. Red curb on south side.

High School and Middle School only start 5 min apart....maybe needs to be farther apart.

W Sac Corner hot spot – uncontrolled...movements from Esplanade to frontage road, previous discussions with City for a flashing light here...investigating signal instead? Bikes cross from east to west in the crosswalk.

Lincoln hot spot – Odd movements from Lincoln onto Esplanade, Lincoln one-way with no parking, but problematic with parents parking

Bicycling – bike secured storage on campus...lots of kids riding bikes.

Parking lot at the corner of Sac/Warner leases to CSU.

Middle School

Lot of bike riders...bike secured storage access off Oleander

Avenue traffic coming down Oleander to middle school

No bike safety education to Middle School...just elementary school.

Memorial/Valambrosa – traffic across memorial to Esplanade, across to Bidwell Mansion. High school kids across to the frontage road.

Drop off in front of Middle School is 3 lanes wide.

Adding some striping crosswalk at Oleander/Frances Willard.

Citrus elementary school (K-6)

Buses, lots of walking and biking. (Almost all walk and bike...most parents don't have transportation, but good parent participation)

No SRTS training.

Issues to Address:

- Safe crossings
- Safe bike paths that are clearly designated.
- Cars running red lights on Esplanade....maybe not purposeful, but a mistake because the signals are not visible because of the tree growth, or lost time with turning conflicts.
- Lack of mastarms
- Roundabout at Memorial would help alleviate cross traffic into the neighborhoods.
- Sac and Lincoln crossings should have a higher level of improvements than the rest of the crossings.

Aug 14th start of school...separate flyer.

State Parks – Matt Teague – District Engineer

Traffic circle in parking lot...originally conceptualized as rubber curb...but it is a temporary solution.

Parking lot is too small. 26 spaces, 3 or 4 buses show up, no parking for parents

Frontage road entering parking lot is a burden.

Some special events...would like to expand...but limited by parking

Science museum has no bus parking, bus parking was supposed to be part of Phase II...which is now dead.

Science museum did not build their own access

Museum has sold off half of their parking for CSU permit parking.

Events are limited to W, Th, F, Sat, Sun, no Mon, Tues., civic, weddings, lawn predominately,

Visitor center is being upgraded, museum,

Start of school – invites new parking demand for Campus.

Campus ped/bike access

Contra flow in traffic circle by peds/bikes

New crosswalk on south leg of memorial has helped.

Tree impacts? Parks can provide a landscape plan and/or historic tree inventory.

Goal is to expand their parking

Don't want to give up any property to the City

Sowilleno Avenue – owned by both State and CSU – State would prefer to close it. Source of traffic is drop offs to CSU...could use a cul de sac. Potential for conversion to ped/bike path only.

Science Museum

Renee Renner, Executive Director. She is located at the museum site very day.

On Chico's State's campus

No physical changes sought

15,000 visitors per year for the museum

Sat, Sun school trips...only open 12-5.

Field trips 4 days of 5 days per week. "Hand's on lap" drop off kids. But no coordination with State Parks.

Parking lot in front is controlled by CSU.

Challenges –

No bus parking on site

Large exhibits which require large trucks for delivery

Roundabout is a safety concern because it is used as a pick-up and drop off point, and as a crosswalk at any point with pedestrians walking without any awareness.

Stolen bike hub area...and other hidden areas of the corridor.

Junipers along frontage road should be removed.

Issues with pedestrian crossings

Parking difficulties with science lot...needing permit and to get on the list.

Signage for parking is convoluted.

Lack of green turning arrows, sun obstructions, frontage road confusion, and yellow light is too short.

Flashing walk time is not enough, crossing Esplanade.

BCAG – Jim Peplow, Ivan Garcia

25-28 mph timing on the corridor. Used to be signs indicating 28 mph. Loose it a First Street (tres)...twice a day. Morning high school and after 3-6

Routes 15 and 16

Goal is a ¼ miles apart.

How many riders – Route 15 is one of the two busiest, 20,000/month, 800 per day. Core route...if it gets down, domino effect.

2 years ago...added Route 16 fills in gap times on schedule route.

GPS on board

Going down frontage roads is a killer on timing. Too narrow...traffic blocked. In the Fall, the leaves gets clogged in the buses. Delay caused by Chico High School...10-15 min delay.

Long Term – would prefer not to have to use frontage roads...move onto main line.

Transit priority for signalization?...would compete well for funds.

Inventory of stops image

Bidwell mansion. Frontage road from HS is a big waste of time. How about moving the stop into the right turn lane approaching Memorial.

Impacts of bus stop with adjacent diagonal space.

CMAQ – emissions analysis. For PE

500K, 1.MK...dividable chunks.

GhG for ATP.

School district participation..

Chico Velo

Janine Rood

Newsletter around the 15th of the month.

Next meeting is July 12th Sunday.

North of 11th is not ride able from families, bike path is fine, but veers off to far.

Most folks riding bikes on the corridor are going north of 11th.

She likes the frontage roads.

501C nonprofit. Bicycle advocacy. Not a bike club.

Mission is to get more people riding bikes...conversations are more about commuting.

Equal amounts of riders on Oleander as Esplanade.

Frontage roads are two-way north of 8th??

1. Kids
2. Transients
3. Commuters
4. Recreational

Frontage roads are shaded not the center of the boulevard...better for riding

Vehicle traffic on the frontage roads needed.

No signage!

Oleander/First Street crossing is needed.

Oleander needs to be part of this study.

Sidewalk from couplet project needs to be marked for bike travel.

Crossing 5th has been better since the traffic calming

1st/Oleander bicyclist's death

Separate bike turn lanes needed:

1st/Oleander and 1st/esplanade

5th then 9th, then 7th, then 3rd in terms of busy traffic

Sharrows down on frontage roads.

Tuesday, June 16, 2016

CANA – Chico Area Neighborhood Association

Chico Street to Lindo channel, mangrove to train tracks

Memorial – East 1st avenue, east of Esplanade down to Chico Creek

Expect it to be dangerous...but because of that it is safe.

Frontage roads are acting as bike routes, Oleander and Arcadian are not functioning. So just acknowledge that the frontage roads are the bike routes.

Keep Clear in the road is working fine.

Enforcement issues...wrong way riders, not stopping, not looking.

Beginning of school year is the worst time because of new drivers...check data.

As a cyclists crossing E-W impacted by N-S traffic anticipating the lights.

Memorial/Esplanade – Science museum

CANA issues:

11th Ave/Esplanade

– Problems with Holly Avenue bridge connection

3 blocks west of the Esplanade are City with narrower roads...west of that is County with wider roads.

Hospital pedestrians crossing....can't use bulbing on the Esplanade

Speed on East First Avenue –

Oleander – no crosswalks of Oleander between Memorial and E First

High school crossings need to be addressed.

Since the Avenues Plan...there have been deaths and injury accidents on bikes.

Bicycles – Previous recommendations suggested that frontage roads run opposite of adjacent travel lanes. Easy to accomplish between 1st and memorial because of the meters and permit parking.

Problems – Old State Route designation, needs to be changed. No State involvement on the Esplanade now.

Roundabouts – would benefit the Esplanade. Speeding an issue. 8th would be a candidate.

First/Oleander is a problem because traffic is focusing on the Esplanade signal.

East side of the Esplanade near Sacramento...some of the oldest sidewalks in town.

Collision numbers are way lower than the incidents

Oleander/First is a big issue

Avenues Plan' traffic engineer said that roundabouts are applicable on the roundabout

Concerned about planning aspects of County owned land on Oleander. (How did traffic model treat this parcel)?

Oleander is in poor condition...needs to be more accommodating for bikes.

Previous planning sessions – there has been zero implementation.

Oleander/First Avenue is a problem

Anything to slow traffic down on E First would be welcomed.

Traffic is not watching where they are going. Watching lights ahead.

Police need to enforce Oleander corridor....needs a radar survey

Camera lights at traffic signals.

Can't improve the traffic until we get the police on our sides.

Speed bumps...is it possible.

Bike rider

Oleander needs bike lanes...needs to be repaved.

Fix potholes

First Avenue roundabouts are a good idea.

First Avenue is a terror.

Parked vehicles on First Avenue obstruct sight distance

Chico Chamber of Commerce – Katie Simmons

Business Walks once per month....use for this study.

Either July 24th or July 31st (Fridays)...2 hours.

Iconic

Avenue of trees

Lots of history

Represents what Chico used to be ...connection to the past.

Bike traffic on frontage roads

Chico High School

Need to talk to Downtown business association

Melding of university traffic with student traffic, peds, bikes...triangle section....

Connection of Esplanade to downtown is critical...has more potential as a gateway.

Center for Nutrition (Patty Horsley), CSU...is seeking an SRTS grant...High School

Feed Store – need to turn left over the center bumps...either stop it or allow it.

Dutch Bros Coffee...traffic feeding onto the frontage, impacted with drive through traffic.

Starbucks goes east....backing up onto frontage.

North end the forgotten stepchild

NB right to Cohasset backs up over the bridge

Need to define the characteristics of the north end.

Chico Nut comes to life at Christmas

Gateway opportunities on both ends

Chico Heritage Association

Why not the north point of the Esplanade?

Why fix it.

Don't mess with the timed lights...save a lot of gas?

If you are a bike commuter...pain to stop on the side streets....would like to see yield for bicycles.

History behind the Esplanade:

Marysville-Shasta Road...became SR 99...lines of trees separated horses from wagons from pedestrians

Subdivided in 1880s

Call Tom DiGiovanni – great resource

11th Avenue is starting to become a cut-through

Lindo Channel – Sandy Gulch

Signs used to say 28 mph. (Find the signs)

Esplanade handles twice as much traffic as Mangrove??

Been a number of changes over the year

Bring back the trolley

MONCA

Vet's building 1927

MONCA Art Museum - Leasing through the County.

Concerns about parking from the neighborhood

When the high school is not in session..MONCA can use their parking

Will have 11 designated on-street parking spaces

Vacate for 10 years

Starting in 2016 – Art Museum, first 4 ksf...entrance off Esplanade, phase II, auditorium, will be exhibition spaces...rental for events.

Whole building 17,500 sf.

Hope to have some interaction with students as interns.

Concerned about crossings to the high school lot

Putting up bike racks to encourage biking

Working with B Line for incentives to ride the bus

Bus stop in front of MONCA

How about use of the County courthouse site on Oleander

Which is closer...high school parking or Oleander courthouse parking?

Friday, July 24, 2015

Lori Hoffman, CSU Chico

No official access via the Esplanade....minor entrance

All science museum parking is CSU permit parking (parking fund built the parking)

CSU owns the 2 acres that the science museum sits on.

Trees fronting the site are state owned.

- 17,000 students (60% live in 2 mile radius...less than 5 % to the north)
- 1,000 staff
- 1,000 faculty

Warner/West Sac lot – CUSD leaving the lot to CSU.

OK with closing So Le Mi street.

A bigger priority for CSU is the NORD/Sacramento area.

John Growden, Northern Star Mills

Bike interaction on the pavement in the area of truck deliveries and parking is an issue. The property line is somewhere between the dock and the edge of sidewalk.



ESPLANADE CORRIDOR STUDY

Community Workshop #1 – Existing Conditions and Public Input September 9, 2015 City of Chicago

- 6:30-6:45 Open House
- 6:45-7:45 Presentation by Project Team
- 7:45-8:00 Input Exercise
- 8:00-8:15 Presentation Wrap-up
- 8:15-8:30 Q&A




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- > City Staff
 - Brendan Ottoboni
 - Wyatt West
- > W-Trans
 - Steve Weinberger
 - Lauren Davini
- > Gallaway Enterprises
 - Tracy Bettencourt

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INTRODUCTION AND STUDY OBJECTIVES



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PURPOSE OF THE MEETING

- > Workshop #1 – Existing Conditions/Public Input
 - To introduce the project
 - Share consultant's initial views and findings
 - Public to provide input on key issues
 - Identify study area opportunities and issues
 - Discuss community priorities/preferences
- > Workshop #2 – November 19, 2015
 - Present corridor alternatives
- > Workshop #3 – February 2016
 - Present and refine the preferred plan

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STUDY OBJECTIVES

- To provide safe connectivity for all users between the downtown and destinations along the corridor.
- ADA Access Enhancements
- Maintain acceptable vehicle traffic operations
- Improve transportation safety around High School
- Engage the community in envisioning the future and providing input on preferences/priorities
- Present a preferred street design for the corridor
- Assist City in packaging the preferred plan into a future grant application (Active Transportation Planning grant program or Highway Safety Improvement Program)

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COMPLETE STREETS

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation



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PROJECT TIMELINE

- Kickoff Meeting – May 2015
- Data Collection – May
- Discussions with Stakeholders – June
- Existing Conditions Analysis – June–Aug
- **Workshop #1 – September 9**
- Development of Alternatives – October
- Workshop #2 – November 19, 2015
- Development of Preferred Plan – November
- Workshop #3 – February 2016
- Presentation of Preferred Plan – March/April

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- Chico Chamber of Commerce Business Walk
– Katie Simmons



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- Meeting with corridor stakeholders
- Important destinations and land uses in the corridor

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PUBLIC INPUT

- Workshop #1 – September 9
- Workshop #2 – November 19, 2015
- Workshop #3 – February 2016
- Council Public Hearing (end of process)
- Project website
http://www.chico.ca.us/capital_project_services/EsplanadeCorridorImprovementStudy.asp
- Online Survey (TBD)
- Comment Cards (at each workshop)
- Please add your contact info to the Sign-up Sheets
- Email sweinberger@w-trans.com

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ESPLANADE CORRIDOR TIMELINE



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THE AVENUES NEIGHBORHOOD IMPROVEMENT PLAN, 2008



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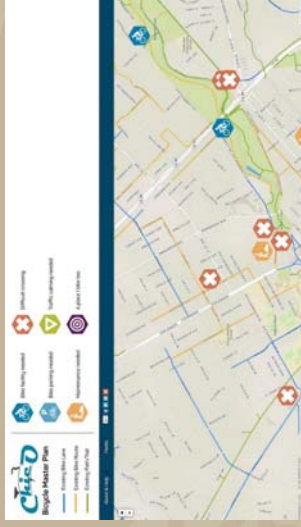


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CHICO BIKE MASTER PLAN



- Goal: Develop a safe and comfortable network of bikeways that will appeal to people of all ages and abilities, build a stronger community, and demonstrate that bicycling means business.
- Currently examining existing bicycling conditions in the City and will be developing recommendations for infrastructure, education, and encouragement programs over the coming months.



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CHICO BIKE MASTER PLAN



- Esplanade Ave is a **major north-south connector** for people that bicycle in Chico
- It **does not currently cater to people of all ages and abilities** to comfortably ride on the frontage roads adjacent to the main roadway, though many bicyclists ride on them
- The qualitative bicycle level of traffic stress (BLTS) analysis shows Esplanade to be one of the **least comfortable bike routes in the city**
- A **high number of intersection conflict points** exist, creating dangerous conditions for people bicycling and unpredictable riding behavior that can lead to collisions with motor vehicles—collision data demonstrates repeated occurrence of crashes involving bicyclists on this corridor
- Innovative strategies to improve conditions for people that bicycle on Esplanade will be explored as part of the Chico BMP Update, including **bicycle-only signals, intersection pavement markings**, and other treatments that can **separate motorists and bicyclists in space and/or time**.

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Caltrans Strategic Management Plan



Goal #3: Sustainability, Livability and Economy

Target – By 2020, increase trips by non-auto modes:

- Triple bicycle
- Double pedestrian
- Double transit

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FINDINGS AND OBSERVATIONS



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EXISTING DATA

- Traffic volume counts
- Pedestrian and bicycle counts
- Collision history
- Corridor travel time
- Intersection level of service (vehicle delay)
- Queuing
- Pedestrian facilities and crosswalk locations
- Available bicycle facilities
- Transit usage
- On-street parking

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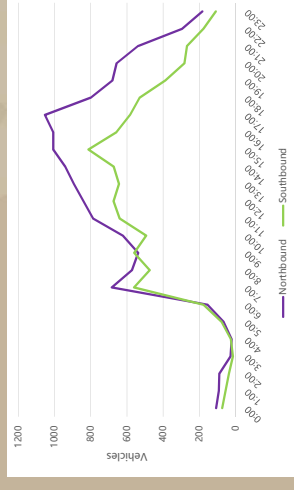
Vehicles per Day



ESPLANADE CORRIDOR IMPROVEMENT STUDY

• Current Conditions

- Hourly Traffic Trends between Memorial Way and Francis Willard Avenue

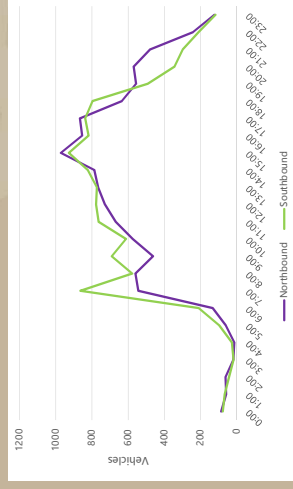


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

• Current Conditions

- Hourly Traffic Trends between Sacramento Avenue and 1st Avenue

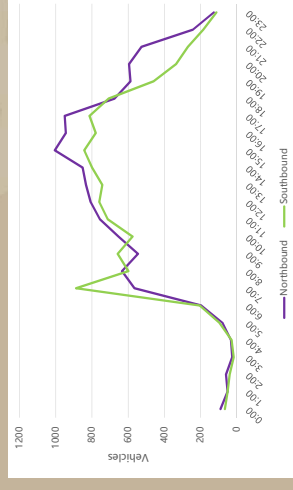


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

• Current Conditions

- Hourly Traffic Trends between 2nd Avenue and 3rd Avenue

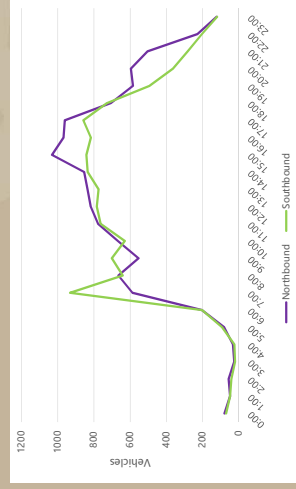


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

- **Current Conditions**

- Hourly Traffic Trends between 4th Avenue and 5th Avenue

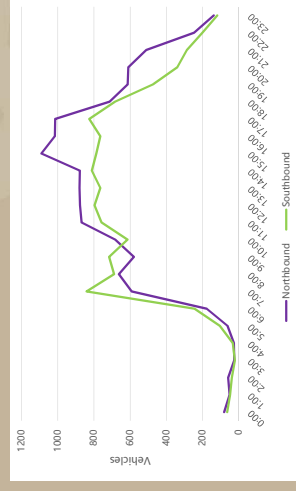


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

- **Current Conditions**

- Hourly Traffic Trends between 6th Avenue and 7th Avenue

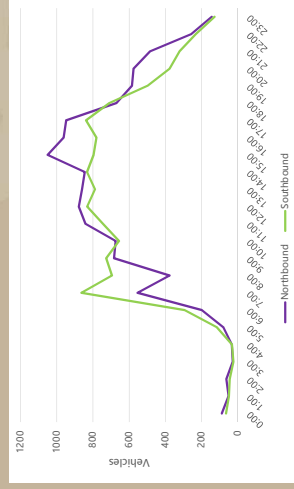


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

- **Current Conditions**

- Hourly Traffic Trends between 8th Avenue and 9th Avenue

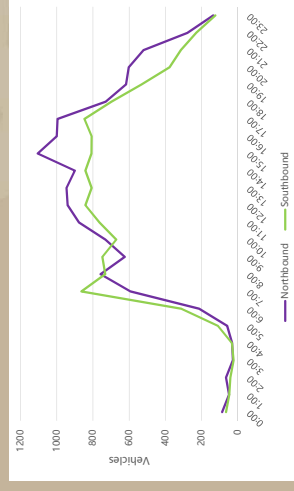


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ESPLANADE CORRIDOR IMPROVEMENT STUDY

- **Current Conditions**

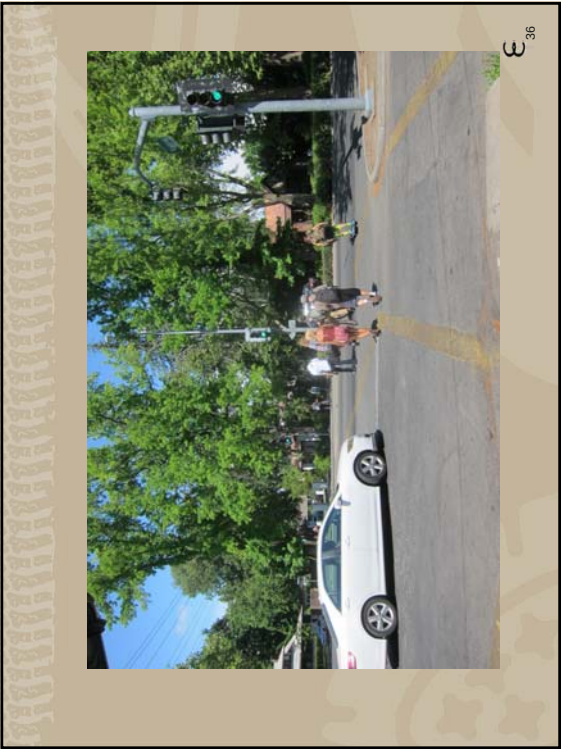
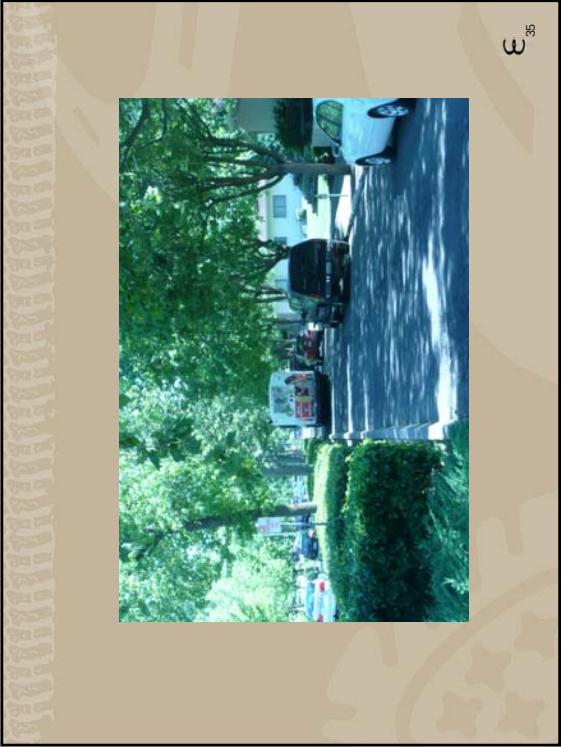
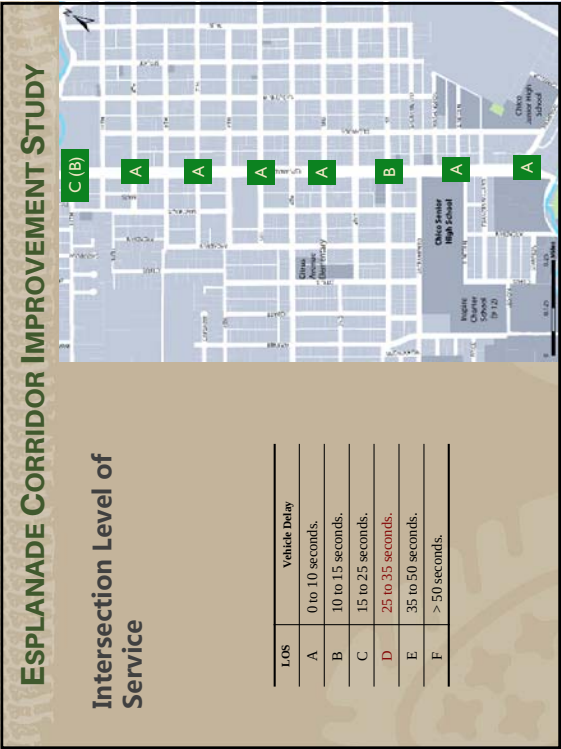
- Hourly Traffic Trends between 10th Avenue and 11th Avenue

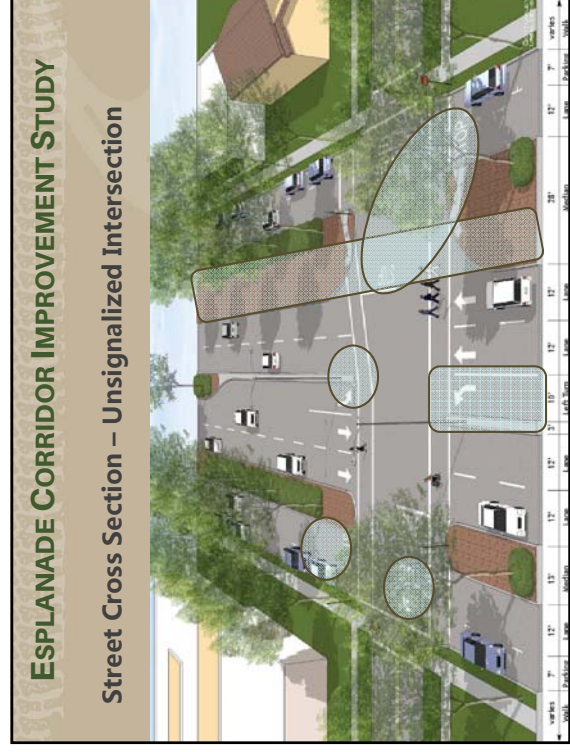


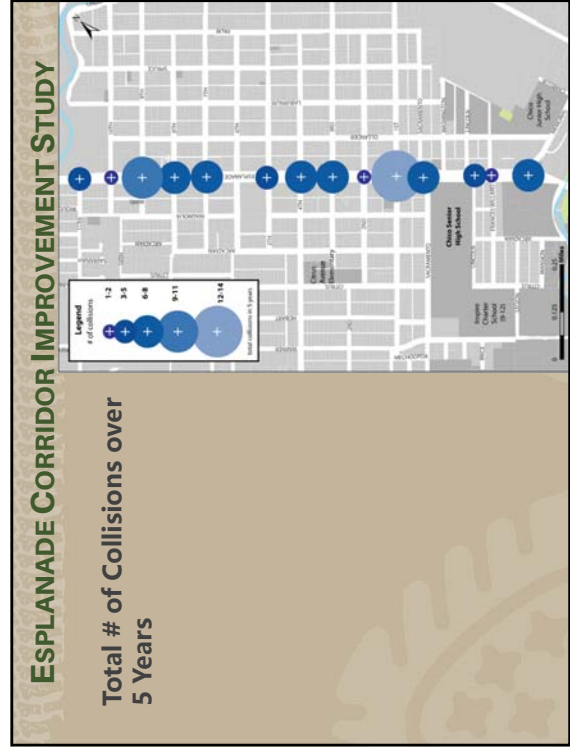
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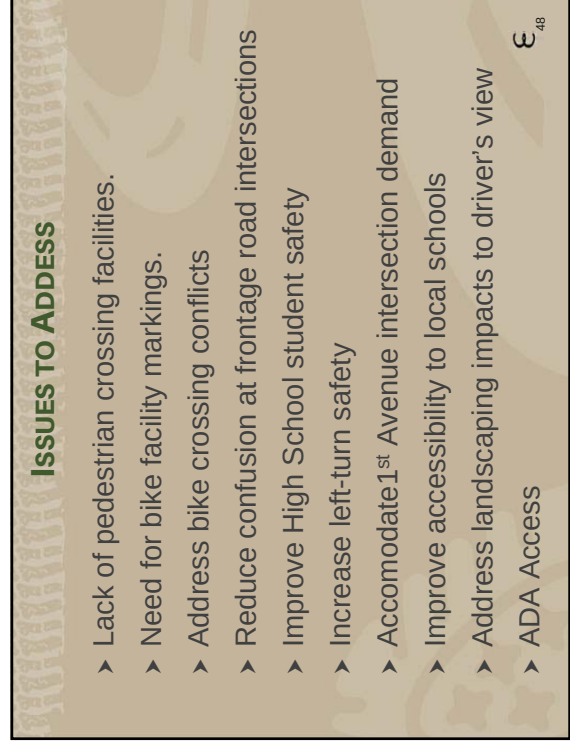
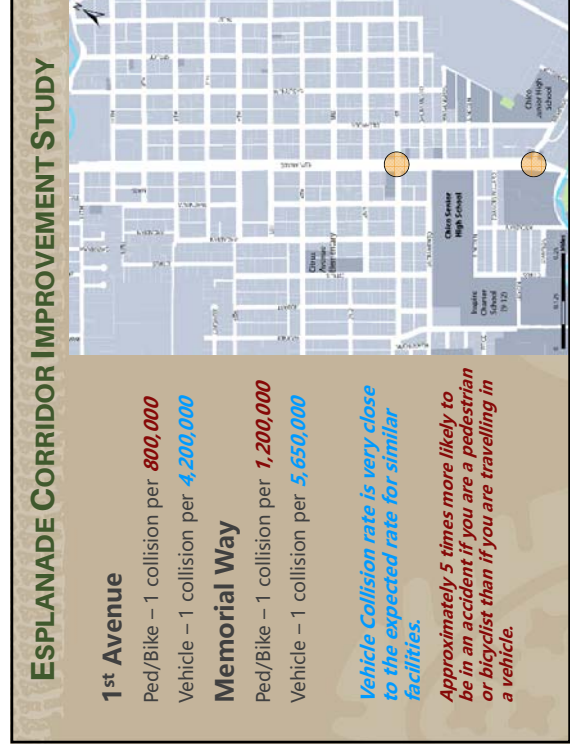
Existing Vehicle Travel Time				
Direction of Travel	PM Peak Period		Off-Peak	
	Average Travel Time	Average Speed	Average Travel Time	Average Speed
NB Esplanade	2:51	25.1	2:40	26.8
SB Esplanade	2:55	24.5	2:32	28.3

Travel Time is measured in minutes: seconds
Speed is measured in miles per hour (mph)









INPUT EXERCISE

- Don't Touch (like the way it is)
- Acceptable (not perfect, but it works)
- Fix-it (critical issue that needs to improve)



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Corridor Opportunities



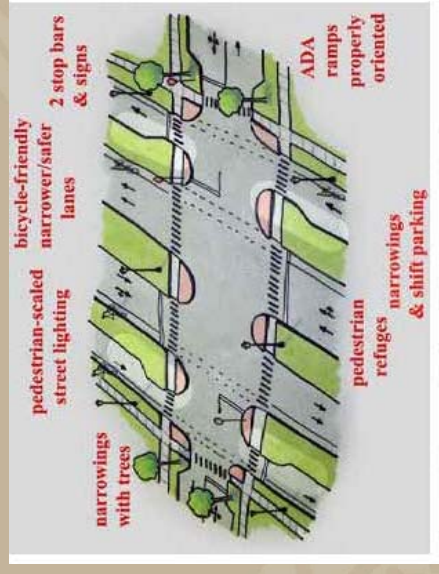
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POTENTIAL IMPROVEMENT CONSIDERATIONS

- Intersection Improvements
- Roadway geometry (stay within the exiting Right-of-Way)
- Signal modifications and upgrades
- Traffic Signal timing
- Turn Lanes
- Bike Facilities
- Pedestrian crossing improvements
- Roundabouts ?
- Other traffic controls
- Striping and pavement markings
- Wayfinding signage
- Sidewalk improvements
- On-Street Parking
- School pick-up/drop-off
- Safe Routes to School
- Lighting
- Locations for Public Art ?
- Landscaping changes
- Urban Design
- Street Furniture

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QUESTIONS TO THE PUBLIC

WOULD YOU BE INTERESTED IN SEEING
ALTERNATIVES BROUGHT FORWARD IN THE
PROCESS THAT INCLUDE:



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ADA curb ramp improvements?

- A. Yes
- B. No



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The use of standard pedestrian crossing signal equipment at the existing signalized intersections?

- A. Yes
- B. No



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Clearly marked bicycle facilities and crossings?

- A. Yes
- B. No



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More refuge medians for pedestrians crossing the Esplanade?

- A. Yes
- B. No



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Countdown pedestrian crossing signals?

- A. Yes
- B. No



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Bike lanes within the primary travelway of the Esplanade?

- A. Yes
- B. No



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Marked bike facilities within the frontage roads?

- A. Yes
- B. No

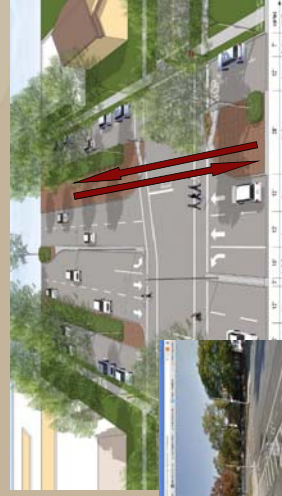


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Use of the rail right-of-way as a two-way bike facility?

- A. Yes
- B. No



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Use of the rail right-of-way for B-Line bus stops?

- A. Yes
- B. No



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Reorientation of the on-street parking to the inside of the frontage roads?



- A. Yes
- B. No

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Allow left-turn lanes on the Esplanade at existing signalized intersections such as First Avenue and Memorial Way?



- A. Yes
- B. No

Ε₇₀

ESPLANADE CORRIDOR IMPROVEMENT STUDY

More vehicle capacity in the east-west direction at 1st Avenue?



- A. Yes
- B. No

Ε₇₁

ESPLANADE CORRIDOR IMPROVEMENT STUDY

Conversion of the frontage roads north of 9th Avenue to one-way operations?



- A. Yes
- B. No

Ε₇₂

ESPLANADE CORRIDOR IMPROVEMENT STUDY

Use of roundabout intersections at 1st Avenue and Memorial Way as long as the modifications....

- 1) improve safety
- 2) help with high school traffic conditions
- 3) improves vehicle delay
- 4) helps to maintain signal progression on the corridor



A. Yes
B. No



Ε₇₄

Any other ideas ?



NEXT STEPS

- Existing Conditions Analysis – will be posted on website
- Development of Alternatives and Analysis – October
- Public Survey to be posted on website
- Workshop #2 – November 19, 2015

Ε₇₅



SPLANADE CORRIDOR STUDY

Community Workshop #1 –
Existing Conditions and Public Input
September 9, 2015
City of Chico





ESPLANADE CORRIDOR STUDY

Community Workshop #2 – Survey Results and Alternatives November 19, 2015 City of Chico

- 6:30-6:50 Open House
- 6:50-7:50 Presentation by Project Team
- 7:50-8:00 Input Exercise
- 8:00-8:30 Q&A




ESPLANADE CORRIDOR IMPROVEMENT STUDY




- City Staff
 - Brendan Ottoboni
 - Wyatt West
 - Tracy Bettencourt
- W-Trans
 - Steve Weinberger
 - Lauren Davini



WORKSHOP AGENDA

- Study Objectives
- Workshop #1 Review
- Justification for Change
- Online Survey #1 Results
- Traffic Signal Timing and Equipment Education
- **Alternatives**
- Input on Preferred Plan
- Next Steps
- Combine Elements into a Preferred Plan
- Community Input
- Online Survey #2
- Q&A



STUDY OBJECTIVES




STUDY OBJECTIVES

- To provide safe connectivity for all users between the downtown and destinations along the corridor.
- ADA Access Enhancements
- Maintain acceptable vehicle traffic operations
- Improve transportation safety around High School
- Engage the community in envisioning the future and providing input on preferences/priorities
- Present a preferred street design for the corridor
- Assist City in packaging the preferred plan into a future grant application (Active Transportation Planning grant program or Highway Safety Improvement Program)

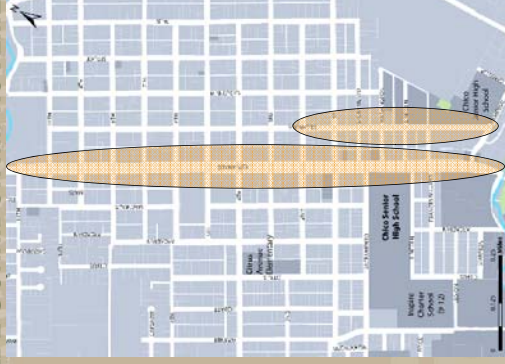
Ε₅

PURPOSE OF THE MEETING

- **Workshop #1 – Existing Conditions/Public Input**
- **Workshop #2 – November 19, 2015**
 - Present corridor alternatives
 - Public Input on alternatives
 - Combining alternatives
- **Workshop #3 – February 2016**
 - Present the preferred plan

Ε₆

ESPLANADE CORRIDOR IMPROVEMENT STUDY



Ε₇

COMPLETE STREETS

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation



PROJECT TIMELINE

- Kickoff Meeting – May 2015
- Data Collection – May
- Discussions with Stakeholders – June
- Existing Conditions Analysis – June-Aug
- Workshop #1 – September 9
- Development of Alternatives - October
- **Workshop #2 – November 19, 2015**
- Development of Preferred Plan – November to January
- Workshop #3 – February 2016
- Presentation of Preferred Plan – March/April

9

WORKSHOP #1 REVIEW

3

ESPLANADE CORRIDOR TIMELINE

11

THE AVENUES NEIGHBORHOOD IMPROVEMENT PLAN, 2008

Created by
The City of Chicago and the
Avenues Community

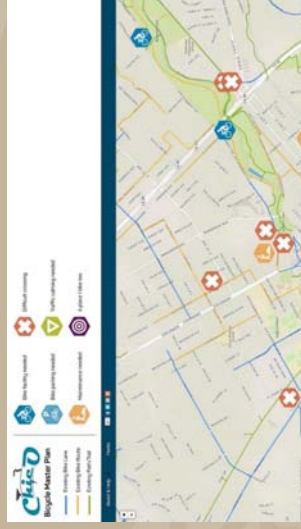
Adapted April 15, 2008 by City Council Resolution # 20-08

12

CHICO BIKE MASTER PLAN



- Goal: Develop a safe and comfortable network of bikeways that will appeal to people of all ages and abilities, build a stronger community, and demonstrate that bicycling means business.
- Currently examining existing bicycling conditions in the City and will be developing recommendations for infrastructure, education, and encouragement programs over the coming months.



Ε₁₃

Caltrans Strategic Management Plan



- Goal #3: Sustainability, Livability and Economy
- Target – By 2020, increase trips by non-auto modes:
 - Triple bicycle
 - Double pedestrian
 - Double transit

Ε₁₄

ESPLANADE CORRIDOR IMPROVEMENT STUDY



Ε₁₅

ESPLANADE CORRIDOR IMPROVEMENT STUDY



Ε₁₆

ESPLANADE CORRIDOR IMPROVEMENT STUDY

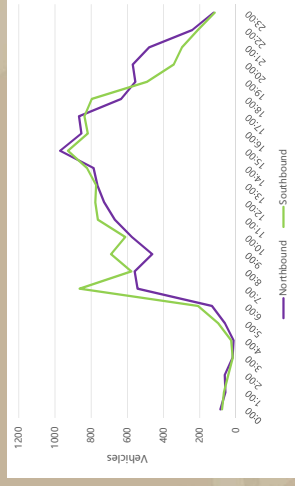
Vehicles per Day



ESPLANADE CORRIDOR IMPROVEMENT STUDY

Current Conditions

- Hourly Traffic Trends between Sacramento Avenue and 1st Avenue



18

ESPLANADE CORRIDOR IMPROVEMENT STUDY

Intersection Level of Service

LOS	Vehicle Delay
A	0 to 10 seconds.
B	10 to 15 seconds.
C	15 to 25 seconds.
D	25 to 35 seconds.
E	35 to 50 seconds.
F	> 50 seconds.

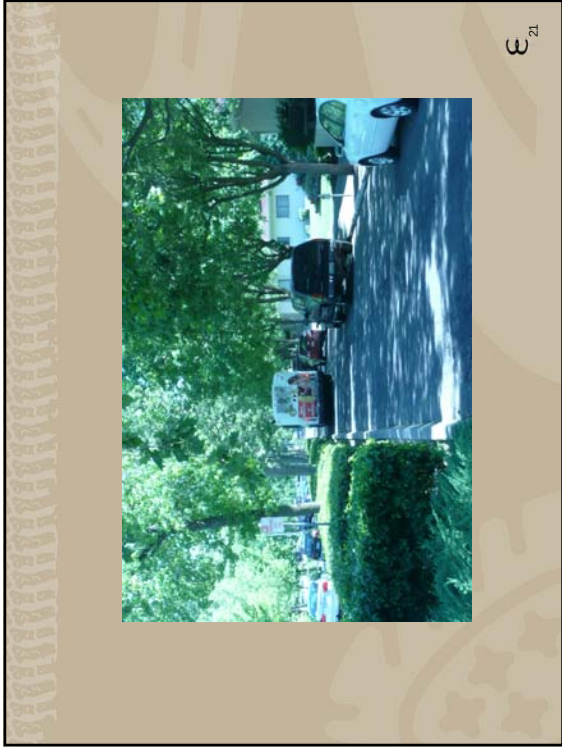


Existing Vehicle Travel Time

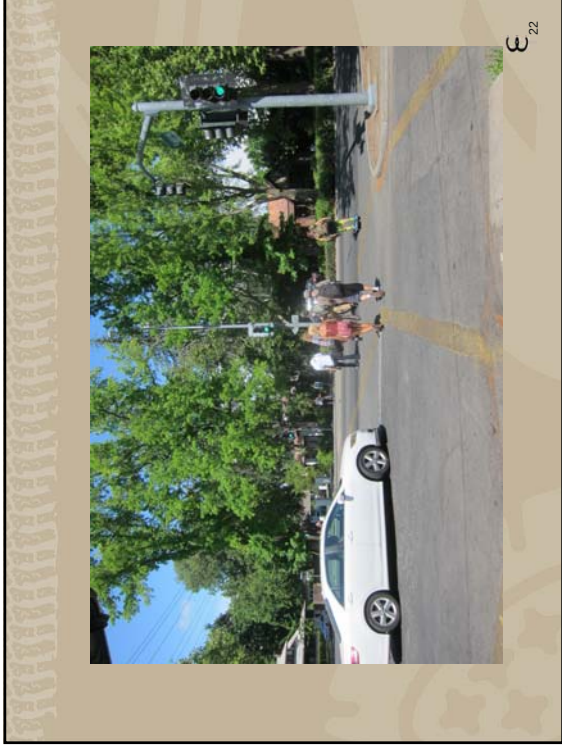
Direction of Travel	PM Peak Period		Off-Peak	
	Average Travel Time	Average Speed	Average Travel Time	Average Speed
NB Esplanade	2:51	25.1	2:40	26.8
SB Esplanade	2:55	24.5	2:32	28.3

Travel Time is measured in minutes: seconds
Speed is measured in miles per hour (mph)

19

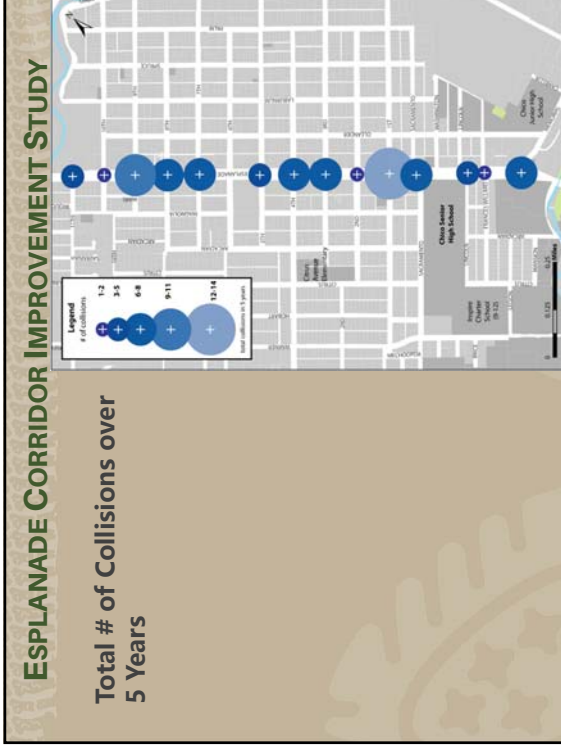


Ε₂₁



Ε₂₂





ISSUES TO ADDRESS

- Lack of pedestrian crossing facilities.
- Need for bike facility markings.
- Address bike crossing conflicts
- Reduce confusion at frontage road intersections
- Improve High School student safety
- Increase left-turn safety
- Accomodate 1st Avenue intersection demand
- Improve accessibility to local schools
- Address landscaping impacts to driver's view
- ADA Access

Ε₂₉

Ranking the Issues on the Esplanade

Problems	
1 st Avenue Intersection	16
Pedestrian Facilities Near High School	16
Overhead 1 st Avenue Intersection	14
Traveling by Bicycle on Frontage Road	13
Frontage Road Intersections	9
Memorial Way Intersection	8
Bike Route on Overlander	6
Bike Crossing Facilities	4
Connection to Airport like Path	4
Crosswalks on Esplanade	4
Don't Touch	
Tree Coverage	29
North-South Signal Progression (28 mph)	19
Left Turn Restrictions on Esplanade	11
Frontage Roads	11
Center Median	8
Connection to Airport like Path	5
Sidewalks	5
Acceptable	
Traveling by Bicycle on Frontage Road	8
Bike Route on Overlander	7
Transit Service	7
North Tree Landscaping	6
Signal Timing	6
Pedestrian Facilities Near Downtown	4
North-South Signal Progression (28 mph)	4
Center Median	4

Ε₃₀

Justification for Change



WHAT NEEDS TO BE IMPROVED AND WHY

- Standard Pedestrian Safety Features
- Pedestrian/Bicycle Accident Rate
- Reduction in Frontage Road Conflicts/Confusion
- Safe School Access
- Serve & Encourage Active Transportation

Ε₃₂

WHAT NEEDS TO BE IMPROVED AND WHY

- Standard Pedestrian Safety Features
- Pedestrian/Bicycle Accident Rate
- Reduction in Frontage Road Conflicts/Confusion
- Safe School Access
- Serve & Encourage Active Transportation
 - State of California Objective
 - Good Community Planning
 - It exists
 - College Community, flat terrain
 - More bikes = Less Cars

£₃₃

WHAT NEEDS TO BE IMPROVED AND WHY

- Standard Pedestrian Safety Features
- Pedestrian/Bicycle Accident Rate
- Reduction in Frontage Road Conflicts/Confusion
- School Safe Access
- Serve & Encourage Active Transportation
 - State of California Objective
 - Good Community Planning
 - It exists
 - College Community, flat terrain
 - More bikes = Less Cars
- Ensuring a high level of service for vehicle traffic

£₃₄

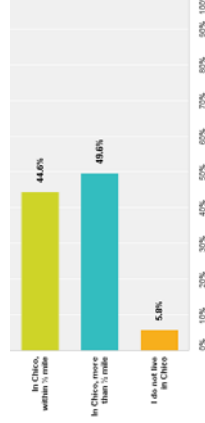
Survey #1 Results



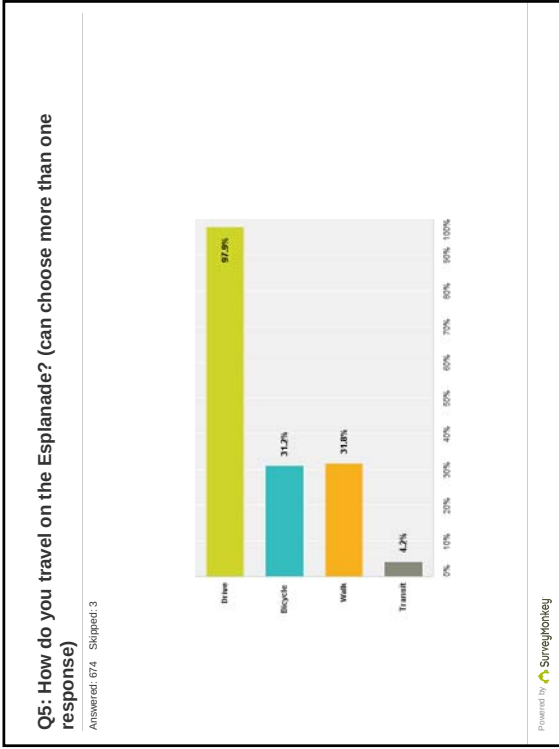
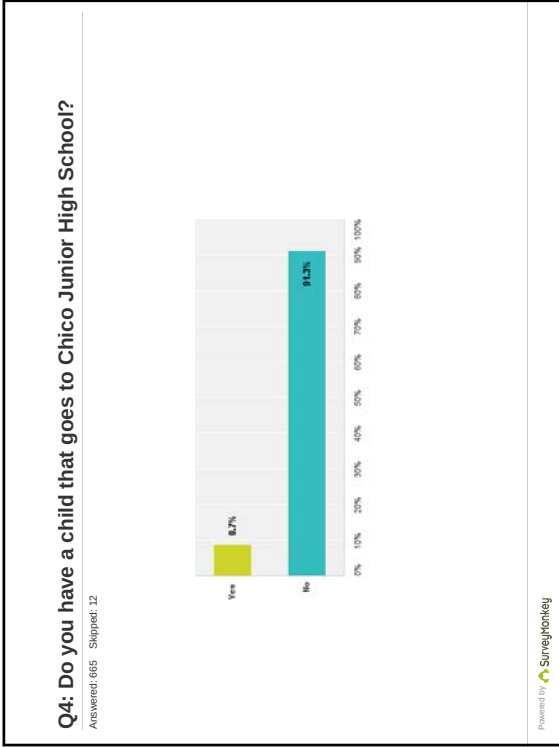
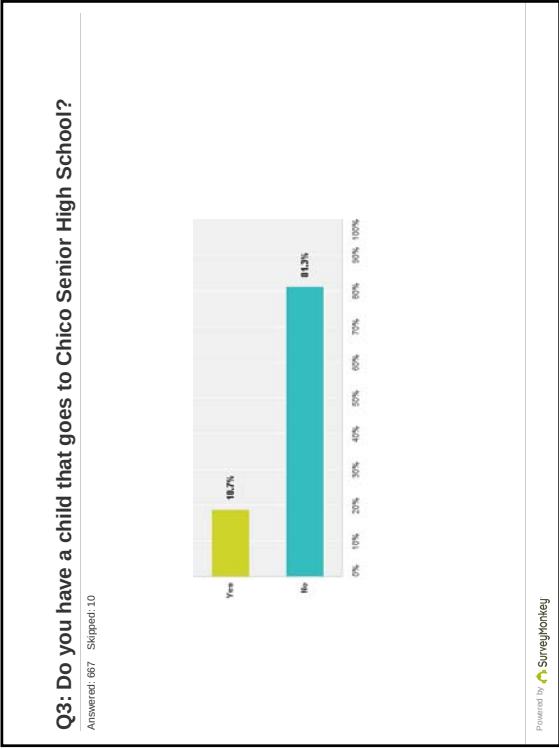
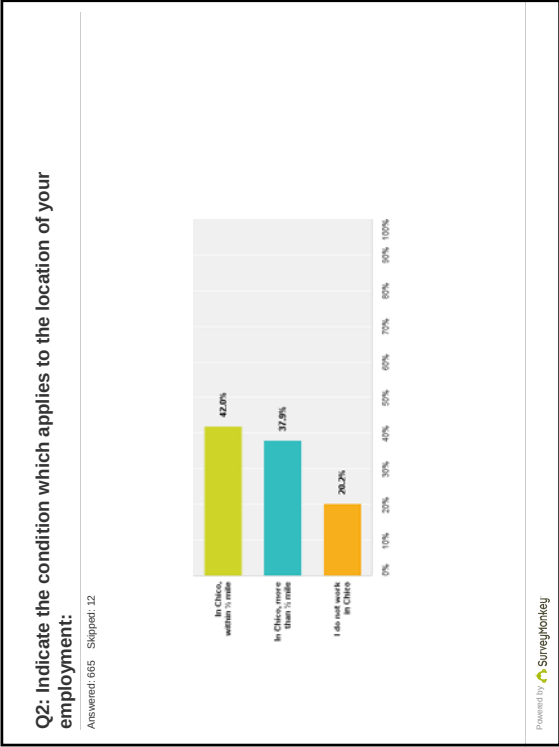
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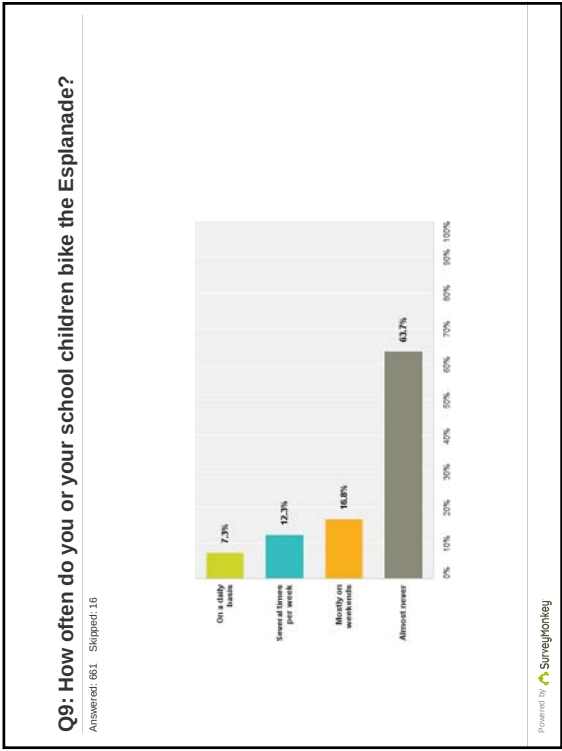
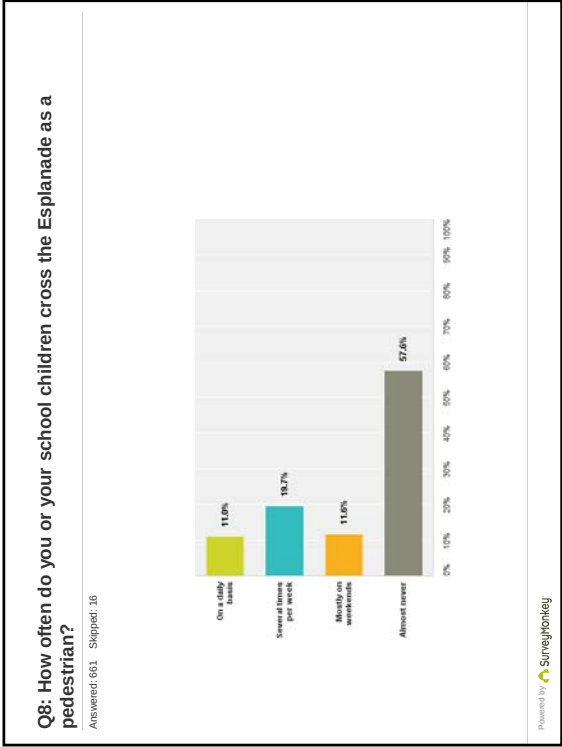
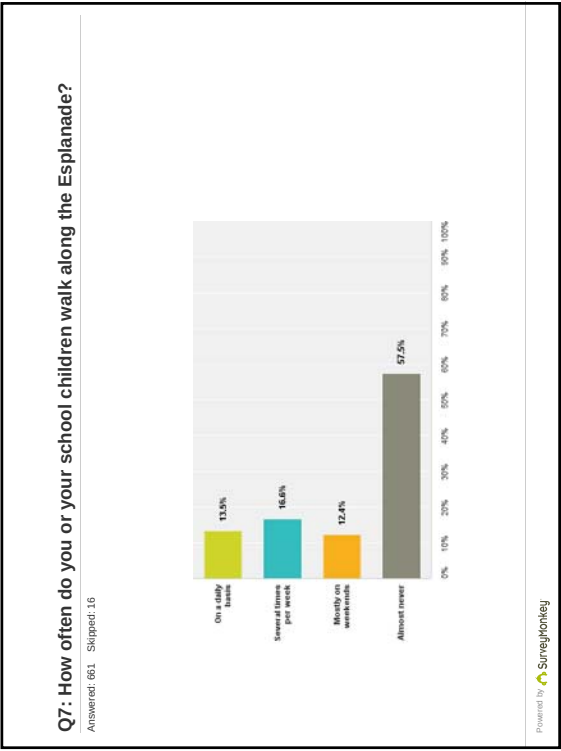
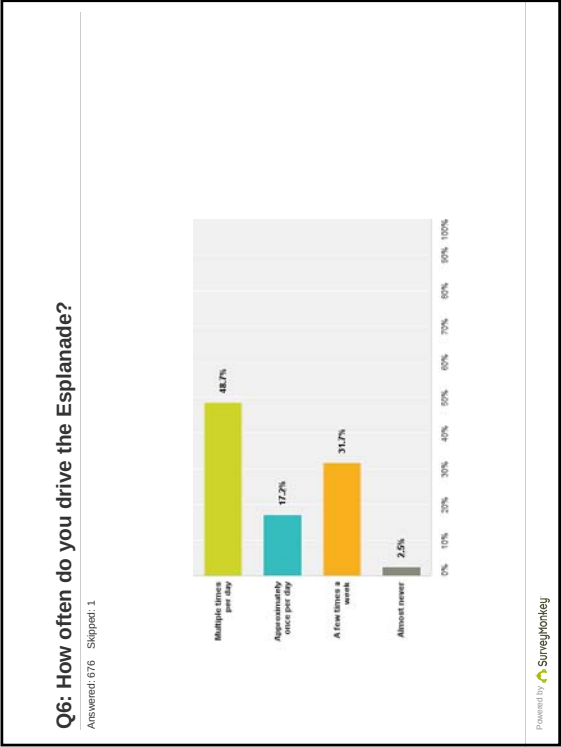
Q1: Indicate the condition which applies to the location of your residence:

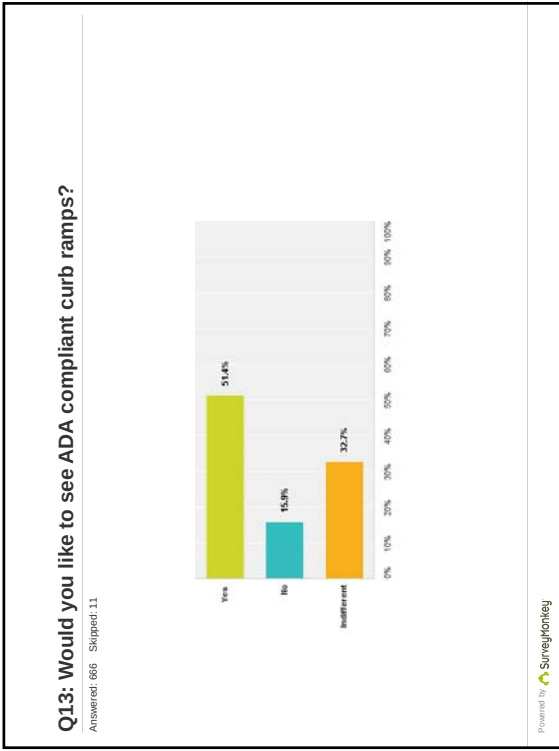
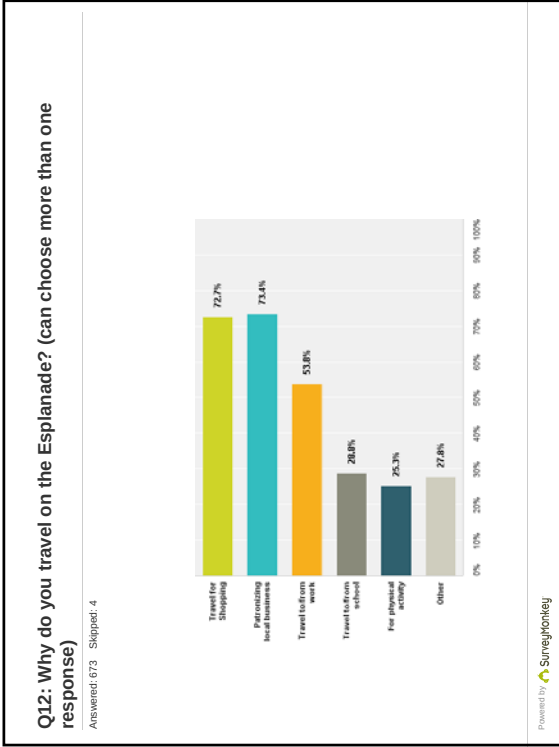
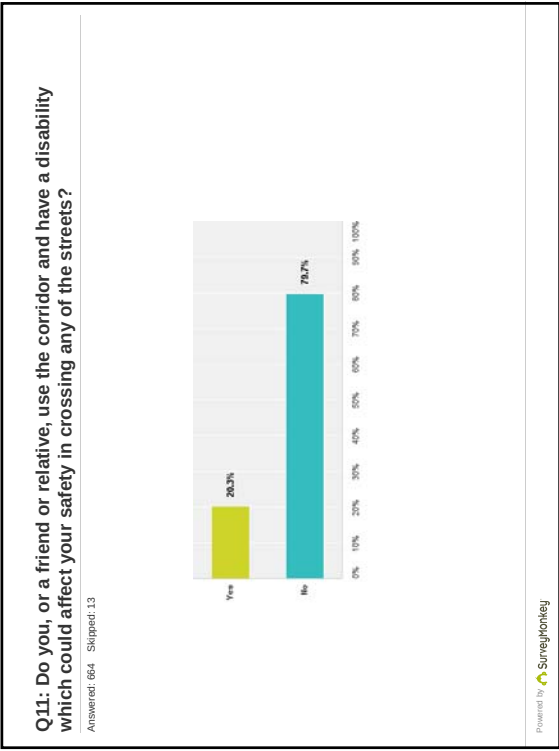
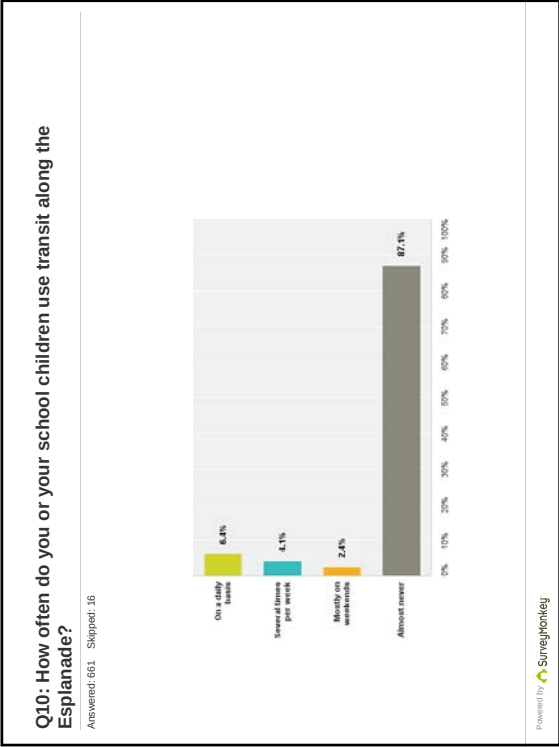
Answered: 671 Skipped: 6

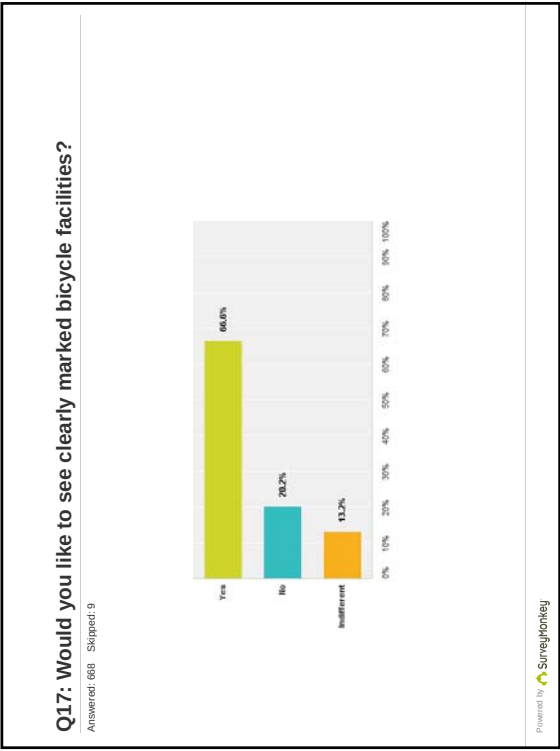
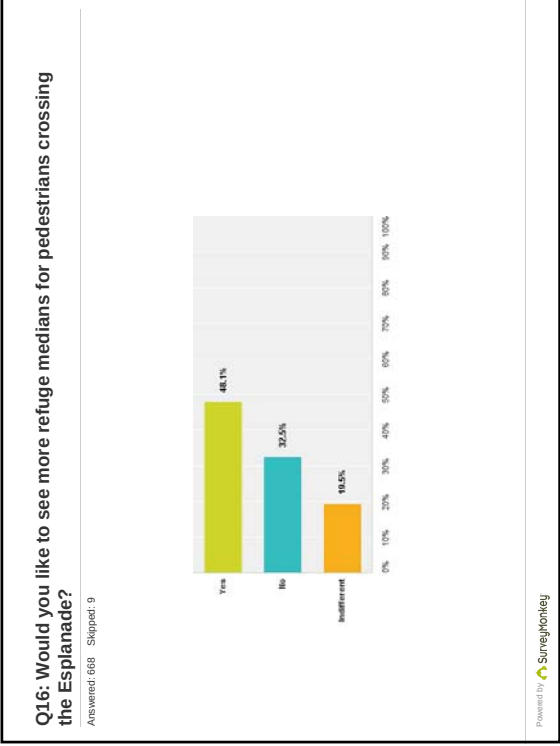
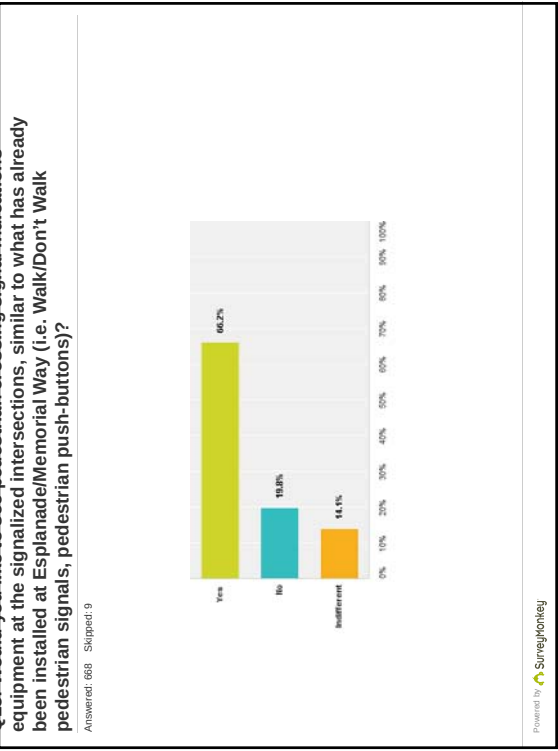
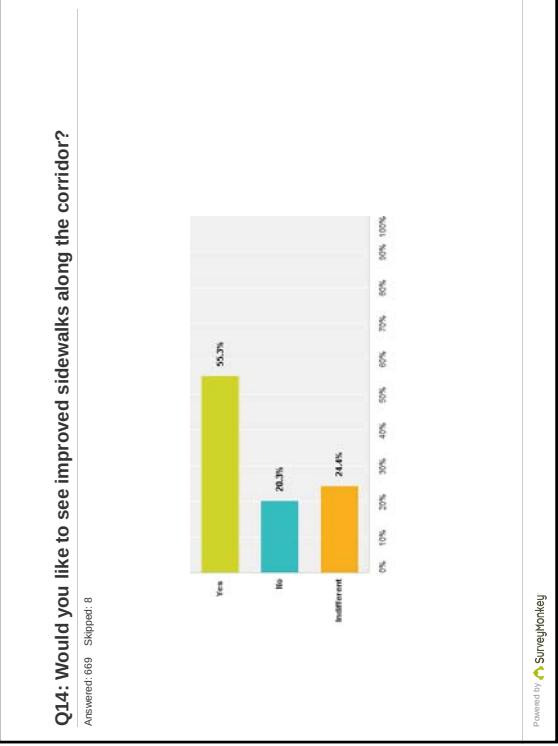


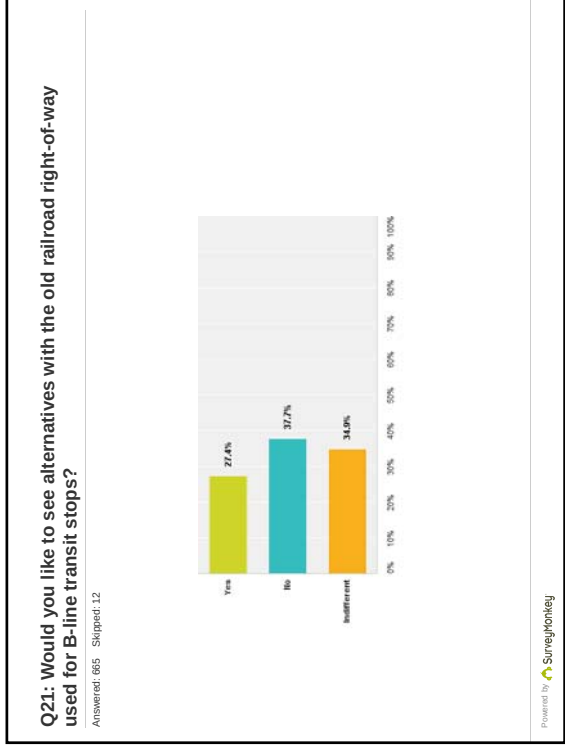
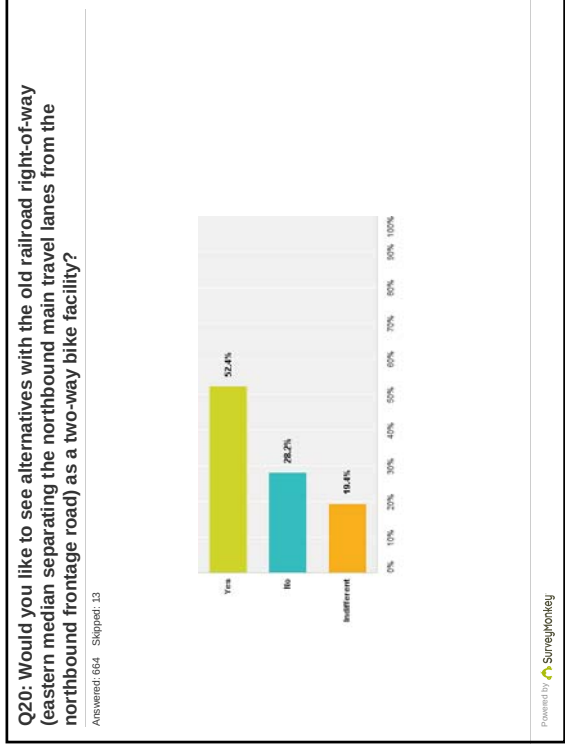
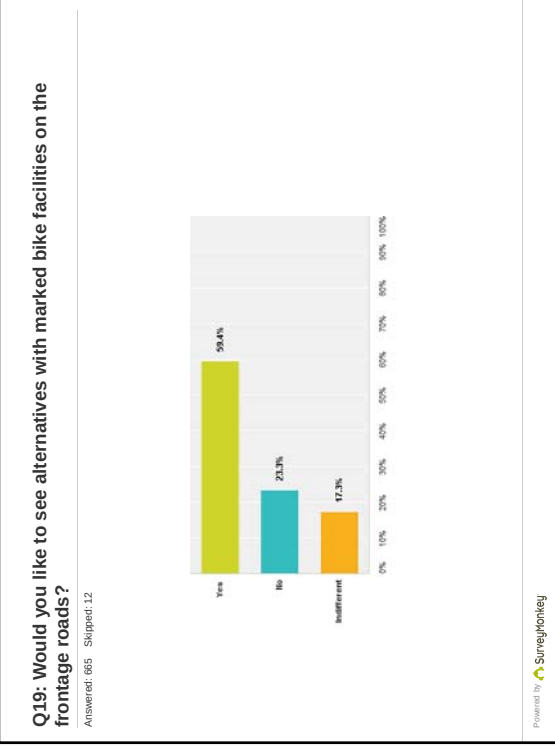
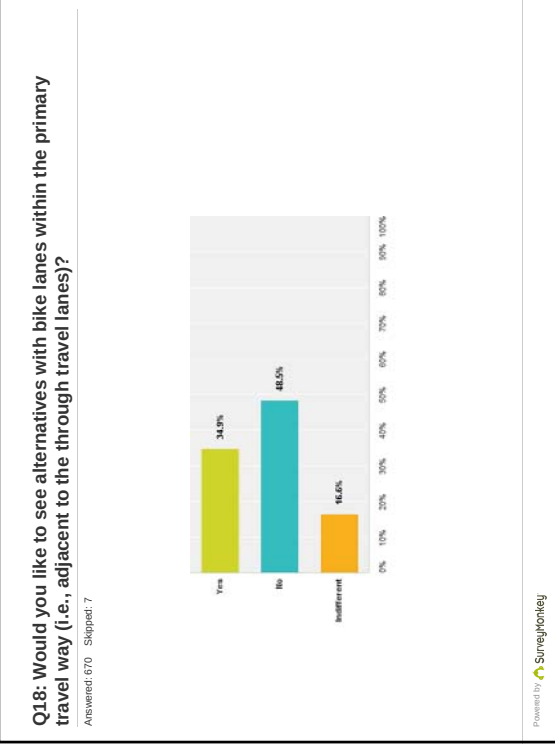
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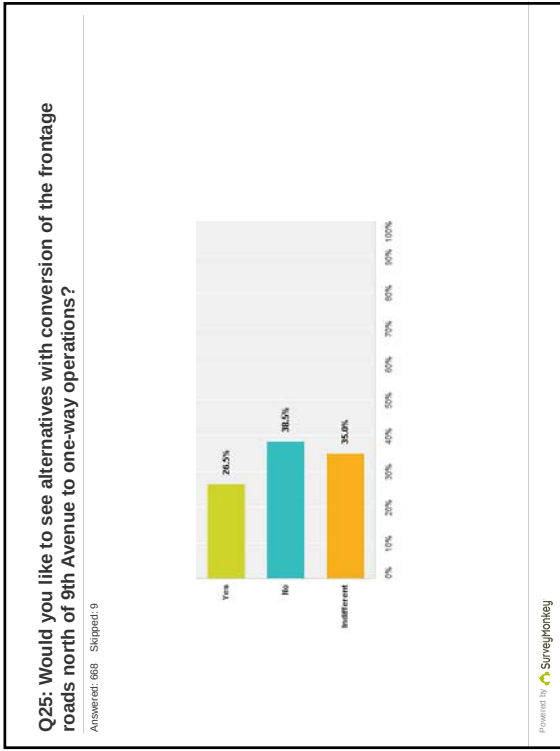
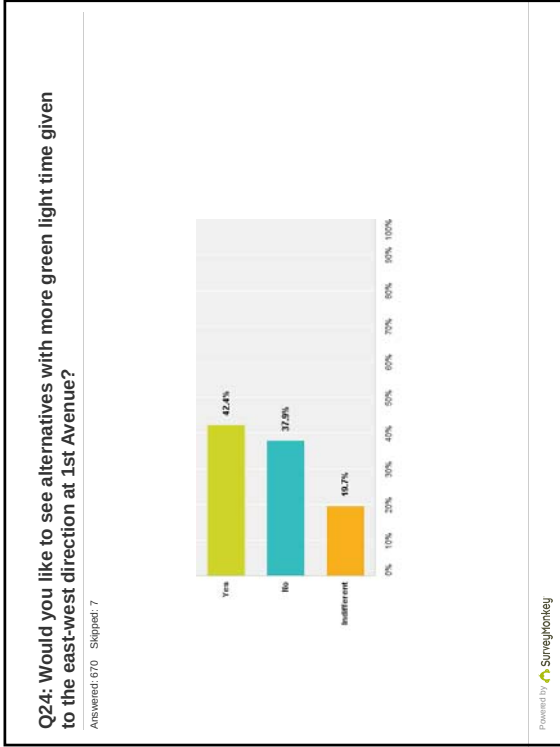
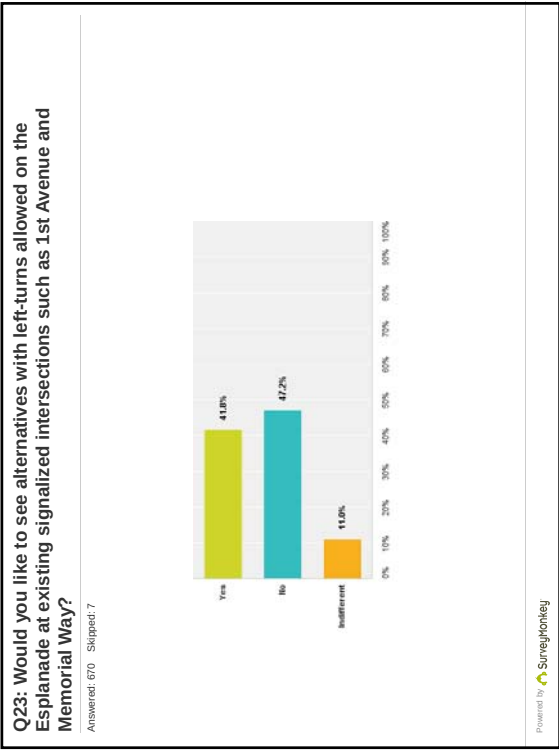
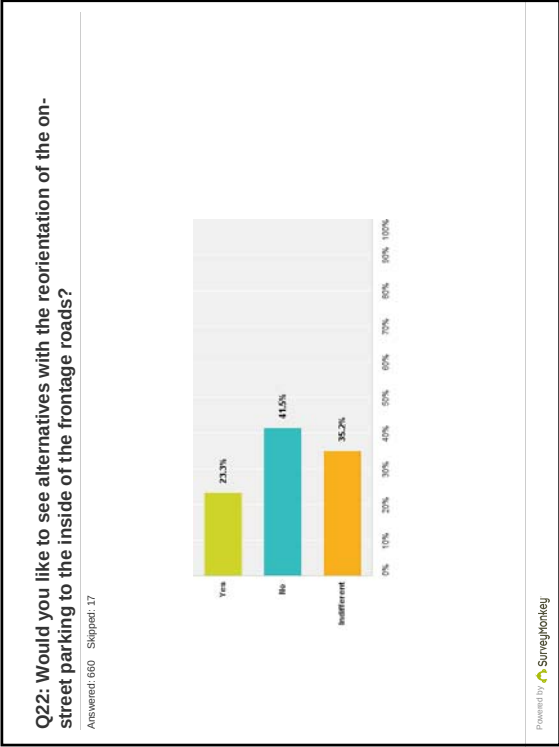


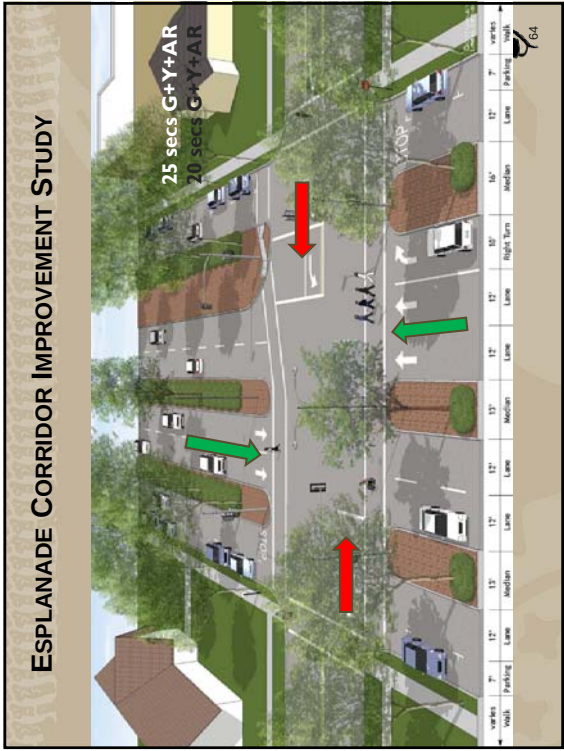
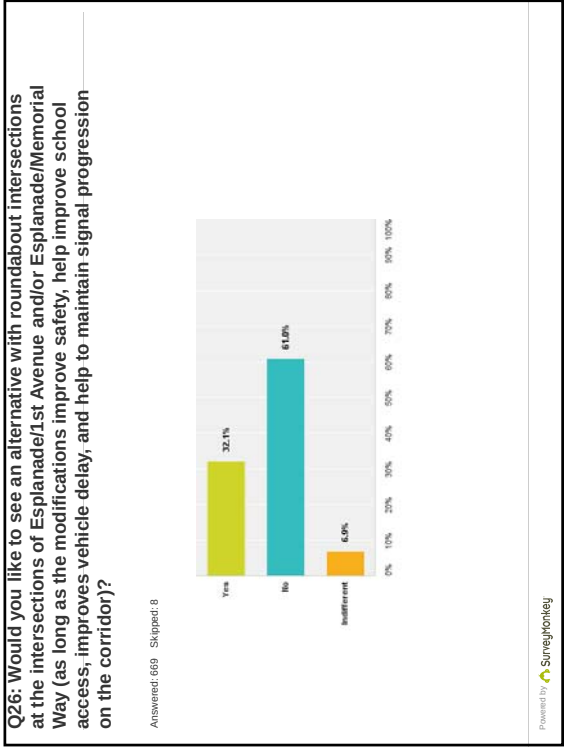












ESPLANADE CORRIDOR IMPROVEMENT STUDY



ESPLANADE CORRIDOR IMPROVEMENT STUDY



TRAFFIC SIGNAL TIMING

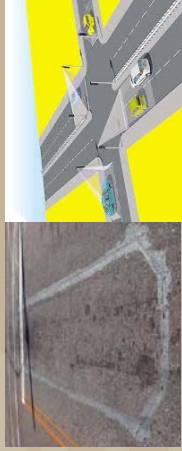


TRAFFIC SIGNAL TIMING



TRAFFIC SIGNAL TIMING

- > No vehicle detection
- > Ignores volume of traffic
- > Fixed Time
- > Run by a time clock
- > Subject to stops due to the cycle
- > Coordinated by time
- > Vehicle detection
- > Reacts to the volume of traffic
- > Actuated
- > Run by a computer
- > Subject to stops due to pedestrian crossings, traffic needs.
- > Coordinated by computer routines



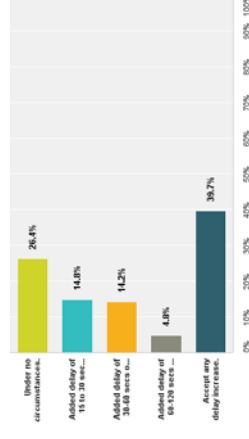
69

TRAFFIC OPERATIONS = MANAGEMENT OF SPACE & TIME

QUESTION FOR THE DRIVING PUBLIC: HOW MUCH TIME ARE YOU WILLING TO GIVE UP TO IMPROVE SAFETY AND CREATE THE OPPORTUNITY FOR OTHER TRANSPORTATION MODES?

Q27: Would you accept longer travel times driving north-south on the Esplanade in favor of safer pedestrian and bicycle crossings, and more capacity for local east-west traffic? (Note: Average vehicle travel time in each direction on the corridor during peak periods is currently approximately 175 seconds.)

Answered: 660 Skipped: 17



Powered by SurveyMonkey

Alternatives

WIT-Trans

POTENTIAL IMPROVEMENT CONSIDERATIONS

- Intersection Improvements
- Roadway geometry (stay within the exiting Right-of-Way)
- Signal modifications and upgrades
- Traffic Signal timing
- Turn Lanes
- Bike Facilities
- Pedestrian crossing improvements
- Roundabouts ?
- Other traffic controls
- Striping and pavement markings
- Wayfinding signage
- Sidewalk improvements
- On-Street Parking
- School pick-up/drop-off
- Safe Routes to School
- Lighting
- Locations for Public Art ?
- Landscaping changes
- Urban Design
- Street Furniture

£⁷⁴

The aerial view shows the intersection of Highway 101 and Highway 102. The existing signalized intersection is located at the intersection of Highway 101 and Highway 102. The proposed signalized intersection is located at the intersection of Highway 101 and Highway 102. The image includes a north arrow and a scale bar.



[illegible]

205

28

[illegible]

873

←	lanes	7'	12'	13'	12'	3'	10'	12'	12'	12'	28'	12'	7'	lanes
	parking	lane	median	lane	lane	left turn	lane	lane	lane	median	lane	parking	width	

و

7' various width

12" parking

12" Lane

11' Median

12" Lane

5' Cycle Rack

12" Lane

12" Lane

13' Median

12" Lane

12" Lane

13' Median

12" Lane

12" Lane

13' Median

12" Lane

7' parking

various width

۳۲

[illegible]

290

[illegible]

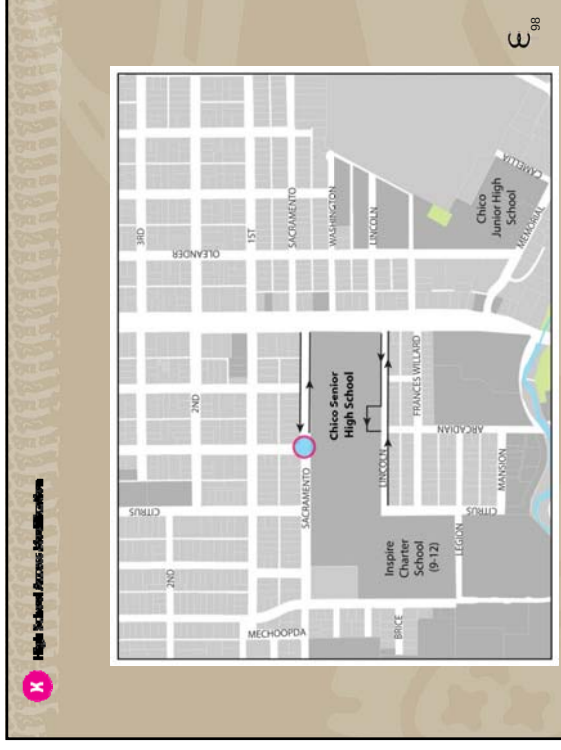
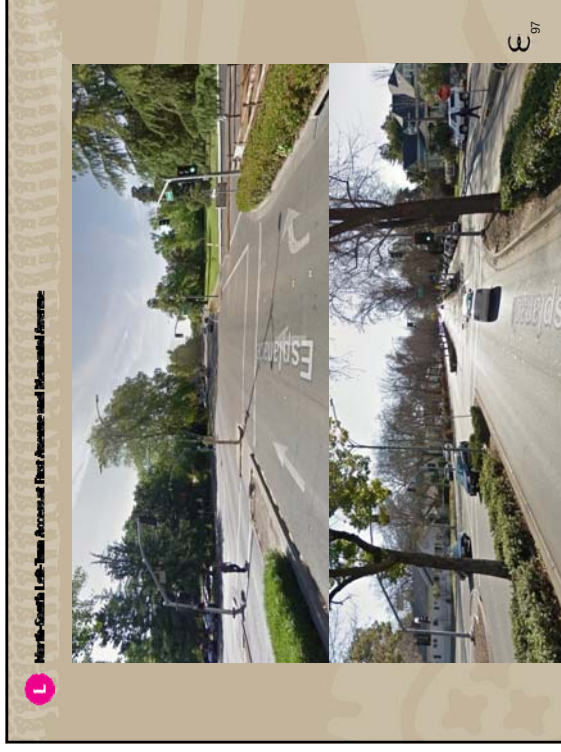
391

[illegible]

3⁹²

EXISTING – UNSIGNALIZED INTERSECTION





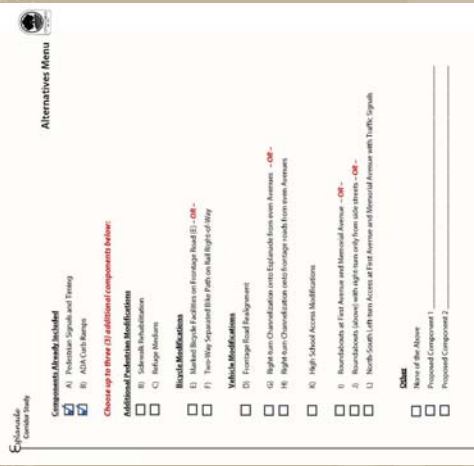
**QUESTION FOR THE DRIVING PUBLIC:
HOW MUCH TIME ARE YOU WILLING TO GIVE UP
TO IMPROVE SAFETY
AND CREATE THE OPPORTUNITY
FOR OTHER TRANSPORTATION MODES?**

Scenario	AM Peak Hour			PM Peak Hour		
	Travel Time (sec)	Change (sec)	\$B	Travel Time (sec)	Change (sec)	\$B
Editing	278			281		
Base (ped + bike w/o, ped crossing time)	209	22	195	196	16	208
Bike Signal	211	11	201	201	5	212
Closure of Outbound Traffic at Unsig. Ints	202	2	194	192	16	212
N-5 Lefts Turn @ 1st and Memorial with Signals	209	10	197	189	7	200
Roundabout @ 1st and Memorial	209	9	206	203	7	196



INPUT ON PREFERRED PLAN (PARTICIPATION EXERCISE)



Alternatives Menu

Comments/Items Included

- ☒ A) Additional Signals and Timing
- ☒ B) ADA Curb Cuts

Choose up to three (3) additional components below:

Additional Pedestrian Modifications

- ☐ B) Sidewalk Installation
- ☐ C) Bridge Medians

Bus Stop Modifications

- ☐ E) Marked Bicycle Pathways on Forestry Road (B) - **OR** -
- ☐ F) Two-Way Separated Blue Path on both Right of Way

Vehicle Modifications

- ☐ G) Forestry Road Resurfacing
- ☐ H) Right turn Channelization onto Forestry from west Avenue - **OR** -
- ☐ H) Right turn Channelization onto Forestry from east Avenue
- ☐ J) North-South Left turn Access off First Avenue and Memorial Avenue with Traffic Signals
- ☐ K) High School Access Modifications

Other

None of the Above

Proposed Component 1 _____

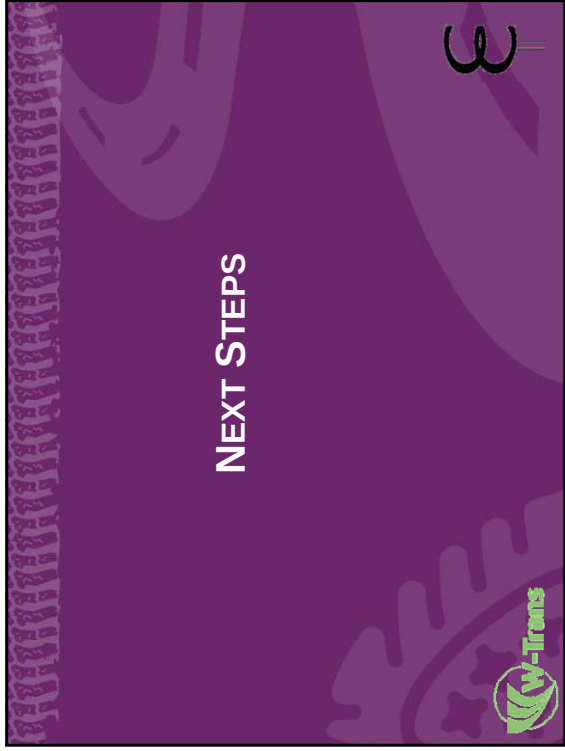
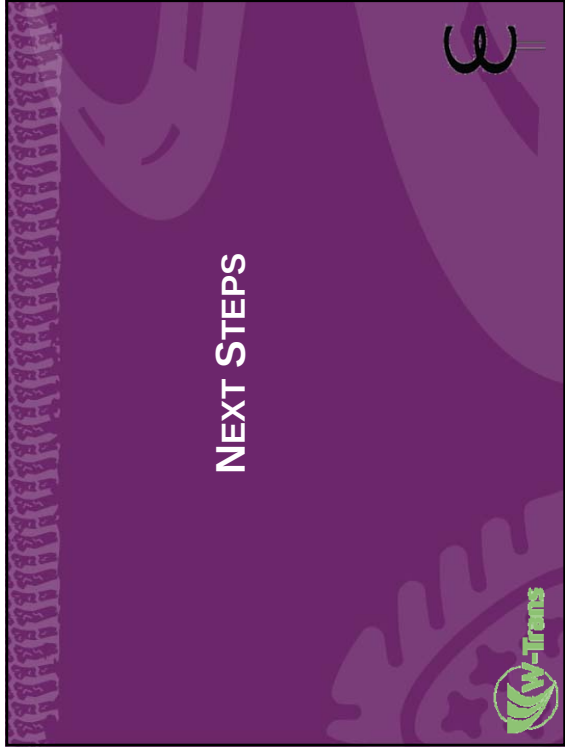
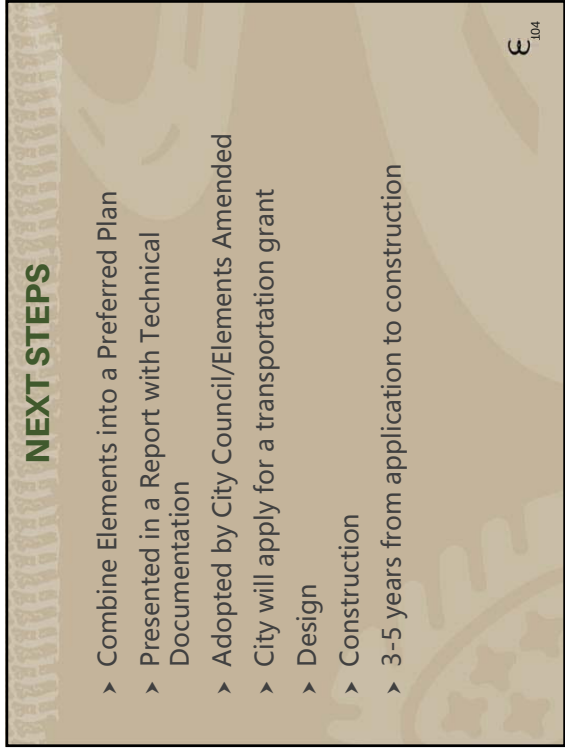
Proposed Component 2 _____

Choose up to three (3) additional components

Ε₁₀₂



NEXT STEPS

NEXT STEPS

- Combine Elements into a Preferred Plan
- Presented in a Report with Technical Documentation
- Adopted by City Council/Elements Amended
- City will apply for a transportation grant
- Design
- Construction
- 3-5 years from application to construction

Ε₁₀₄

COMBINE ELEMENTS INTO A PREFERRED PLAN



Developing Preferred Plan

- Community Input
- Staff Input
- Consultant Experience
- Successful Grant Potential
- Technical Constraints
- Design Standards and Liability (Ped signals are in)
- Council Input

Ε₁₀₆

COMMUNITY INPUT



PUBLIC INPUT

- Workshop #1 – September 9
- Workshop #2 – November 19, 2015
- Workshop #3 – February 2016
- Online Surveys
- Council Public Hearing (end of process)
- Project website
- http://www.chico.ca.us/capital_project_services/EsplanadeCorridorImprovementStudy.asp
- Comment Cards (at each workshop)
- Please add your contact info to the Sign-up Sheets
- Email sweinberger@w-trans.com

Ε₁₀₈



Survey #2

- Take affect November 23
- Run until December 13
- Questions will ask:
 - Which elements should be included in the preferred plan.
 - What is your priority ranking for the elements in the preferred plan.
- Suggested questions ?

Ε₁₁₀





ESPLANADE CORRIDOR STUDY

Workshop #3

City Council Meeting

April 5, 2016




ESPLANADE CORRIDOR TIMELINE

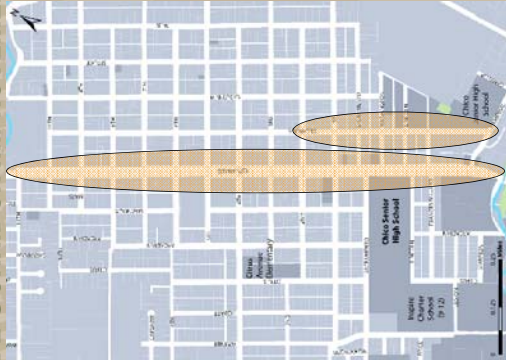





Existing Deficiencies



ESPLANADE CORRIDOR IMPROVEMENT STUDY



Street Cross Section – Signalized Intersection



ESPLANADE CORRIDOR IMPROVEMENT STUDY

Street Cross Section – Signalized Intersection



ESPLANADE CORRIDOR IMPROVEMENT STUDY

Street Cross Section – Signalized Intersection



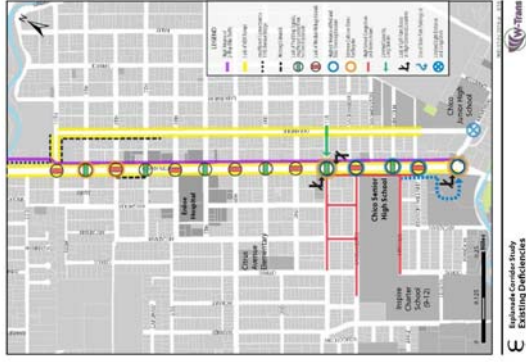
ESPLANADE CORRIDOR IMPROVEMENT STUDY

Street Cross Section – Signalized Intersection



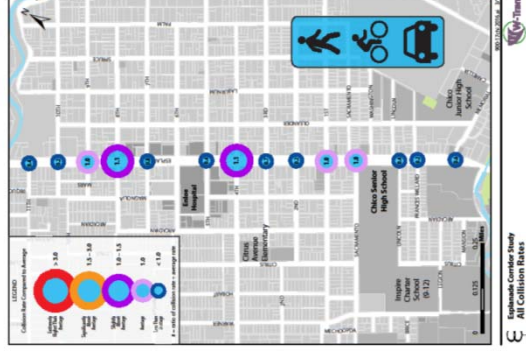


STAFF REPORT
ATTACHMENT C



13

STAFF REPORT
ATTACHMENT D



14

STAFF REPORT
ATTACHMENT D



15

STAFF REPORT
ATTACHMENT D



16



- Vehicle Collision rate is very close to the expected rate for similar facilities.



- Better than expected pedestrian safety record even without adequate crossing timing. Pedestrian Collision hot spot at Esplanade/Sacramento Avenue.



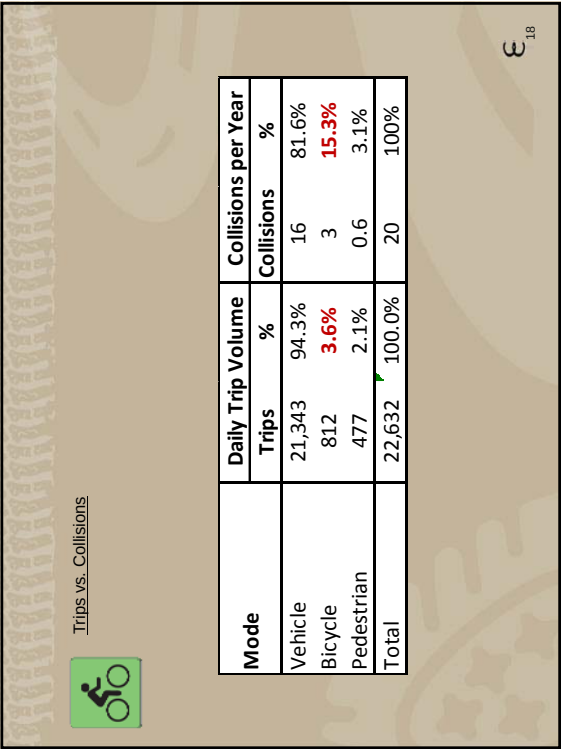
- Approximately 5 times more likely to be in an accident if you are a bicyclist than if you are travelling in a vehicle.





Trips vs. Collisions

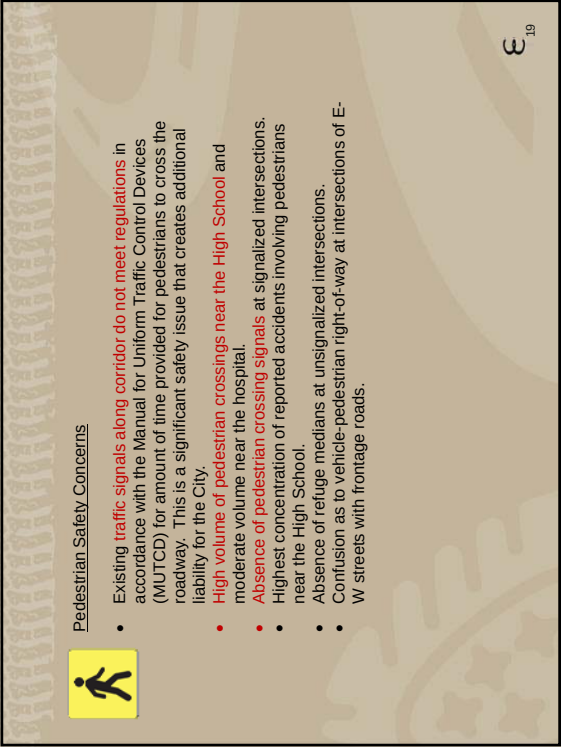
Mode	Daily Trip Volume		Collisions per Year	
	Trips	%	Collisions	%
Vehicle	21,343	94.3%	16	81.6%
Bicycle	812	3.6%	3	15.3%
Pedestrian	477	2.1%	0.6	3.1%
Total	22,632	100.0%	20	100%





Pedestrian Safety Concerns

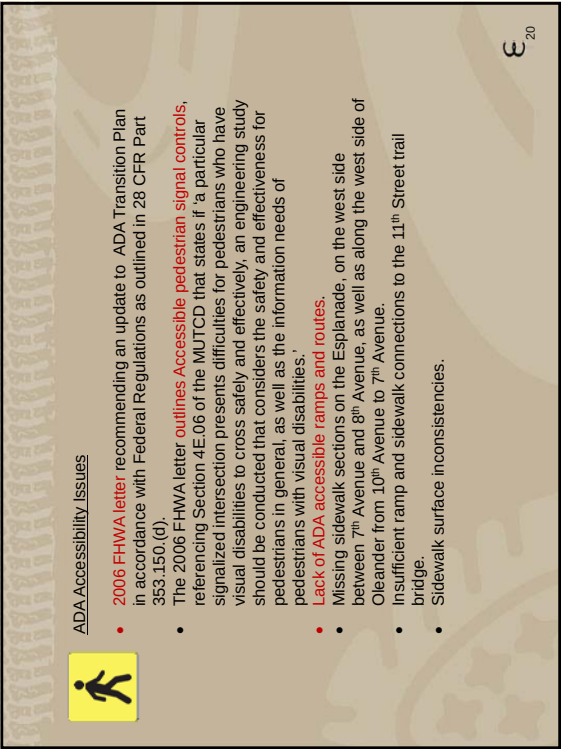
- Existing traffic signals along corridor do not meet regulations in accordance with the Manual for Uniform Traffic Control Devices (MUTCD) for amount of time provided for pedestrians to cross the roadway. This is a significant safety issue that creates additional liability for the City.
- High volume of pedestrian crossings near the High School and moderate volume near the hospital.
- Absence of pedestrian crossing signals at signalized intersections.
- Highest concentration of reported accidents involving pedestrians near the High School.
- Absence of refuge medians at unsignalized intersections.
- Confusion as to vehicle-pedestrian right-of-way at intersections of E-W streets with frontage roads.





ADA Accessibility Issues

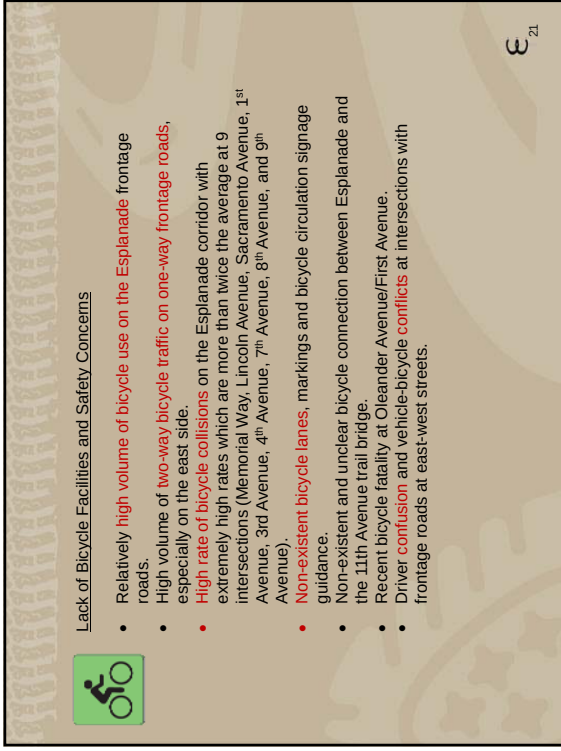
- 2006 FHWA letter recommending an update to ADA Transition Plan in accordance with Federal Regulations as outlined in 28 CFR Part 353.150.(d).
- The 2006 FHWA letter outlines Accessible pedestrian signal controls, referencing Section 4E.06 of the MUTCD that states if 'a particular signalized intersection presents difficulties for pedestrians who have visual disabilities to cross safely and effectively, an engineering study should be conducted that considers the safety and effectiveness for pedestrians in general, as well as the information needs of pedestrians with visual disabilities.'
- Lack of ADA accessible ramps and routes.
- Missing sidewalk sections on the Esplanade, on the west side between 7th Avenue and 8th Avenue, as well as along the west side of Oleander from 10th Avenue to 7th Avenue.
- Insufficient ramp and sidewalk connections to the 11th Street trail bridge.
- Sidewalk surface inconsistencies.





Lack of Bicycle Facilities and Safety Concerns

- Relatively **high volume of bicycle use on the Esplanade** frontage roads.
- High volume of **two-way bicycle traffic on one-way frontage roads**, especially on the east side.
- **High rate of bicycle collisions** on the Esplanade corridor with extremely high rates which are more than twice the average at 9 intersections (Memorial Way, Lincoln Avenue, Sacramento Avenue, 1st Avenue, 3rd Avenue, 4th Avenue, 7th Avenue, 8th Avenue, and 9th Avenue).
- **Non-existent bicycle lanes**, markings and bicycle circulation signage guidance.
- Non-existent and unclear bicycle connection between Esplanade and the 11th Avenue trail bridge.
- Recent bicycle fatality at Oleander Avenue/First Avenue.
- Driver **confusion** and vehicle-bicycle **conflicts** at intersections with frontage roads at east-west streets.



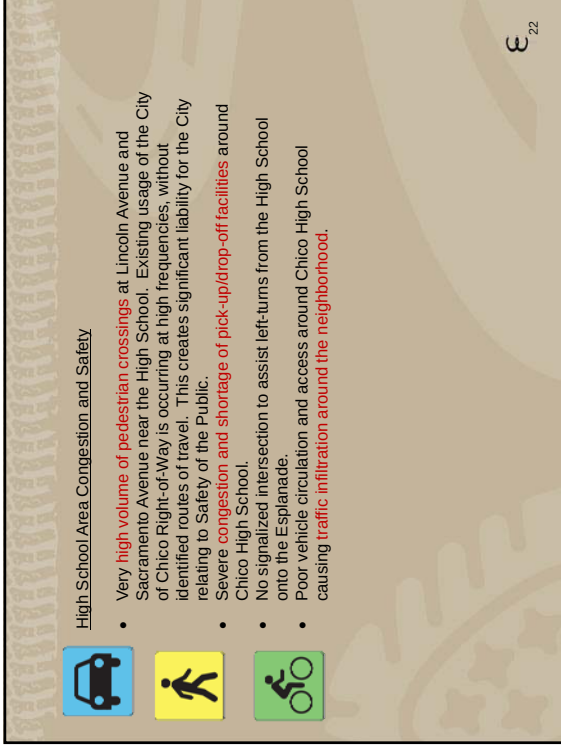
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High School Area Congestion and Safety

- Very **high volume of pedestrian crossings** at Lincoln Avenue and Sacramento Avenue near the High School. Existing usage of the City of Chico Right-of-Way is occurring at high frequencies, without identified routes of travel. This creates significant liability for the City relating to Safety of the Public.
- Severe **congestion and shortage of pick-up/drop-off facilities** around Chico High School.
- No signalized intersection to assist left-turns from the High School onto the Esplanade.
- Poor vehicle circulation and access around Chico High School causing **traffic infiltration around the neighborhood**.



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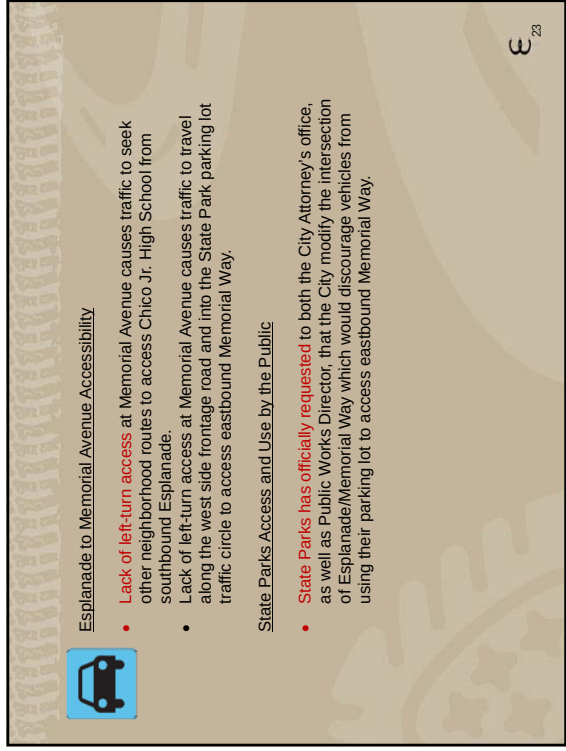


Esplanade to Memorial Avenue Accessibility

- **Lack of left-turn access** at Memorial Avenue causes traffic to seek other neighborhood routes to access Chico Jr. High School from southbound Esplanade.
- Lack of left-turn access at Memorial Avenue causes traffic to travel along the west side frontage road and into the State Park parking lot traffic circle to access eastbound Memorial Way.

State Parks Access and Use by the Public

- **State Parks has officially requested** to both the City Attorney's office, as well as Public Works Director, that the City modify the intersection of Esplanade/Memorial Way which would discourage vehicles from using their parking lot to access eastbound Memorial Way.



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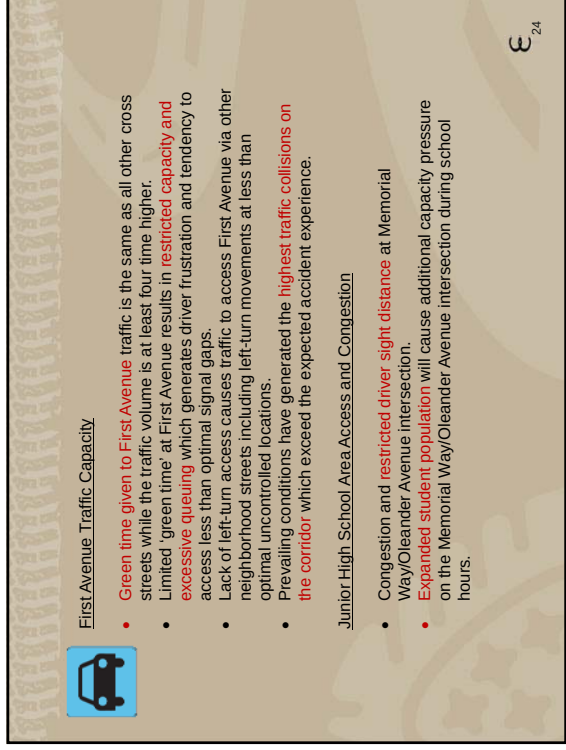


First Avenue Traffic Capacity

- **Green time given to First Avenue** traffic is the same as all other cross streets while the traffic volume is at least four time higher.
- Limited 'green time' at First Avenue results in **restricted capacity and excessive queuing** which generates driver frustration and tendency to access less than optimal signal gaps.
- Lack of left-turn access causes traffic to access First Avenue via other neighborhood streets including left-turn movements at less than optimal uncontrolled locations.
- Prevailing conditions have generated the **highest traffic collisions on the corridor** which exceed the expected accident experience.

Junior High School Area Access and Congestion

- Congestion and **restricted driver sight distance** at Memorial Way/Oleander Avenue intersection.
- **Expanded student population** will cause additional capacity pressure on the Memorial Way/Oleander Avenue intersection during school hours.



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- Lack of pavement markings and signage results in **confusion** between drivers, pedestrians and bicycles on right-of-way priority at frontage road intersections with east-west streets.
- Low hedge landscaping along the corridor **restricts driver sight distance** at frontage road intersections.

Recommendations



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- Comments from the Council
- Input from key stakeholders in the corridor
- The public through the public process
- On-line surveys
- Need to meet traffic engineering standard practices and state guidelines
- Traffic Engineering analysis
- Collision history review
- Input from City staff
- Experience of the consulting team



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ADA Curb Ramp



Pedestrian
Signal Heads



Pedestrian
Push Buttons



Vehicle Detection

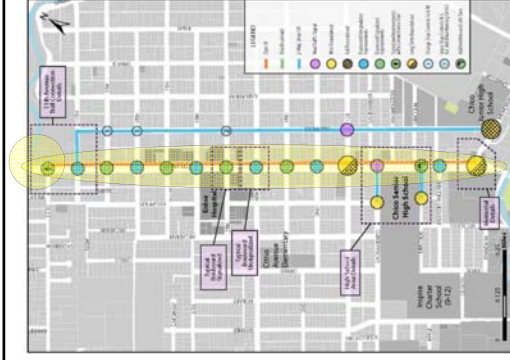


2. ADA Accessibility Recommendations



ADA Recommendations

- Improved **trail connection** to the 11th Avenue trail bridge with adequate walkway and ramps, as well as accessibility off of the Lindo Channel bridge on both the West and East sides.
- ADA acceptable **curb ramps** at all crosswalk locations.
- Sidewalk plan to provide missing **sidewalks** and reconstruct uneven sidewalk surfaces.



3. 1st Avenue Capacity Recommendations

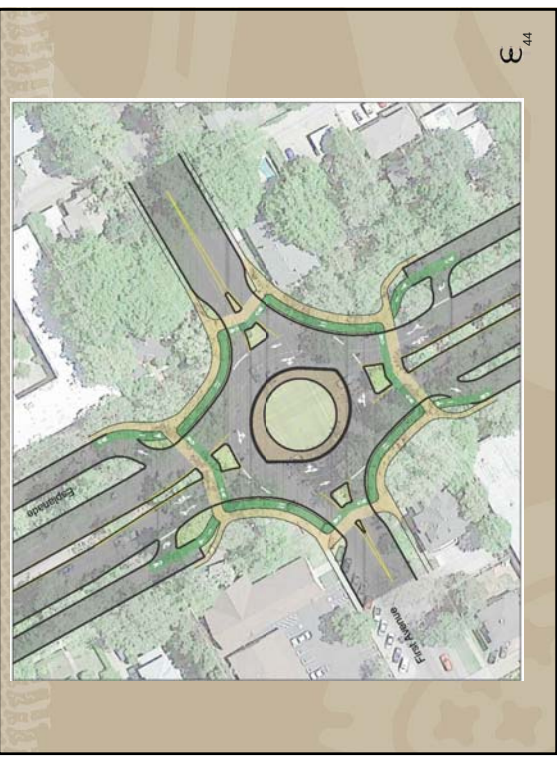


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First Avenue Recommendations

- a) New **roundabout** at Esplanade/1st Avenue with full four-way access as a long term mitigation.
- b) Updated signal timing plan to accommodate higher volumes on First Avenue.





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4. Junior High School Area Access Recommendations



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➤ Memorial/Oleander

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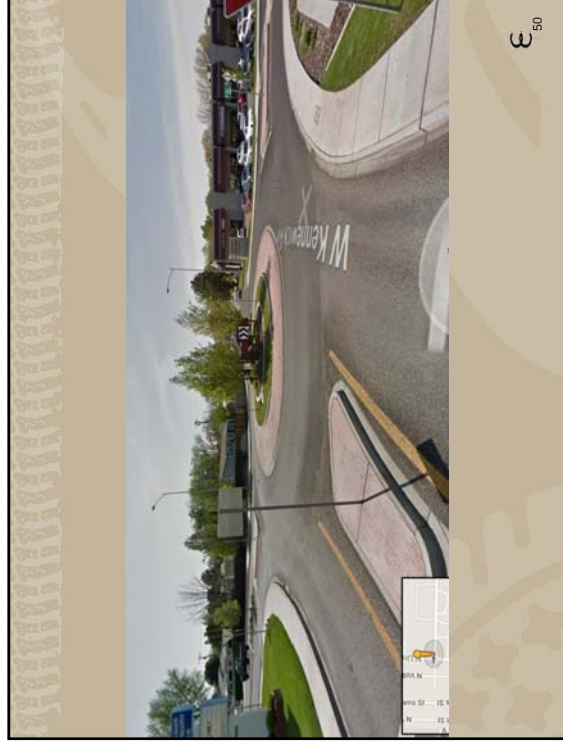
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Junior High School Recommendations

- a) New single-lane **roundabout** at Memorial Way/Oleander Avenue near Chico Jr. High School.
- b) Suggested future Safe Routes to School **assessment** to evaluate the campus safety more fully.

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- 5. General Vehicle Guidance and Convenience
- 6. Other Amenities Recommendations



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General Vehicle Guidance Recommendations

- Clear and consistent **pavement markings** at frontage road intersection areas.
- Creation of the **shared space area at crossings** of the E-W streets and frontage roads.
- Vehicle detection** at all approaches of signalized intersections.
- Traffic signal indications guiding cross traffic to **stop "outside"** of the frontage road.

Other Amenities Recommendations

- Recommendation for a future **Landscaping Plan** to eliminate visual obstructions and upgrade all landscaping as appropriate.
- Recommendation for a future **Lighting Plan** to upgrade efficiency, function and aesthetics of lighting equipment.

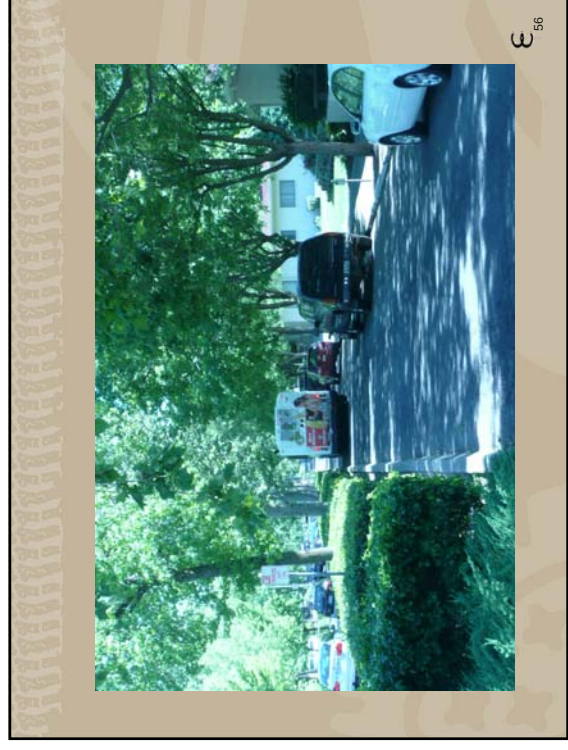
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7. Bicycle Facilities/Crossing Recommendations



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Bicycle Facility Recommendations

- Two-way bike trail on old rail right-of-way (east side) with appropriate safety crossing measures.
- Discouragement, but acknowledgement of wrong-way riders on the west side frontage road with a shared space pavement design to slow vehicle and bicycle traffic through these conflict zones.
- Three (3) Options – Bike Facility and Crossings.
- Marked bicycle route on Oleander Avenue which favors minimal stopping except at First Avenue and Fifth Avenue.
- New traffic signal at Oleander Avenue/First Avenue with bike crossing emphasis.

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DISCUSSION: FRONTAGE ROAD CROSSING OPTIONS

West Side	East Side
Do Nothing	Do Nothing
Shared Space	Shared Space
One-Way Channelized	One-Way Channelized
Reoriented Frontage Road	Reoriented Frontage Road
One-Way Channelized	Separated Bike Two-Way (Signalized)
One-Way Channelized	Separated Bike Two-Way (Unsignalized)

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DISCUSSION: SEPARATED BIKE CROSSING DESIGN OPTIONS

Original Concept Flush with Esplanade	New Preferred Set Back Crossing	Pushed Out with More Set Back	Pushed Out to Outer Flank	Reoriented Frontage Road
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OPTION 2
SHARED SPACE ONLY

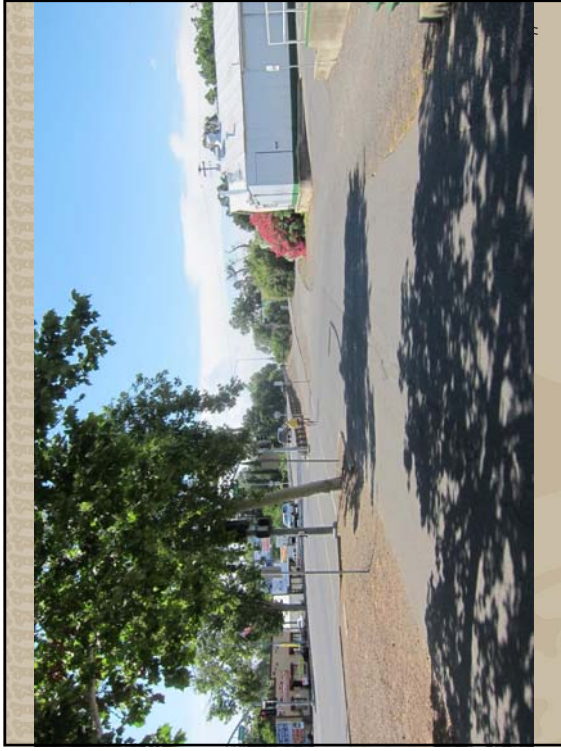


	varies	7'	12'	13'	11'	11'	7'	10'	11'	28'	12'	varies	
◀	Walk	Parking	Lane	Median	Lane	Lane	Median	Left Turn	Lane	Lane	Lane	Parking	Walk

[illegible]

8. Bike Crossing Options at 11th Avenue





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11th Avenue Connection Recommendations

- > Three (3) Options - connections to 11th Avenue bridge

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ATTACHMENT G**

**OPTION 1
PREFERRED
CONNECTION**



11th Avenue Option 1 (Preferred Connection)

Esplanade Area Complete Street Plan

79

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ATTACHMENT G**

OPTION 2

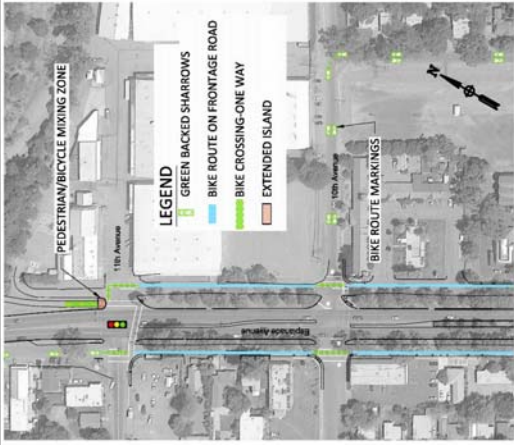


11th Avenue Option 2

Esplanade Area Complete Street Plan

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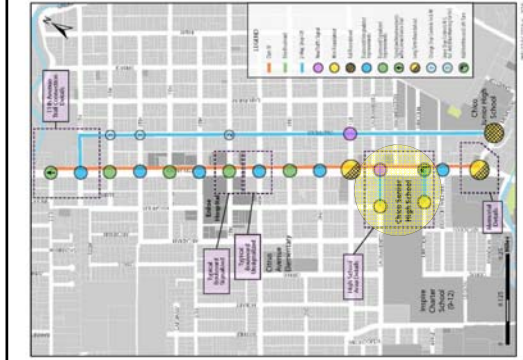
OPTION 3



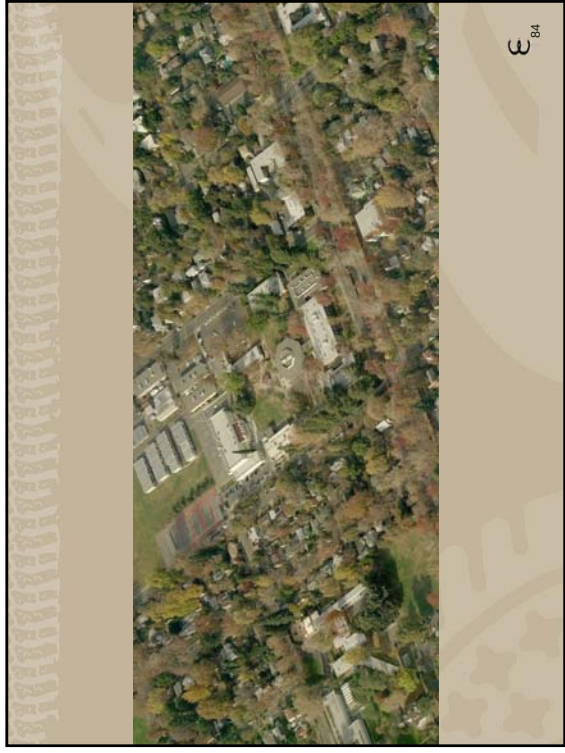
81

9. High School Area Access and Safety Recommendations

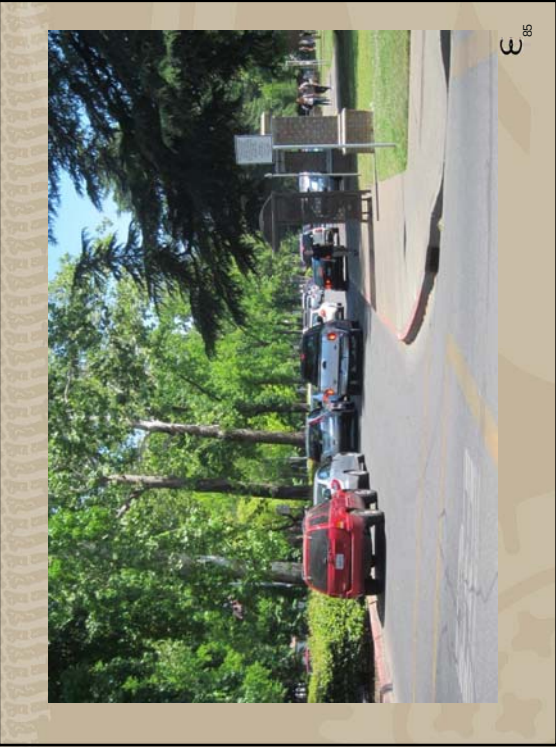
W-Trans



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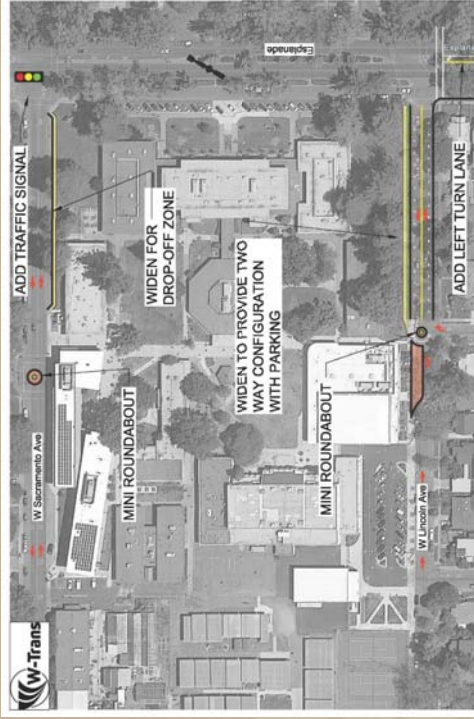


High School Area Recommendations

- Minor widening on the Chico High School side of Lincoln Avenue and West Sacramento Avenue for **expansion of pick-up/drop-off frontage**.
- Conversion of Lincoln Avenue to **two-way traffic** between Esplanade and Arcadian Avenue.
- Turnaround traffic circles** at Lincoln Avenue/Arcadian Avenue and Sacramento Avenue/Magnolia Avenue.
- New **traffic signal** at Esplanade/West Sacramento Avenue.
- New **northbound left-turn lane** at Esplanade/Lincoln Avenue.
- Esplanade **signal timing plan** specific for school hours to favor access to/from Chico High School.

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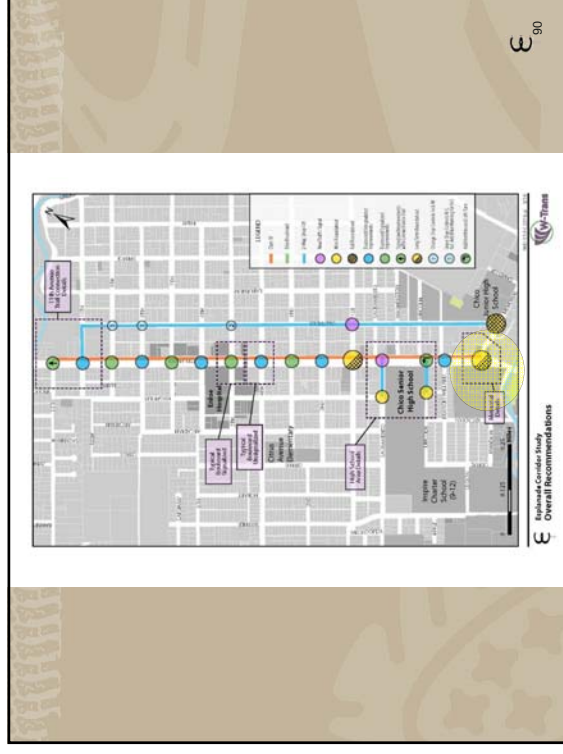
STAFF REPORT ATTACHMENT H



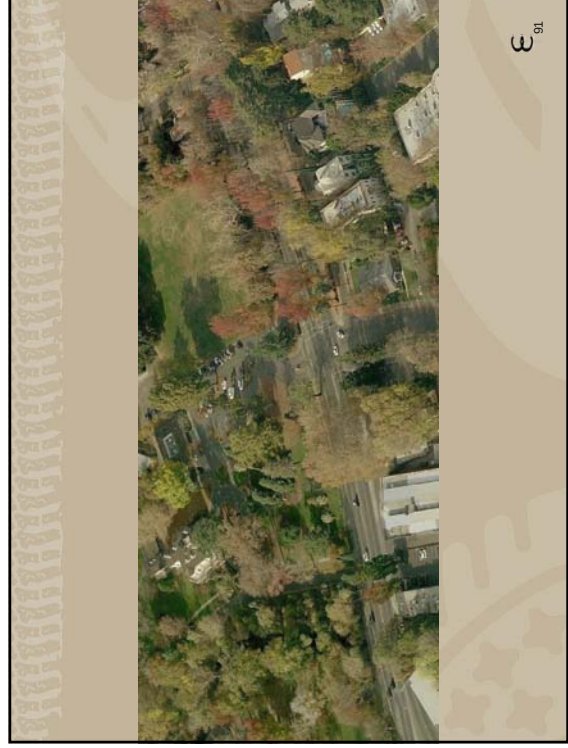
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10. Esplanade to Memorial Avenue/ Accessibility/ State Parks Access and Use by the Public



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Esplanade to Memorial Recommendations

a) New northbound/southbound **left-turn lane** on Esplanade at Memorial Way traffic signal as a short term mitigation.

b) New **roundabout** at Esplanade/Memorial Way with full four-way access as a long term mitigation.

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State Park Access Recommendations

a) **Reorientation** of the west side frontage road to eliminate the connection to the State Park parking lot.

b) The left-turn access and future **roundabout** at Esplanade/Memorial Way would preclude the need for traffic to enter the parking lot

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ATTACHMENT I



→	varies	13'	12'	12'	8'	12'	12'	8'	16'	8'	varies
→	Walk	Lane	Lane	Lane	Median	Left Turn	Buffer	Median	Lane	Parking	Walk

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ATTACHMENT I



→	varies	13'	12'	12'	8'	12'	12'	8'	16'	8'	varies
→	Walk	Lane	Lane	Lane	Median	Left Turn	Buffer	Median	Lane	Parking	Walk

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Roundabout Discussion



Safety

Program / Effect of Safety Programs / Roundabouts / Roundabouts

Roundabouts and Mini Roundabouts

Roundabouts are a type of intersection that uses a central island to control traffic flow. They are often used in place of traditional signalized intersections. Roundabouts are designed to be safer and more efficient than traditional intersections. They are also more aesthetically pleasing and can be integrated into the surrounding landscape. Roundabouts are a key component of the FHWA's Safe System Approach, which aims to reduce the number and severity of crashes by creating a system of roads that are inherently safe. Roundabouts are a key component of the FHWA's Safe System Approach, which aims to reduce the number and severity of crashes by creating a system of roads that are inherently safe. Roundabouts are a key component of the FHWA's Safe System Approach, which aims to reduce the number and severity of crashes by creating a system of roads that are inherently safe.

Program Contact

For more information, please contact the FHWA's Office of Safety Programs at (202) 365-4900 or visit the FHWA's website at <http://www.fhwa.gov>.

Roundabouts Are Safer Than Traditional Intersections

- 90% reduction in fatalities
- 76% reduction in injuries
- 35% reduction in all crashes

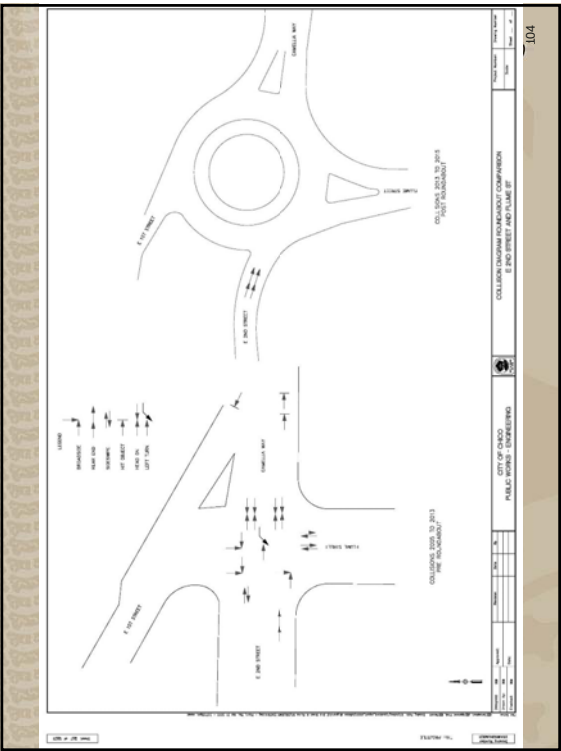
Modern Roundabouts | A Safer Choice

Modern Roundabouts: A Safer Choice

Benefits of Roundabouts

- Increased safety
- Improved traffic flow
- Reduced emissions
- Lower costs
- Community livability

Modern Roundabouts | A Safer Choice





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Why Roundabouts for Esplanade

- City has experience with existing roundabouts
- Roundabouts will allow for better corridor traffic flow
- Can address State Parks concerns
- Safer traffic control option
- Environmental benefits
- Opportunity for urban design and gateway treatments
- Lower operating costs (\$6,000 savings per int per year)
- May attract potential funding (vs. traffic signal)



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NEXT STEPS

- April – Finalize Preferred Concept Plan and Report
- Present at a Hearing for Council Consideration of Plan Adoption
- June 15th – ADTP Grant Application Deadline
- 2017 Awards for ATP Cycle 3 Announced
- 2018 Design Improvements (if awarded) to be reviewed by Council
- 2019/2020 Construction

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ACTIVE TRANSPORTATION GRANT

The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for non-motorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas (GHG) reduction goals, pursuant to SB 375 (01/2008) and SB 341 (of 2009),
- Enhance public health,
- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

Call for Projects – Due June 15th 2016

State Funding = \$240 Million

BCAG/Butte County Projects have received - \$10 Million through first two cycles. (Chico Bikeway 99 Phase IV \$800,000)

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