County Road 98 Bike and Safety Project – *Phase 2*

Public Meeting #4

October 17, 2018;

6:00 PM to 7:30 PM

County Road 98

Bike and Safety Project

Phase 2 Project – Intersection Improvements:

- The intersection improvements considered for each location were **Traffic Signalization** and **Roundabouts**:
- Today's presentation is focused on the ***recommended*** Intersection Improvements - ***Roundabouts***:

Life Cycle Analysis Elements

Safety Cost

- Collision Costs; based on prediction algorithms

Construction Cost

- Initial Construction, including soft costs for Design, Environmental, and Construction Management

Fuel and Green House Gas (GHG) Costs

Operation and Maintenance Cost

- Maintenance costs, including landscape
- Traffic signal operations
- Electrical power

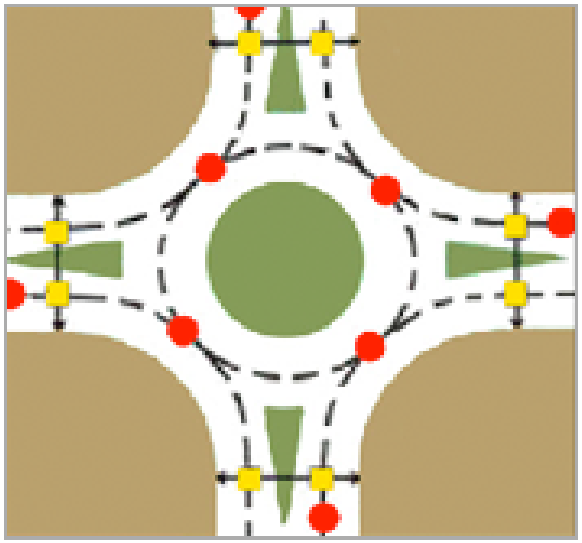
Delay Costs, Total person delay

Life Cycle Analysis Elements

Safety Cost

Conflict points on a regular 4-way intersection compared to a modern roundabout intersection

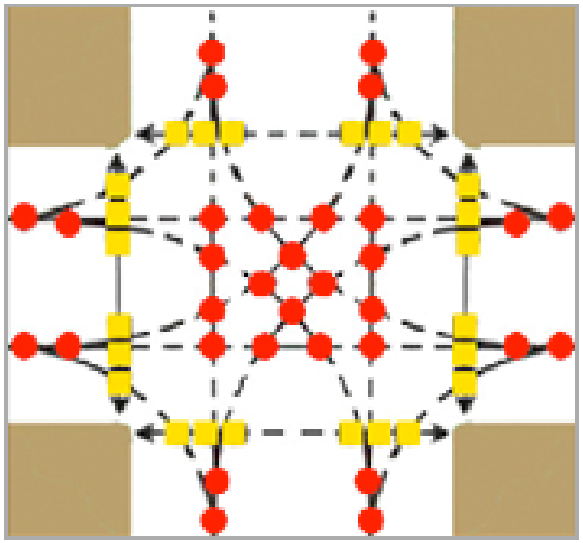
Roundabout



Vehicles - 8 Conflict Points

Peds - 8 Conflict Points

Traffic Signal



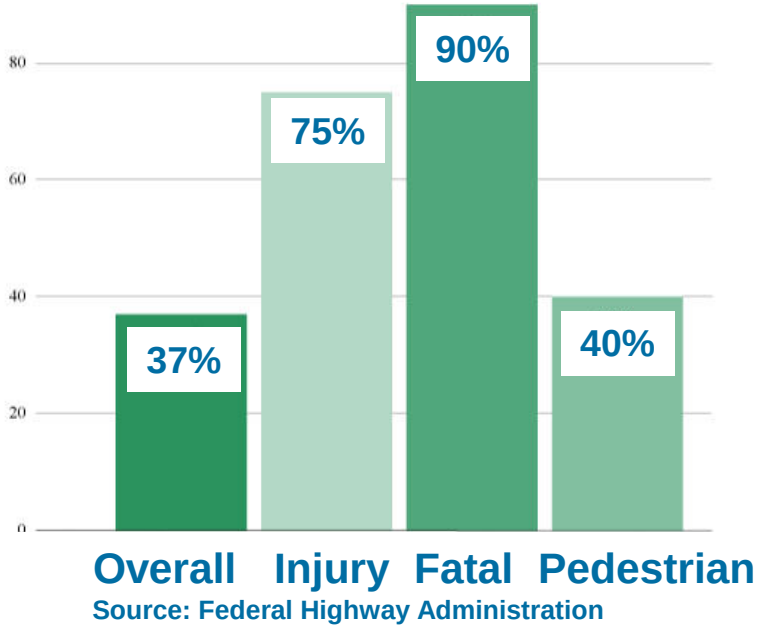
Vehicles -32 Conflict Points

Peds – 24 Conflict Points

Life Cycle Analysis Elements

Safety Cost

Collision Reductions due to Roundabouts

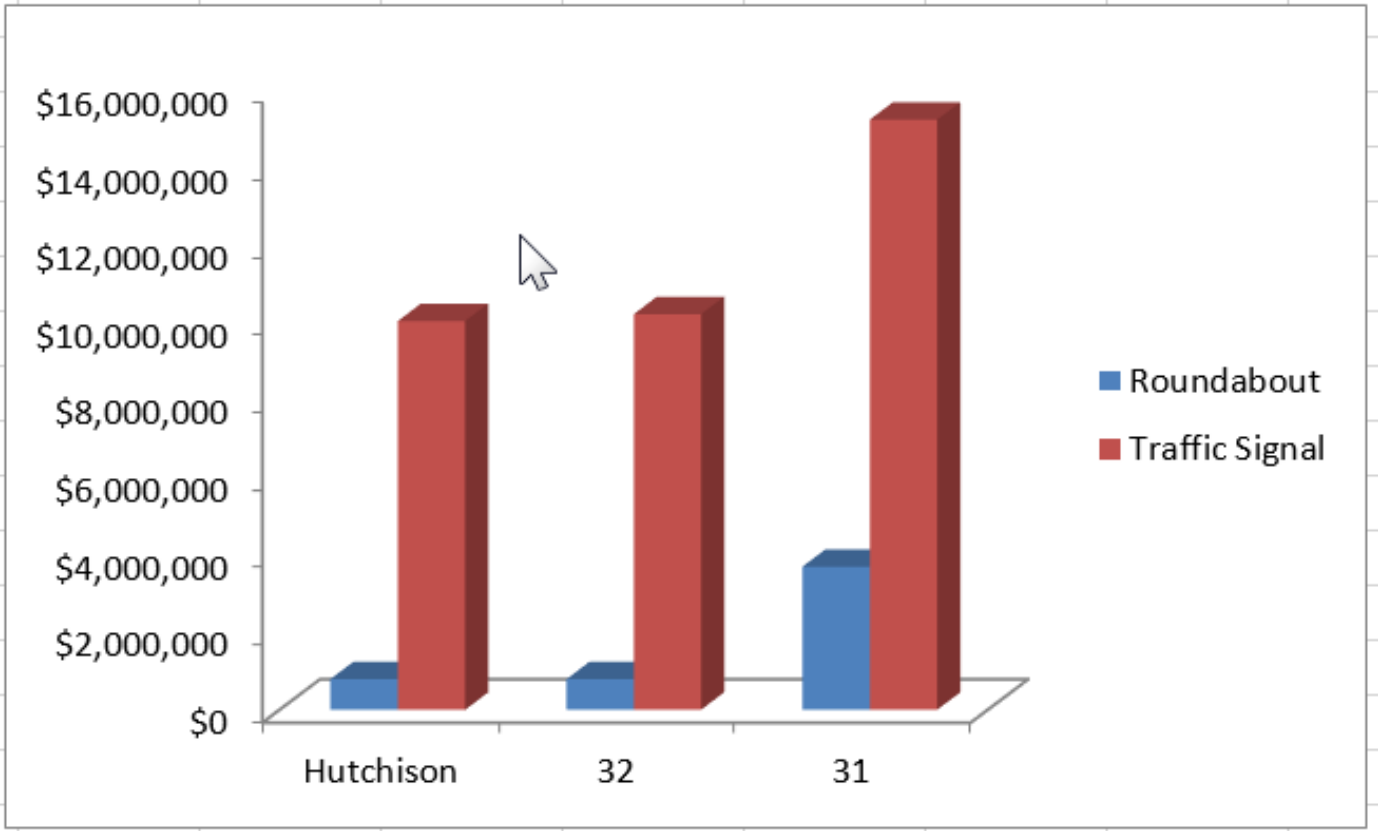


Source: Federal Highway Administration

Collision Costs; based on crash prediction algorithms developed from National/California crash data!

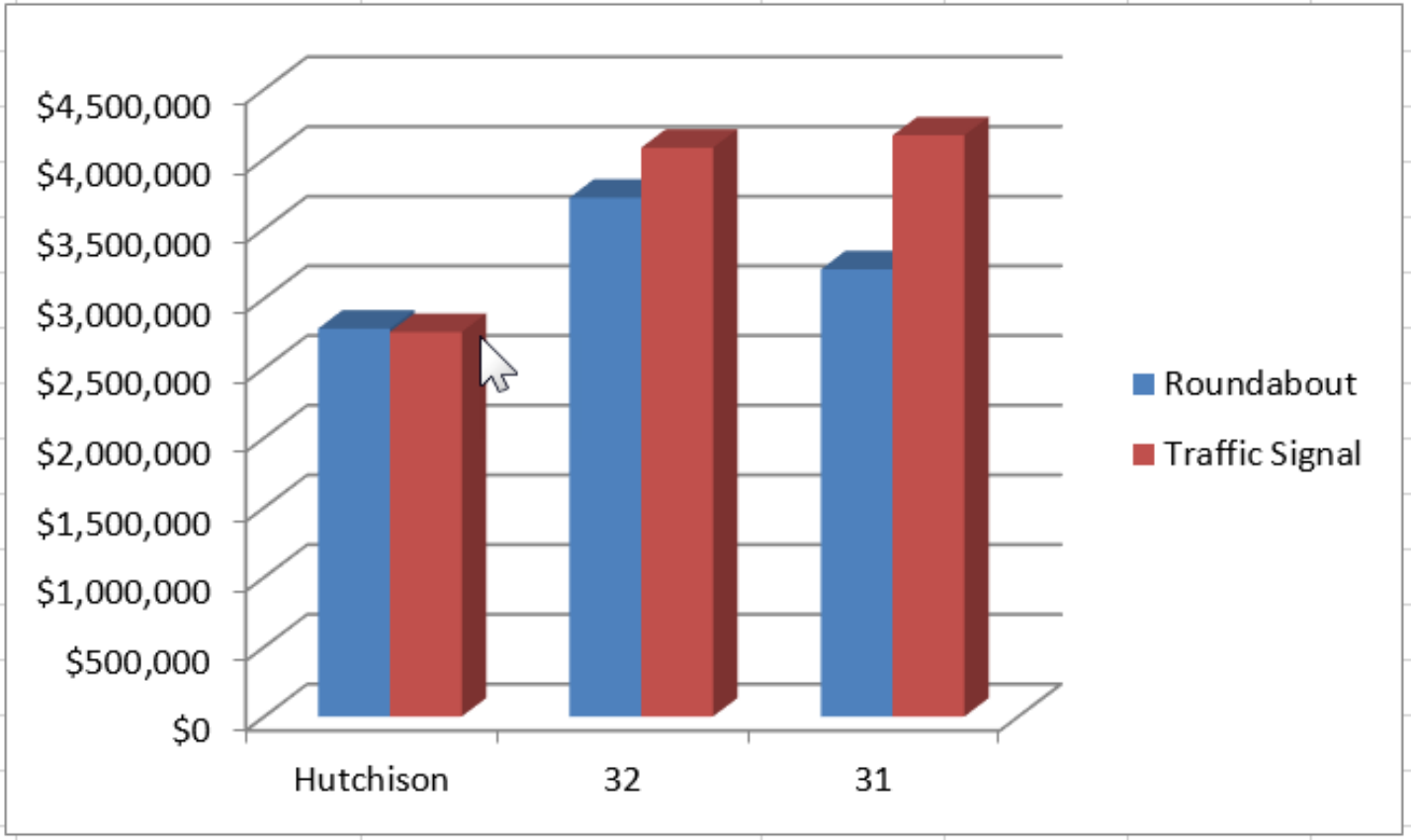
Life Cycle Analysis Elements

Safety Cost (predicted crashes) 2020 -2040



Life Cycle Analysis Elements

Construction Cost



Life Cycle Analysis Elements

Fuel Cost

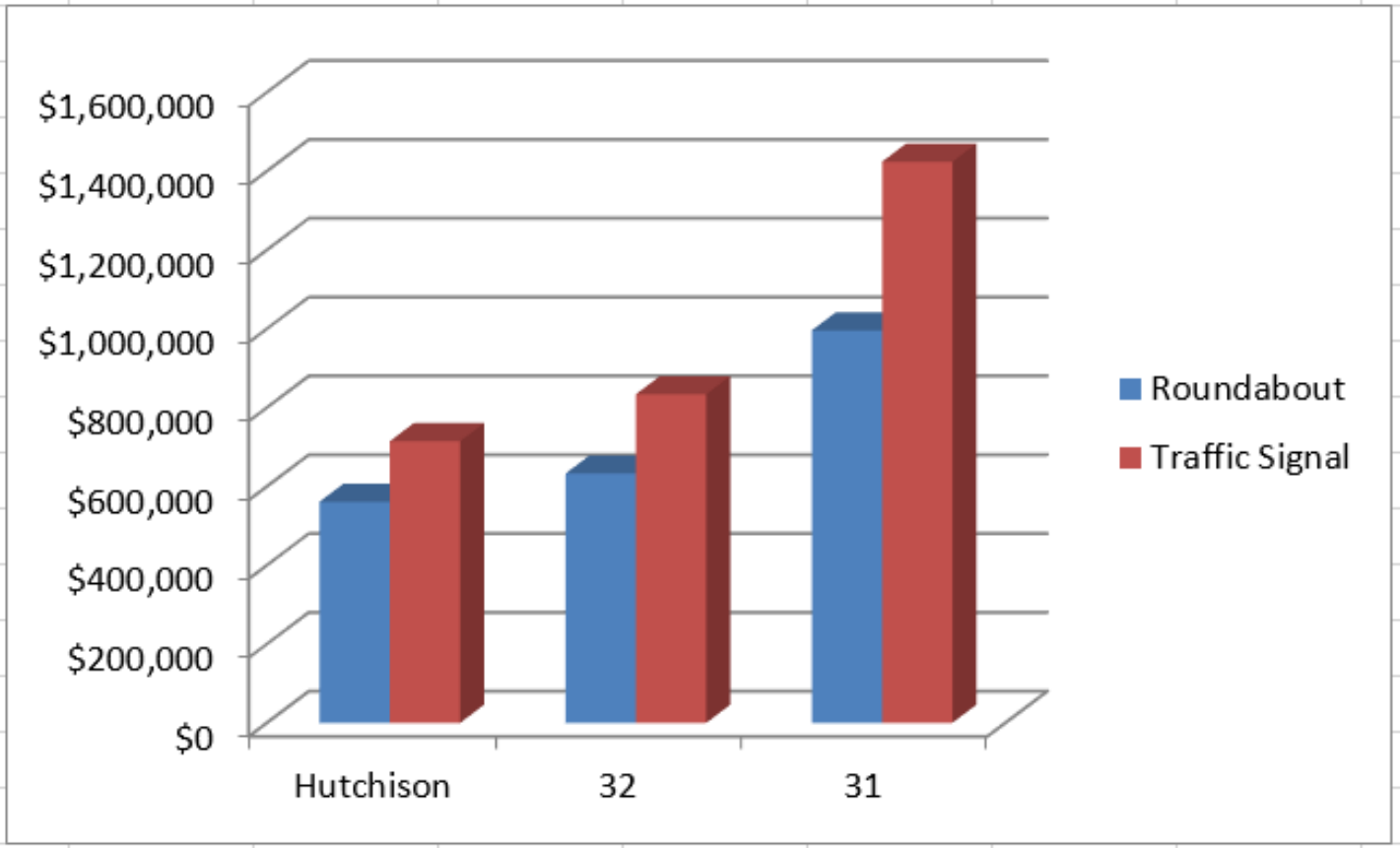
Reduced Stop Time Delay results in reduced fuel consumption; **analysis software provides this data**

Green House Gas (GHG) Costs

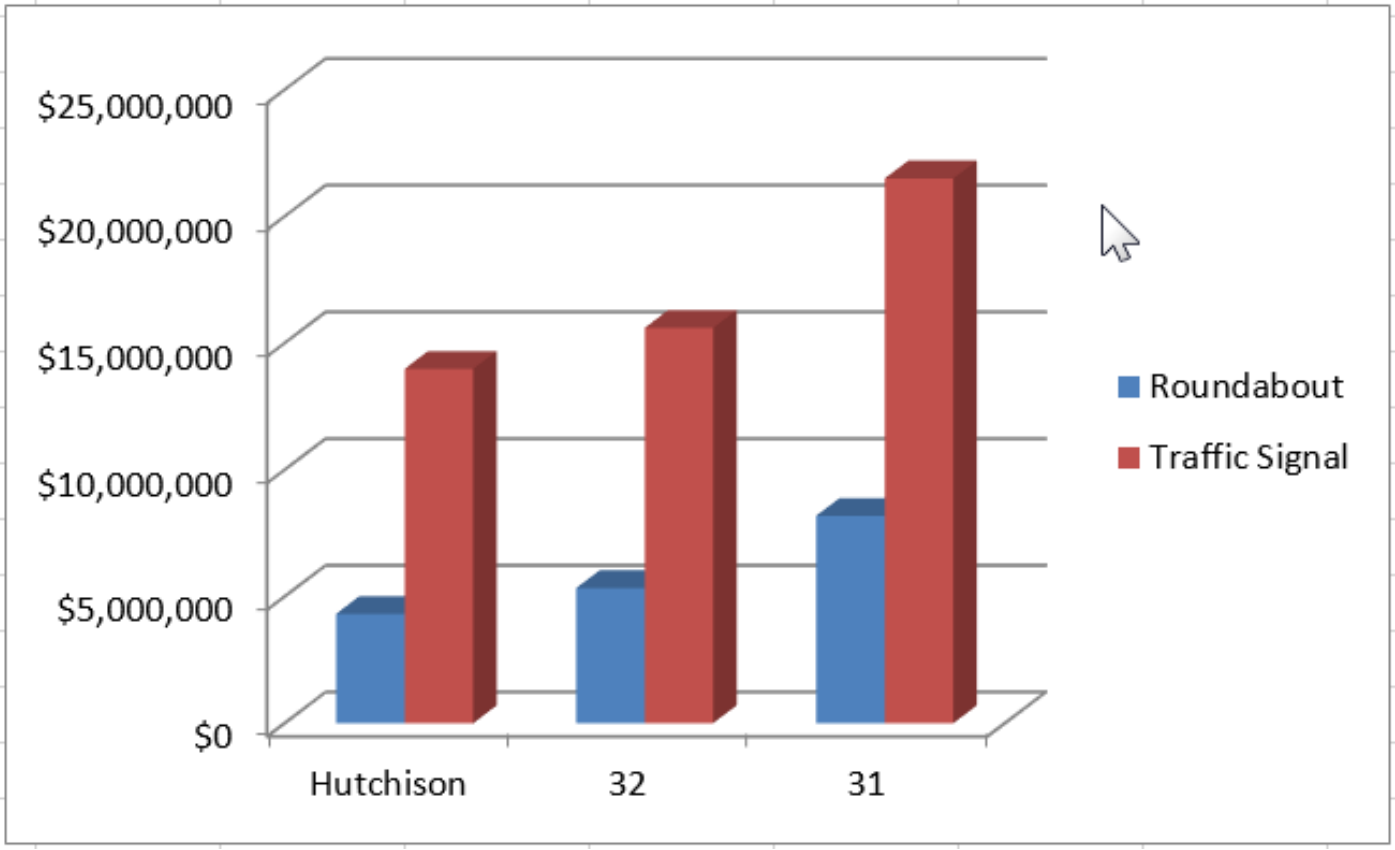
Significant reductions in Greenhouse Gases

Life Cycle Analysis Elements

Fuel and Green House Gas Cost 2020 -2040



Life Cycle Cost



Comments From Previous Public Meetings

The three (3) previous pubic meetings have generated numerous questions and comments.

- The comments include those:
  - posted on our graphics,
  - included within the formal comment cards and,
  - subsequent emails

A sampling of these have been catalogued and are presented on the following slides, complete with responses!

Generic Comments, and Comments Directed at all Locations

Generic to all intersections	
• Naming project CR 98 Bike & Safety Improvement Project is disingenuous as most of the improvements are for motorized vehicles.	• The name of Bike **&** Safety Improvement Project is intended to convey that it is a safety project for all the diverse users of the corridor and is not exclusively for bikes or motorized vehicles. The types of users include commute traffic (bicycle & motorized); farm to market trucking, aggregate resource trucking; farm equipment ; recreational and local traffic (both bicycle & motorized)
• Have the bikes enter their zone earlier for all roundabouts proposed	• This design issue will be considered carefully if the Board approves the recommendation for roundabouts.
• On roundabout, have separate path for less experienced bike riders. Use roundabouts at all intersections. Triggered traffic signals don't.	• Bicycle riders will have a separate travel path (with pedestrians) or may stay in the traffic lanes.
• Roundabouts, make it difficult for the farmers. Stop lights you must stop (red, yellow & green.)	• Roundabouts will be designed to accommodate farm equipment.
• Clarify funding sources and any impact on design and intersection	• Intersection choice will not affect funding. Funding sources require compliance to minimum design standards or justification for modifications. County uses American Association of State Highway and Transportation Officials (AASHTO).

Comments Specific to Hutchison Drive

Hutchison Drive • Improve intersection safety to reduce accidents	• Roundabouts will increase intersection safety by slowing down all traffic and reducing potential points of conflict
• Bike path- separated to Russell Blvd.	• Included in project
• Cars turning onto/from Hutchison face very high speed traffic	• Roundabouts will slow down all traffic
• High north-south vehicle speeds. Unprotected left turn when headed south towards Hutchison. Improve Intersection safety to reduce accidents	• Roundabouts will slow down all traffic.
• Slow down speed limit from 55 to 45 (Covell to Hutchison)	• Under California law speed limits are normally established within 5 mph of what 85% of the motorist using the roadway. Roundabouts are designed to slow traffic down prior to entering the roundabout intersection.

Comments Specific to CR 32 (Russell Boulevard)

County Road 32	
• Match existing bike path	• Included in design
• Provide raised center island for roundabout. Put cacti there	• Raised islands are included in design
• Move cacti to center of roundabout	• If it is at all feasible, cacti will be relocated to center island.
• Provide separate bike path to Hutchison	• Included in design
• Calm vehicle speeds! Bike safety.	• Roundabout will slow down all traffic.
• Cactus Corner is a land-mark sight in Yolo County. Big shame to take a part of it out.	• The design will preserve as much as possible.
• Provide more direct path for E-W bike traffic	• Bicyclists will have the choice of staying in traffic lane & entering roundabout (most direct path) or crossing exiting road & crossing with pedestrians.
• Flooding & FEMA impacts to homes south of Russell	• This will be addressed in design of project drainage and is a similar issue for either roundabout or signal..

Comments Specific to CR 31 (Covell Boulevard)

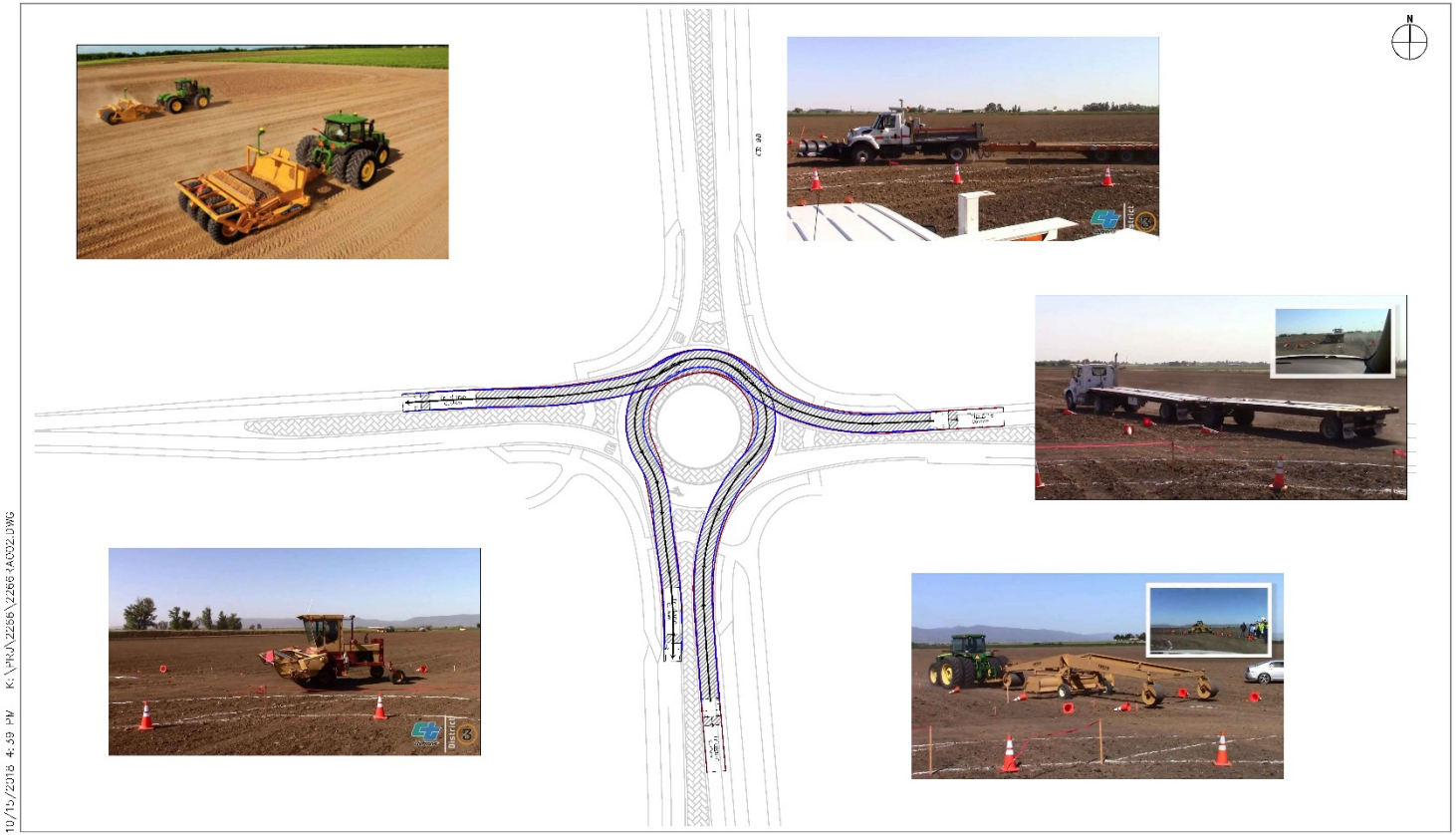
County Road 31	
• Improve drainage so intersection doesn't flood	• This will be addressed in design of project drainage and is a similar issue for either roundabout or signal.
• Improve water flow under CR 98. Currently both summer irrigation and winter flood waters backup here.	• Same answer as above.
• Provide adequate lighting and signing. High Speed is a factor.	• Roundabouts will slow down all vehicular traffic and will include intersection lighting and signage.
• Move center line north at Covell/98 (away from Impossible Acres)	• It is the County practice to try to widen on both sides unless other extraordinary factors dictate widening more on one side.
• Design denies access to over 2 commercial, permitted (encroachment) driveways that allow customer access to our existing business	• Equivalent access will be provided in final design. Left turns are easier to accomodate with a roundabout as vehicles can turn right out of driveway and make a u-turn using the roundabout.
• This concrete medium does not allow left turns to & from our property from existing driveways	• Same answer as above.

General Comments and/or Opinions

Opinions or comments with no response
• I prefer roundabouts to calm traffic and for safety reasons. People on bikes don't like to stop. Roundabouts eliminate the need too. • Prefer roundabouts in all three intersections • We like the four way stops,with lights. • Our preference is for roundabouts instead of signal - idle time/pollution & flow of traffic • A traffic light would allow people to maintain high speeds, where now they must stop. • I am for the stoplights on Rd. 31 • As a cyclist I find signalized intersections safer than roundabouts.

Oversized Vehicle Analysis

FARM EQUIPMENT TURNS



CR 98 PHASE II IMPROVEMENTS Fig No. 1

Yolo, California

October 15, 2018
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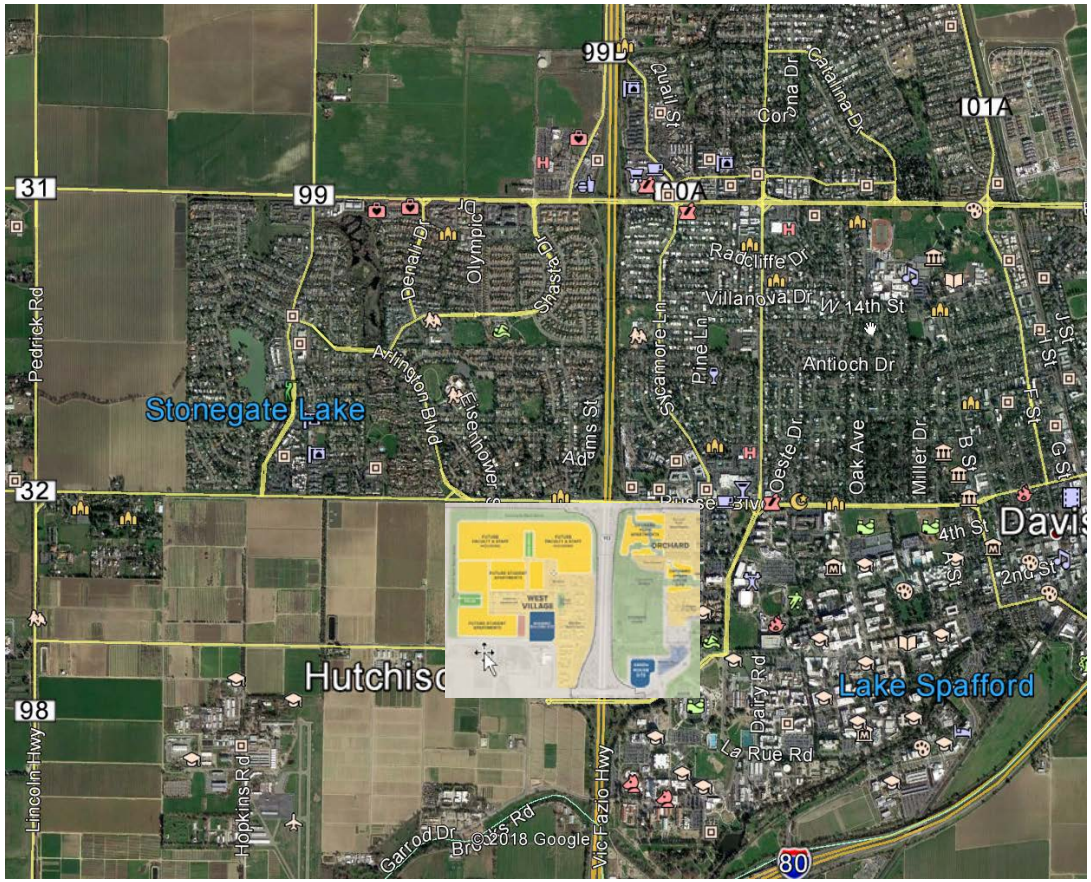
Analysis of UC Davis Expansion Plans

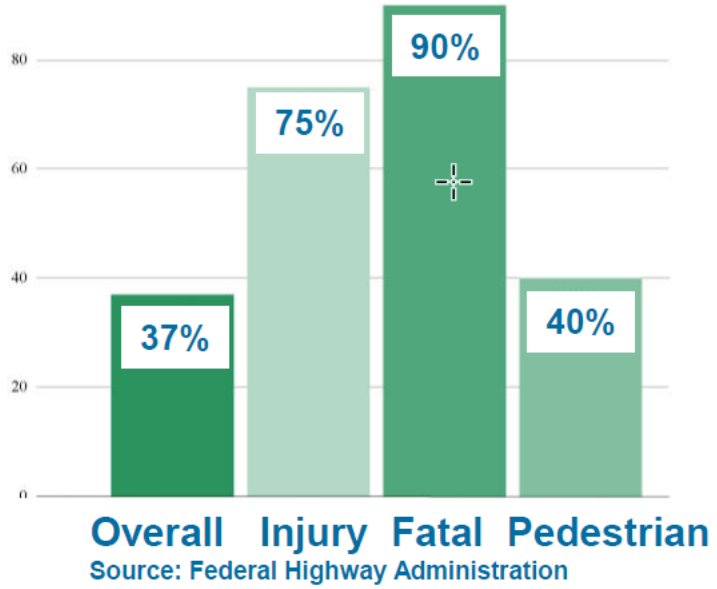
Assuming that as much as ±25% of the total traffic generated from the planned residence expansion were to impact the project corridor, the single lane roundabouts would not experience operational issues!



Questions?

Safety Cost

Collision Reductions due to Roundabouts



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