



# DISCUSSION OF ROUNDABOUTS ALONG VICTORIA AVENUE

Public Works Department

Transportation Committee  
November 8, 2018

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## BACKGROUND

1. On February 8, 2018 a resident requested that the Transportation Committee investigate use of a roundabout at Victoria Avenue and Washington Street.
2. On May 10, 2018, the Transportation Committee requested that Staff prepare a report to preliminarily assess a roundabout at this intersection, and at other locations along Victoria Avenue.



2

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## BACKGROUND

3. Victoria Avenue was commissioned in 1892 and designed by Franz Hosp.
4. The landscaping along Victoria Avenue helps to define the historic character of the roadway.
5. Victoria Avenue Forever is a non-profit organization: provides plantings, funding, and caregiving for the historic roadway.



3

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## VICTORIA AT WASHINGTON ASSESSMENT

### Alternatives:

1. No Build / Expansion
2. Traffic Signal
3. Roundabout

### Study Areas:

- |                  |                               |
|------------------|-------------------------------|
| 1. Operations    | 3. Safety                     |
| 2. Design & Cost | 4. Historical / Environmental |



4

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## ROUNDBABOUTS: GENERAL INFORMATION

1. Differ from neighborhood traffic circles and rotary intersections.
2. Designed to reduce the severity of collisions and encourage free-flowing operations.
3. Recommended by the Federal Highway Administration and California Department of Transportation.



5

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## OPERATIONAL ANALYSIS

Level of Service Analysis: Victoria Ave + Washington St								
	No Build		Added EB Lanes		Traffic Signal		Roundabout	
	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS
AM Peak Hour	19.1	C	21.7	C	20.2	C	24.4	C
PM Peak Hour	62.8	F	63.7	C	25.9	C	33.9	D



6

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## OPERATIONAL ANALYSIS

1. Delays measured under existing conditions in the field exceed 200 seconds
2. The Traffic Signal requires construction of an additional lane
3. To achieve LOS C during the AM Peak Hour the roundabout may require a right hand turn lane for westbound Washington



7

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## OPERATIONAL ANALYSIS: EXISTING QUEUES



8

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## OPERATIONAL ANALYSIS: EXISTING QUEUES



AM Peak Hour of Traffic



PM Peak Hour of Traffic



9

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## SAFETY ANALYSIS

1. 10 Year Collision History: 10 total collisions with 5 Injury collisions.
2. Collisions include three broadside collisions, one head-on, three rear-end, and one sideswipe. Three involve pedestrians / bicyclists.
3. The FHWA has found that a roundabout, when compared to stops/signals, can reduce collisions by 72-82%



10

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## DESIGN & COST

1. Traffic Signal Cost: \$400,000
2. Roundabout Cost: \$400,000 - \$450,000
3. Long term maintenance of a roundabout significantly less costly. Roundabouts also save time, gas, and reduce emissions
4. Roundabouts can accommodate emergency & large vehicles



11

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## SIGNAL CONCEPTUAL PLAN

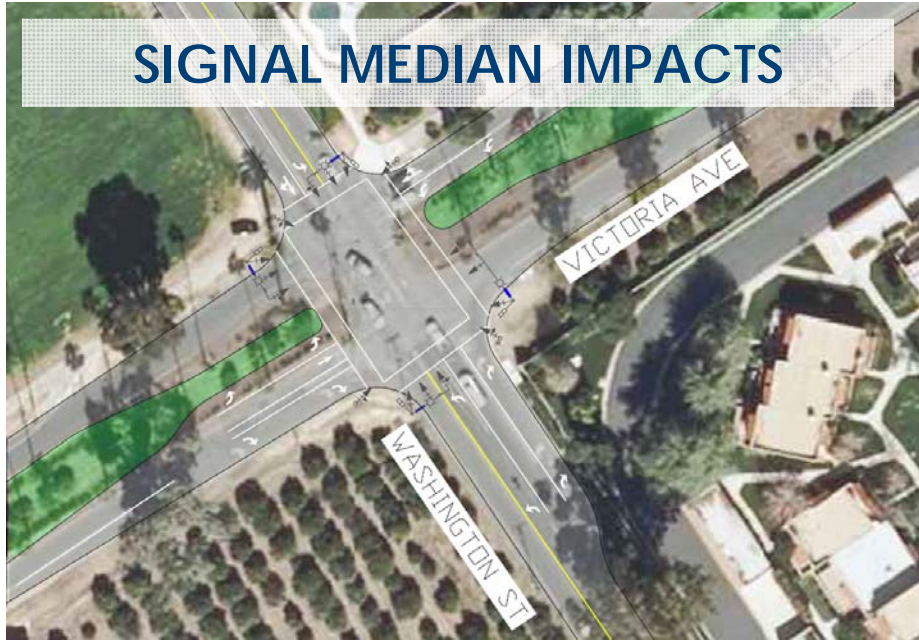


12

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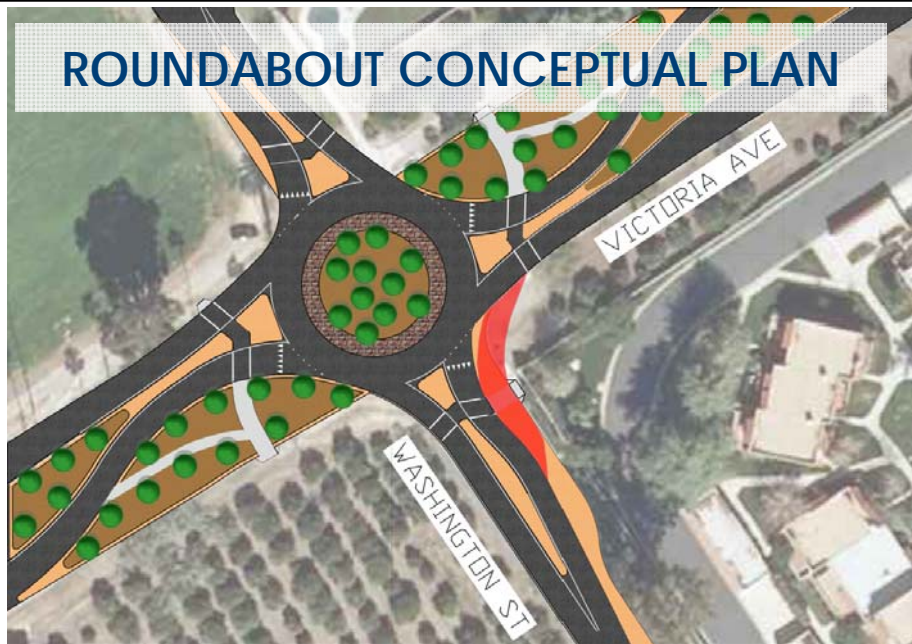
## SIGNAL MEDIAN IMPACTS



13

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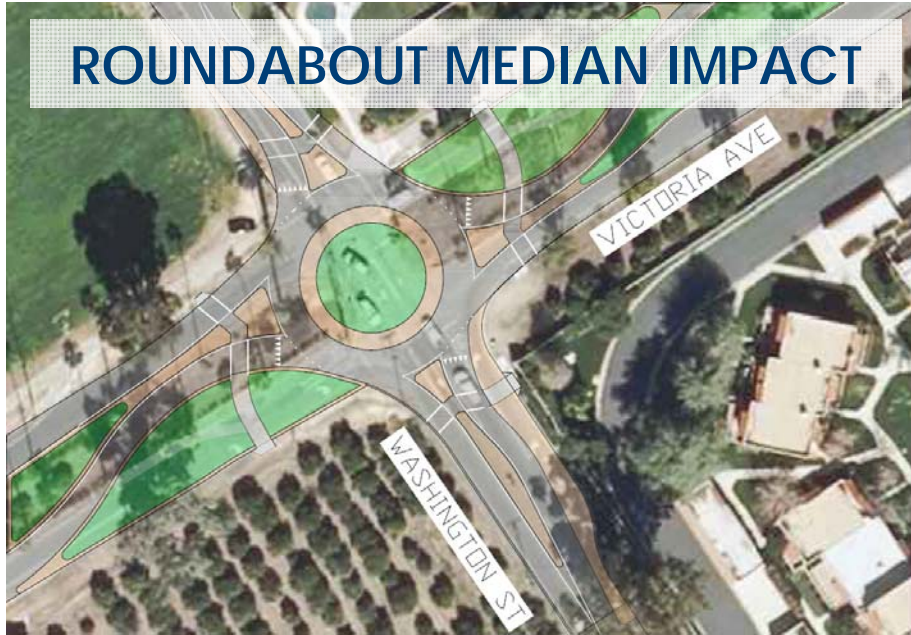
## ROUNDBOUT CONCEPTUAL PLAN



14

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## ROUNDAABOUT MEDIAN IMPACT



15

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## HISTORICAL & ENVIRONMENTAL REVIEW

1. Victoria Avenue is listed in the National Historic Register and is designated as a City Landmark.
2. The Cultural Heritage Board will require a Certificate of Appropriateness for either alternative, and a Cultural Resources Report would be prepared.
3. An Environmental Impact Report would fully assess potential impacts. ~\$100,000



16

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## MULTIPLE ROUNDABOUT LOCATIONS

1. Locations with reduced traffic demand will operate more efficiently.
2. A corridor with multiple roundabouts creates consistent speeds and consistent driver expectations.
3. The same potential for historical & environmental impacts exists at intersections adjacent to Washington Street.



17

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## RECOMMENDATIONS

That the Transportation Committee:

1. Receive and file information regarding traffic control alternatives at the intersection of Victoria Avenue & Washington Street; and
2. Discuss whether staff should pursue funding, alternative study, design, and implementation of alternative traffic control at Victoria Avenue & Washington Street.



18

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