# California Drive

## *Intersection Improvement Project*

***Public Meeting #2***
***May 24, 2016***


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# Welcome and Introductions

- Augustine Chou, City of Burlingame
  - Project Manager
- John Pulliam, Kimley-Horn
  - Civil/Roadway Design Consultant
- Kevin Aguigui, Kimley-Horn
  - Traffic Design Consultant




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## For this evening's meeting:

- Review Existing Intersection and Reasons for Project
- Comments Received at first Public Meeting
- Discuss Roundabout and Traffic Signal options
- Video "How to Drive in a Roundabout"
- Next Steps




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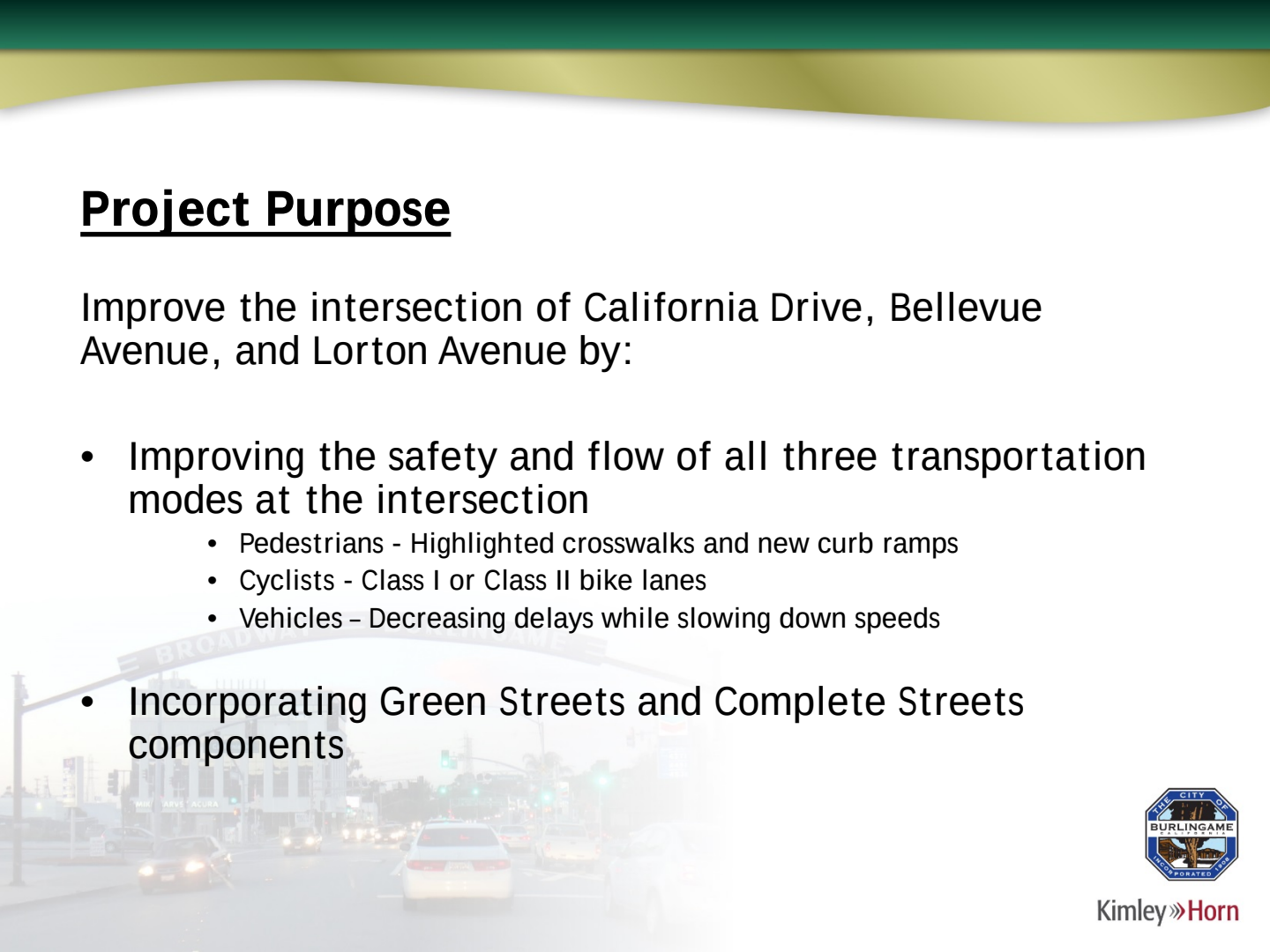
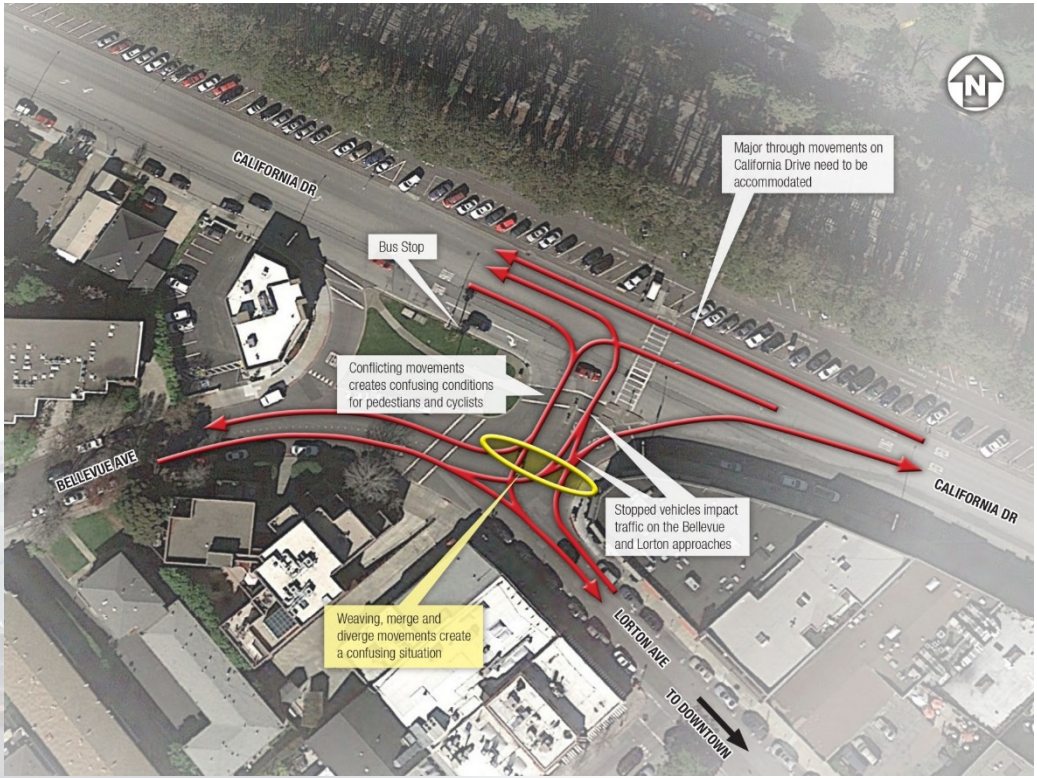
# Project Purpose

Improve the intersection of California Drive, Bellevue Avenue, and Lorton Avenue by:

- Improving the safety and flow of all three transportation modes at the intersection
  - Pedestrians - Highlighted crosswalks and new curb ramps
  - Cyclists - Class I or Class II bike lanes
  - Vehicles – Decreasing delays while slowing down speeds
- Incorporating Green Streets and Complete Streets components



# Existing Intersection Operations

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# Overview of Revised Concept Design

- 2-lane roundabout
- Centered toward tracks
- Emphasis on preserving parking (estimated removal of 4 parking spaces)
- Improved access to parking adjacent to tracks
- Expanded buffer sidewalk/landscape areas




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# Preliminary Project Concept

(Concept Based on Public Comments from Past Meetings)


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# Questions from Previous Public Meeting




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# Questions and Comments from Last Meeting

- Q: Is a roundabout always 2 lanes?

- A: No it does not have to be. Our team has proposed a 2-lane roundabout based on the results of our traffic analysis, and what is needed to accommodate the existing and forecast traffic volumes.




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# Questions and Comments from Last Meeting

- Q: Will there be lighting in the pedestrian crosswalks as part of the project?

- A: Street lighting will be included in the project, and this will include lighting the pedestrian crossings with safety street lighting (overhead lights).




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# Questions and Comments from Last Meeting

- Q: Can you make the northbound California Drive movement not go through the roundabout?

- A: The current concept includes a bypass lane for northbound California Drive, allowing vehicles in that lane to bypass the roundabout.




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# Questions and Comments from Last Meeting

- Q: Why are the roads leading to the roundabout so curved?

- A: Roads approaching the roundabout includes curves to slow down traffic to an appropriate speed to navigate the roundabout, as well as making it safer for pedestrians and cyclists.

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# Questions and Comments from Last Meeting

- Q: It appears the roundabout will take away green space. Can it be preserved?

- A: The concept has been revised to include widened pedestrian/landscaping areas.




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# Questions and Comments from Last Meeting

- Q: Can there be parking lot improvements along California Drive?

- A: The City leases but does not own that land. Work in the parking lot is currently not part of the project scope.




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# Questions and Comments from Last Meeting

- Q: Can the roundabout be moved toward California Drive?

- A: The concept has been revised to shift the roundabout as close to the tracks as possible without impacting the parking lot.




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# Questions and Comments from Last Meeting

- Q: The parking lot along California Drive is underutilized. There should be a safe connection from downtown to that side of the street.

- A: The project will improve pedestrian access between the parking lot and downtown.




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# Questions and Comments from Last Meeting

- Q: Concerns were raised about impacts from a roundabout to through traffic on California Drive.

- A: Through traffic on California Drive (and on all other streets) will actually experience less delay from a roundabout than a traffic signal.




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# Questions and Comments from Last Meeting

- Q: Concerns were raised educating drivers on how to use the roundabout, particularly younger drivers.

- A: The City intends to provide education to drives if a roundabout is constructed.




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# Questions and Comments from Last Meeting

- Q: Comments were provided for some sort of art in the center, and for a gateway feature to be incorporated. Also a question about whether the center of the roundabout could be an accessible park.

- A: Art and gateway features will be considered if the project moves into final design. It is not feasible or safe to allow pedestrians into the center of the roundabout, but there may be an opportunity for a small park area adjanct to the roundabout.

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# Questions and Comments from Last Meeting

- Q: The design should consider future bike paths and connections.

- A:  The team will consider future projects, including any bike or pedestrian facilitates along California.




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# Questions and Comments from Last Meeting

- Q: If there is parking loss, please indicate where and how that will be mitigated.

- A: The team will identify areas of parking loss and intends to preserve as much on-street parking as possible.




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# Questions and Comments from Last Meeting

- Q: A few comments addressed a preference for a lane diet on California and a one-lane roundabout.

- A: Given the traffic counts, a one-lane roundabout would significantly impact traffic. A lane diet along California Drive is currently not an adopted strategy by the City.

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# Questions and Comments from Last Meeting

- Q: Current parking lot is under-utilized. Need to look at how to make it more attractive.

- A: The design team intends to provide safer pedestrian access across California Drive as part of the project.




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# Questions and Comments from Last Meeting

- Q: Is this a done deal? Has the decision to construct a roundabout already been made?

- A: The City is headed in the direction of a roundabout, but is continuing to seek out public input. In addition, the grant funding acquired for this project is specifically for a roundabout. If another alternative is selected, the grant funding would likely be lost and alternative funding will need to be identified.

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# Questions and Comments from Last Meeting

- Q: Why a roundabout and why not a traffic signal?

- A: There were a number of comments at the last meeting asking, “Why not a traffic signal?” The City understands the publics concern. DKS study from 2007 identified the roundabout as the preferred alternative, but we asked our consultants to go back and take a second look, and make sure the roundabout is the right option.

# Simulations

# Operational Analysis: Signal

- Southbound California Drive. Right turns onto Lorton Avenue may queue past Caltrain parking exit and can potentially block through movements, limiting operations.
  - Currently set to No Right Turn on Red due to Lorton Avenue storage limitations.
  - Existing bus stop located in right turn bay. May need to be relocated. If not, will likely further impact queuing.
- Northbound bus stop must be relocated as it will be in middle of signalized intersection.
- California Drive operates acceptably under green but under certain conditions queues on California Drive reach excessive lengths when other movements must be serviced.
- Pedestrian phase across California tied to Lorton/Bellevue movements. If no vehicle demand present, vehicles still need to hold for pedestrians. In simulation, there are times where no vehicles are moving through intersection while peds are being serviced.
- Pedestrians still have few options to navigate through the area and only one way to cross California Drive
- Intersection operates at LOS C under 2016 volumes but operations are anticipated to degrade under future volume growth.

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# Operational Analysis: Roundabout

- Yield control allows continuous movement of vehicles; greater ability to efficiently service high and low volumes
- Northbound bypass lane allows one direction of California drive to avoid entering circulating intersection.
- Pedestrians have two routes to cross California drive and refuge areas provide safe buffers from vehicles.
- Merging/Diverging movements in roundabouts potentially reduce severe crashes such as T-Bone and head-on typically observed at signalized intersections. (Sideswipes are less dangerous types of crashes and are more common at roundabouts).
- Lorton/Bellevue delay considerably less than signalized intersection.
- Bus stops are to be relocated outside of roundabout.

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# Operational Comparisons

**Signal:**

**Node A: California Drive/Lorton Avenue**

| Approach | | 2016 – PM | | |
|---|---|---|---|---|
| | | LOS | Delay (s) | 95%ile Queue (ft) |
| **Lorton Ave** | (SOUTHEAST) | A | 2 | 14 |
| **California Drive** | (NORTHBOUND) | C | 24 | 258 |
| **California Drive** | (SOUTHBOUND) | D | 60 | 335 |
| **Intersection** | | **D** | 37 | 296 |

**Node B: Lorton Avenue/Bellevue Avenue**

| Approach | | 2016 – PM | | |
|---|---|---|---|---|
| | | LOS | Delay (s) | 95%ile Queue (ft) |
| **Lorton Av** | (EASTBOUND) | A | 5 | 9 |
| **Bellevue Ave** | (WESTBOUND) | C | 27 | 99 |
| **Lorton Ave** | (SOUTHBOUND) | C | 27 | 60 |
| **Intersection** | | **B** | 15 | 99 |

**Roundabout:**

| Approach | | 2016 – PM | | |
|---|---|---|---|---|
| | | LOS | Delay (s) | 95%ile Queue (ft) |
| **Lorton Ave** | (SOUTHEAST) | **A** | **8** | **15** |
| **California Drive** | (NORTHBOUND) | **A** | **2** | **36** |
| **California Drive** | (SOUTHBOUND) | **A** | **9** | **61** |
| **Bellevue Ave** | (SOUTHWEST) | **A** | **9** | **15** |
| **Intersection** | | **A** | **6** | **61** |



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# Next Steps

- Gather up tonight's comments, feedback, and suggestions.
- Begin preliminary design work, and attempt to incorporate all comments and suggestions into design analysis.
- Prepare streetscape renderings to show potential aesthetic project elements to consider.
- Prepare for a 3rd public meeting in late Fall to present preliminary design and show potential aesthetic elements.
- Gather public input on landscape elements, hardscaping, gateway features, and other amenities .


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# Thank You!

For more information, please contact:

*Augustine Chou*
*Engineering Program Manager*
*City of Burlingame*
*501 Primrose Road*
*(650) 558-7230*
*AChou@burlingame.org*


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