

I-80 at Gilman Street Interchange Roundabouts

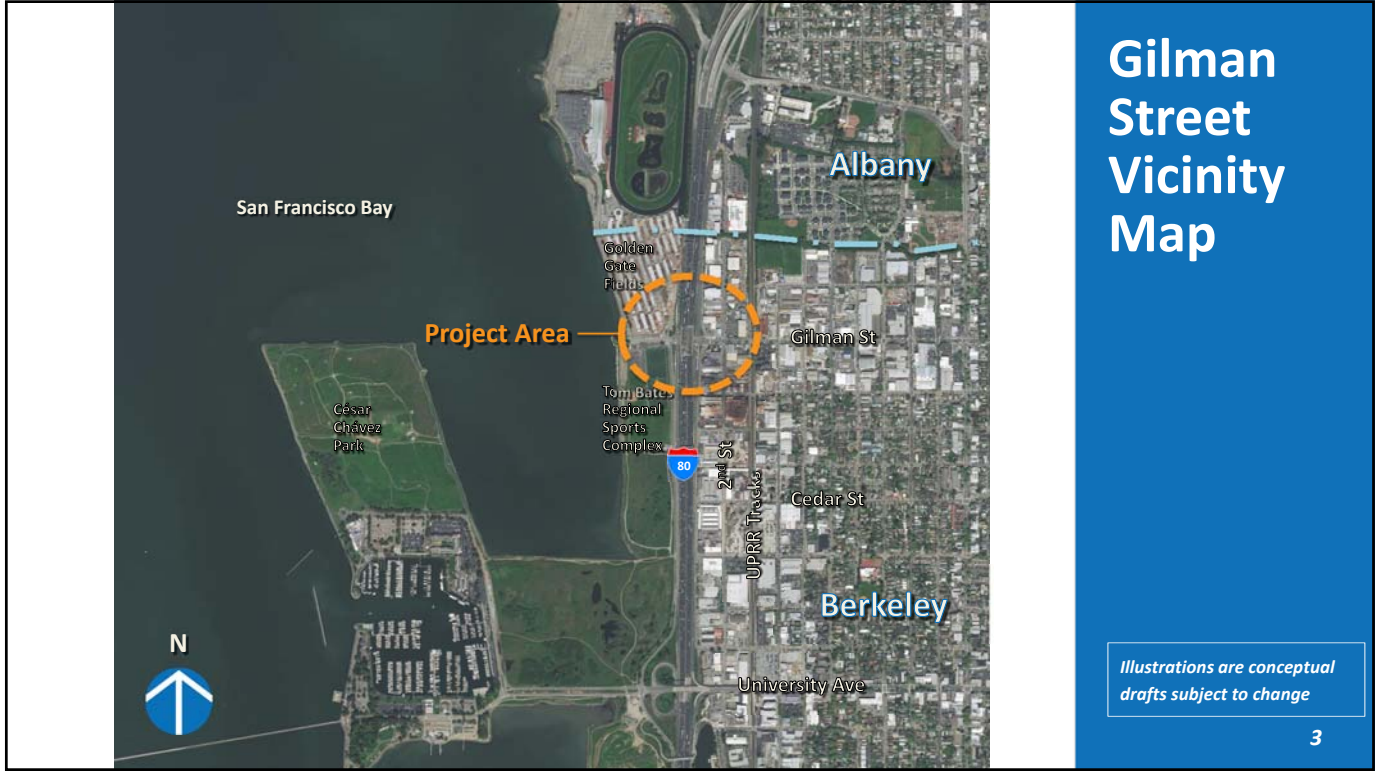
07 February 2018

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Presentation Overview

- » Project Planning Process
- » Project Components
- » Project Implications
- » Future Steps

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Gilman Street Vicinity Map

Illustrations are conceptual drafts subject to change



Collision Data 2012-2015

Illustrations are conceptual drafts subject to change

Interchange is also identified by the City of Berkeley as "high stress" for bicyclists.
 Source: 2017 City of Berkeley Bicycle Plan

Past Studies

- » West Berkeley Parking and Circulation Study (1998)
- » Gilman Street Interchange Improvement Study (2005)
- » Draft Project Study Report (PSR) (2005)
- » West Berkeley Circulation Master Plan Report (2009)
- » Project Study Report-Project Development Support (PSR-PDS) (2014)

These studies concluded:

- » Signalization and stop signs would both fail.
- » No room for diamond interchange.
- » Only workable solution is roundabouts.

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Project Partners

- » Caltrans
- » Alameda County Transportation Commission (ACTC)
- » City of Berkeley
- » City of Albany

Consultant Team Key Members

- » Parsons – Project Management
- » OMNI-MEANS – Roundabout Design
- » TJKM – Traffic Engineering
- » PlaceWorks – Public Engagement

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Project Purpose

- » Improve safety for all modes of transportation.
- » Simplify and improve the navigation, mobility, and traffic operations at the I-80/Gilman Street interchange.
- » Reduce congestion, vehicle queues and conflicts at the I-80/Gilman Street interchange.
- » Improve local and regional bicycle connections and pedestrian facilities through the I-80/Gilman Street interchange.

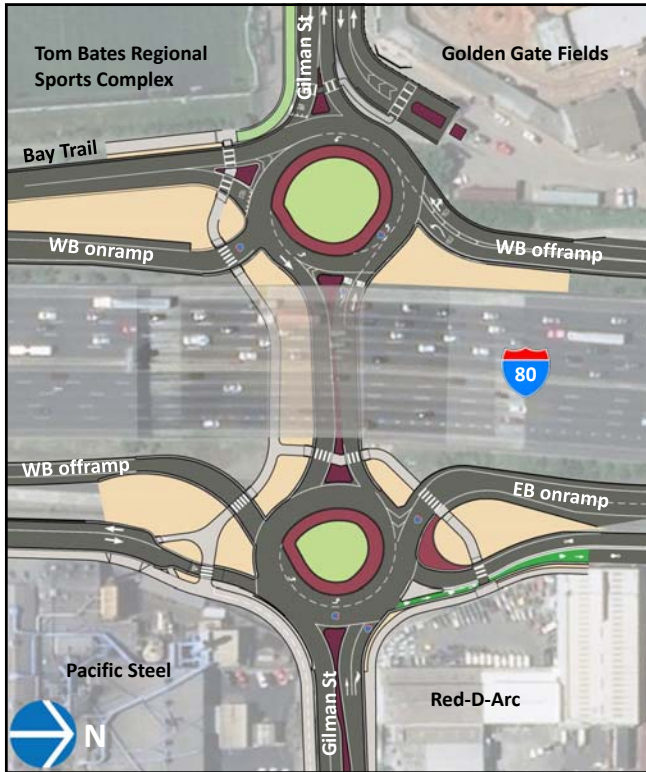


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Project Planning Meetings To Date

- » March 15, 2016: Meeting with Public Agencies
- » March 17, 2016: Meeting with Community Based Organizations
- » March 24, 2016: Meeting with Business Owners
- » April 14, 2016: Meeting with Pacific Steel Casting
- » April 27, 2016: Open House
- » May 4, 2016: Meeting with Business Owners
- » August 26, 2016: Meeting with Golden Gate Fields
- » August 29, 2017: Meeting with Business Owners
- » Late 2017 – 2018: On-going meetings with City of Berkeley, City of Albany, and other stakeholders

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- » Two roundabouts
- » Landscaped areas
- » Sidewalks and at-grade path through interchange
- » Pedestrian / bike overcrossing (POC) over I-80 to the north or south
- » Gilman Street cycle track to new signal at Fourth Street
- » Bike improvements from Gilman / Fourth Street to Codornices Creek
- » New access to Golden Gate Fields stables
- » Bay Trail gap closure at foot of Gilman Street

Design Elements

Illustrations are conceptual drafts subject to change

Design Elements

Southern POC Option



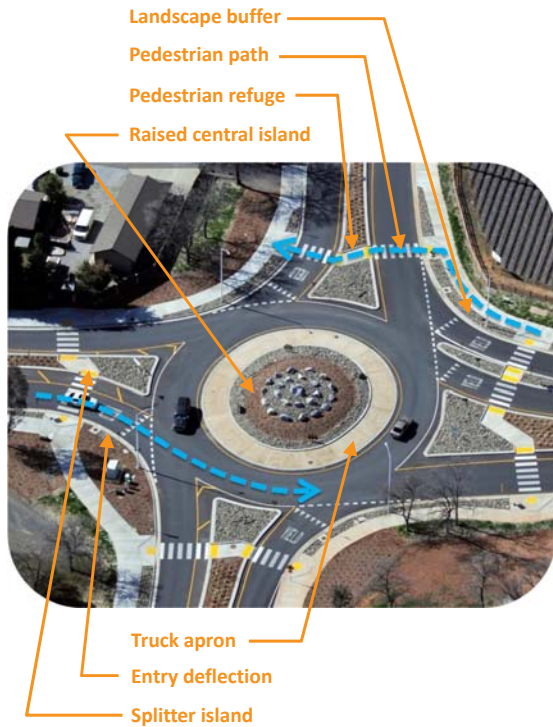
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Design Elements

Northern POC Option



Roundabout Operations



- » Only need to watch for traffic coming from one direction at a time
- » Shorter, simpler pedestrian crossings
- » Slower traffic
- » Pedestrian refuges
- » Landscape separation
- » Shared-use path

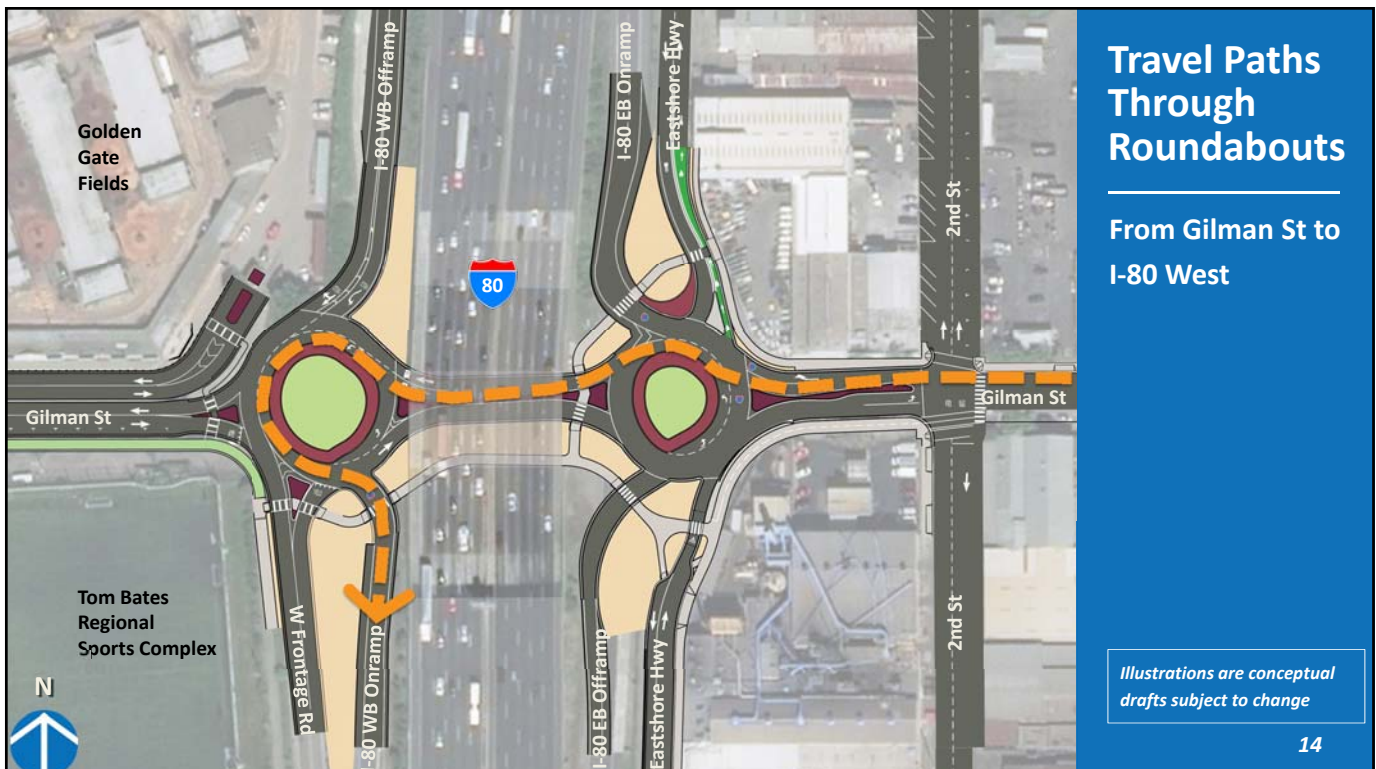
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Roundabout Safety – Why Roundabouts?

- » Improves overall safety
- » According to the Federal Highway Administration, installing a roundabout typically results in:
 - 76% reduction in injury collisions
 - 90% reduction in fatality collisions
 - 40% reduction in pedestrian injuries
 - 75% fewer conflict points compared to standard intersections

Source: Federal Highway Administration, Safe Roads for a Safe Future, 2015.

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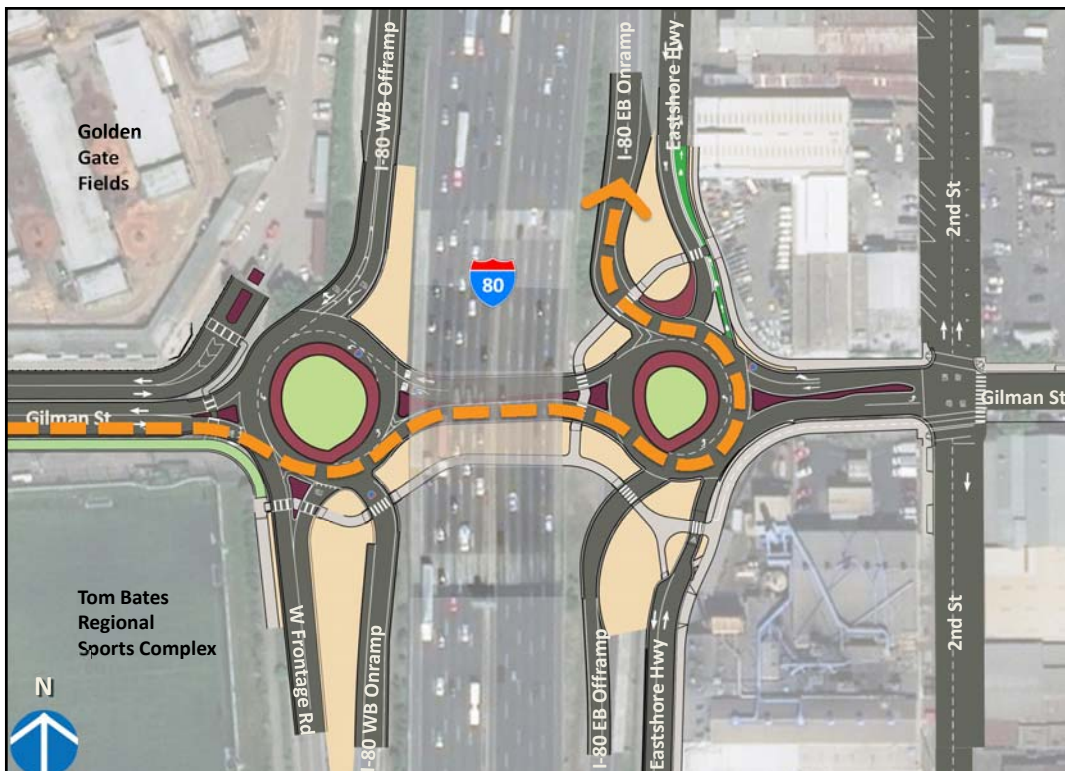


Travel Paths Through Roundabouts

From Gilman St To Golden Gate Fields and Eastshore State Park

Illustrations are conceptual drafts subject to change

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Travel Paths Through Roundabouts

From Eastshore State Park to I-80 East

Illustrations are conceptual drafts subject to change

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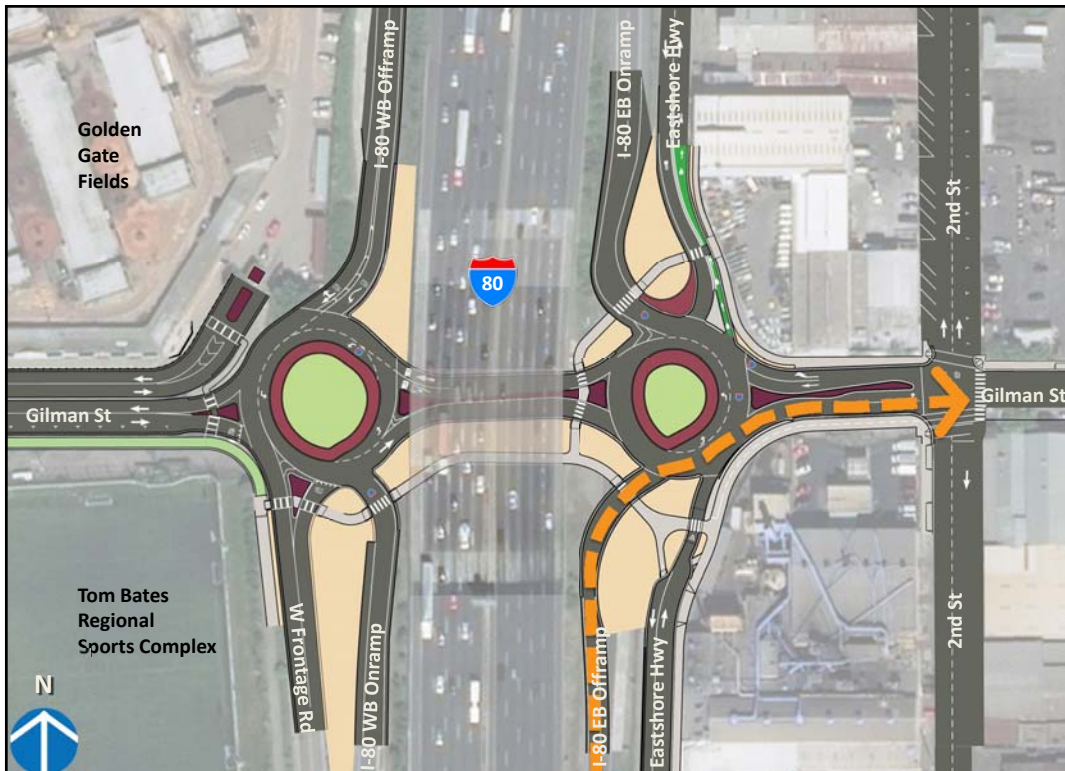


Travel Paths Through Roundabouts

From West Frontage Road south Gilman Street to I-80 East

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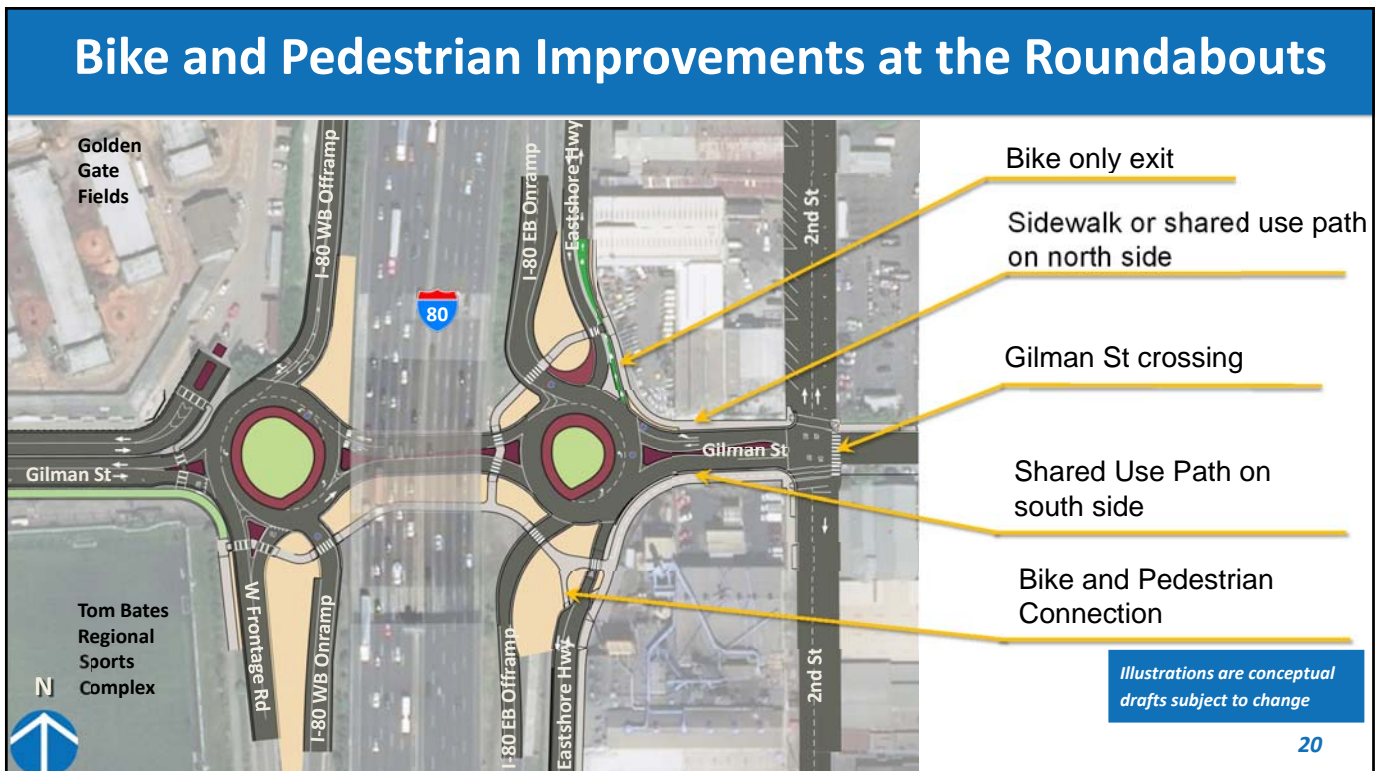
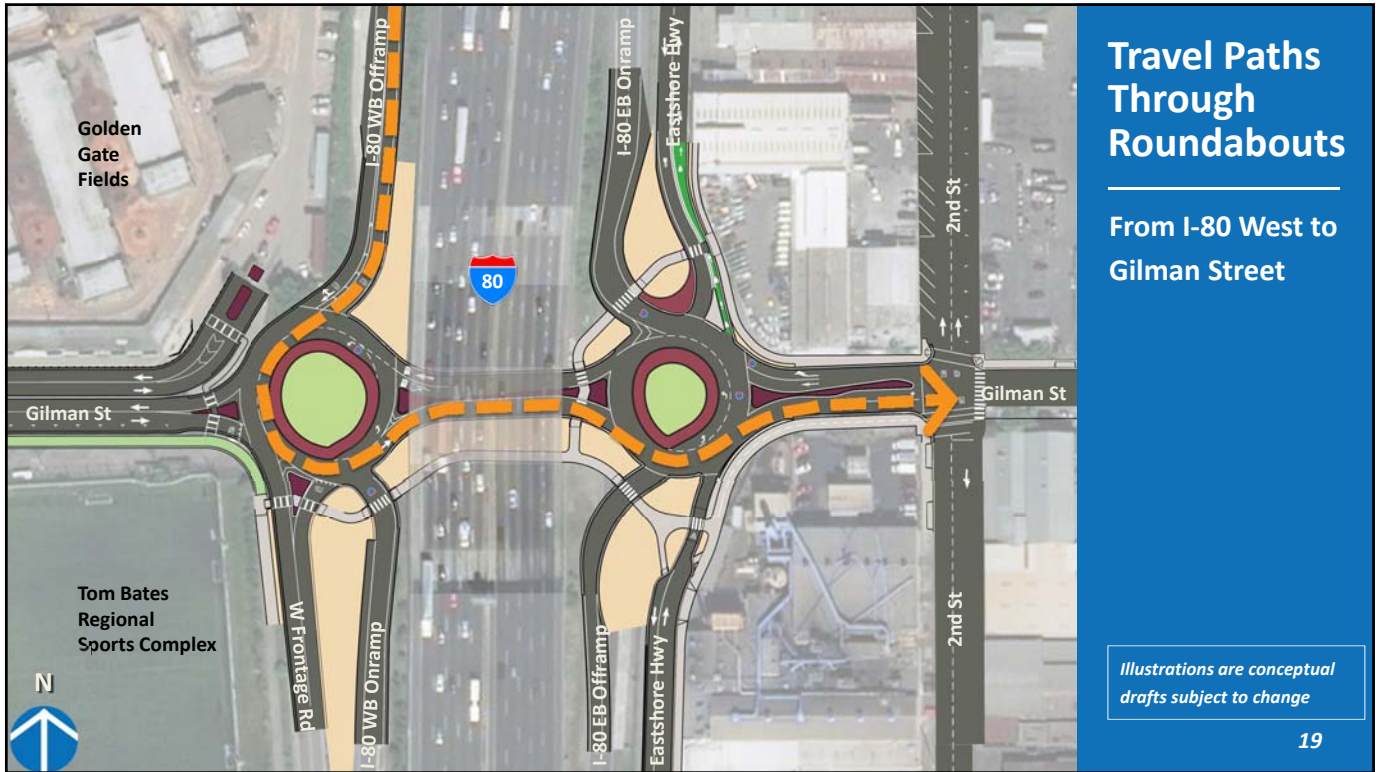


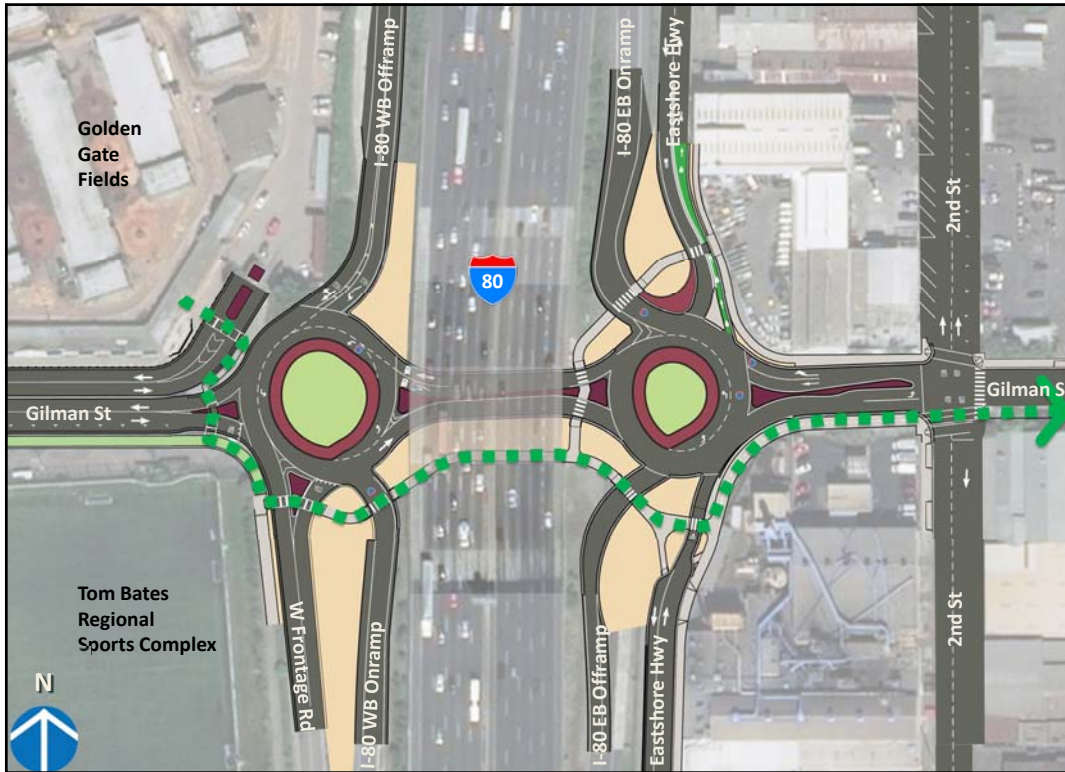
Travel Paths Through Roundabouts

From I-80 East to Gilman Street

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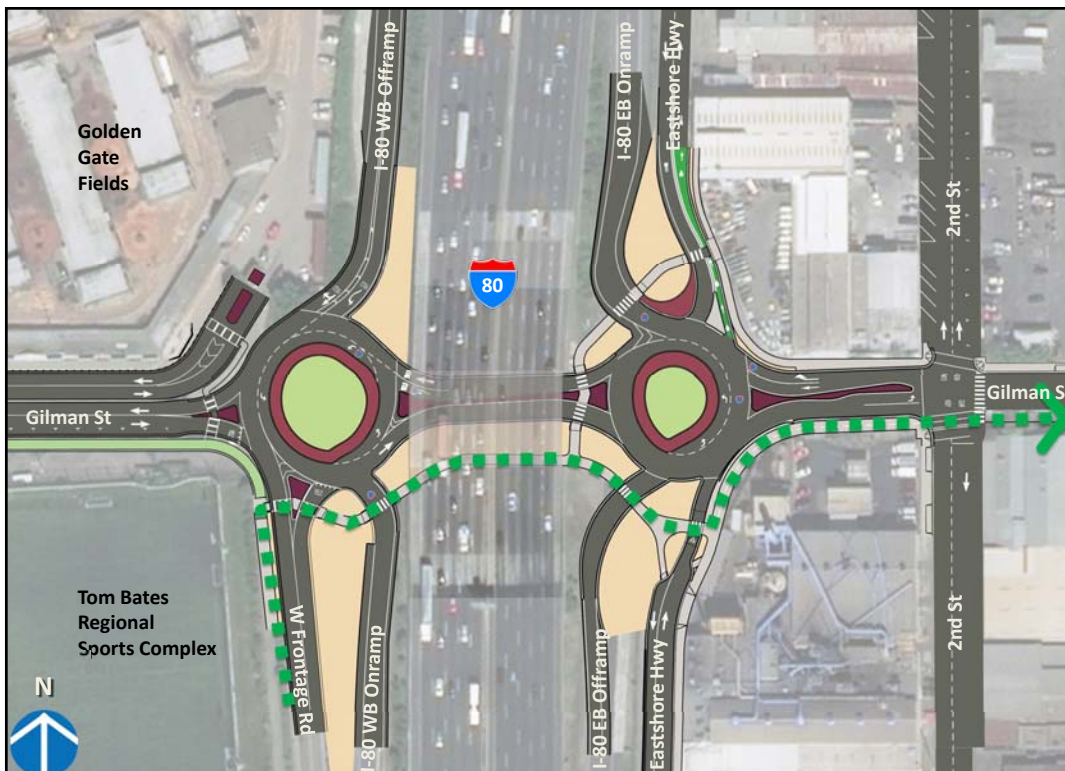




Travel Paths Through Roundabouts

Pedestrian/
Bicycle route
from West
Frontage Road,
north of Gilman
Street, to east

*Illustrations are conceptual
drafts subject to change*



Travel Paths Through Roundabouts

Pedestrian/
Bicycle route
from West
Frontage Road,
south of Gilman
Street, to east

*Illustrations are conceptual
drafts subject to change*

Roundabout Visual Simulation

Eastern Roundabout viewed from northwest near Golden Gate Fields



Illustrations are conceptual drafts subject to change

Pedestrian Overcrossings

Southern POC Option



Illustrations are conceptual drafts subject to change

Pedestrian Overcrossings

Northern POC Option



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Pedestrian Overcrossing Features

Separate bicycle and pedestrian areas



Bay Bridge east span path



University Avenue bike/pedestrian overcrossing

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South Pedestrian Overcrossing Option

Visual simulation from Interstate 80 Eastbound looking north

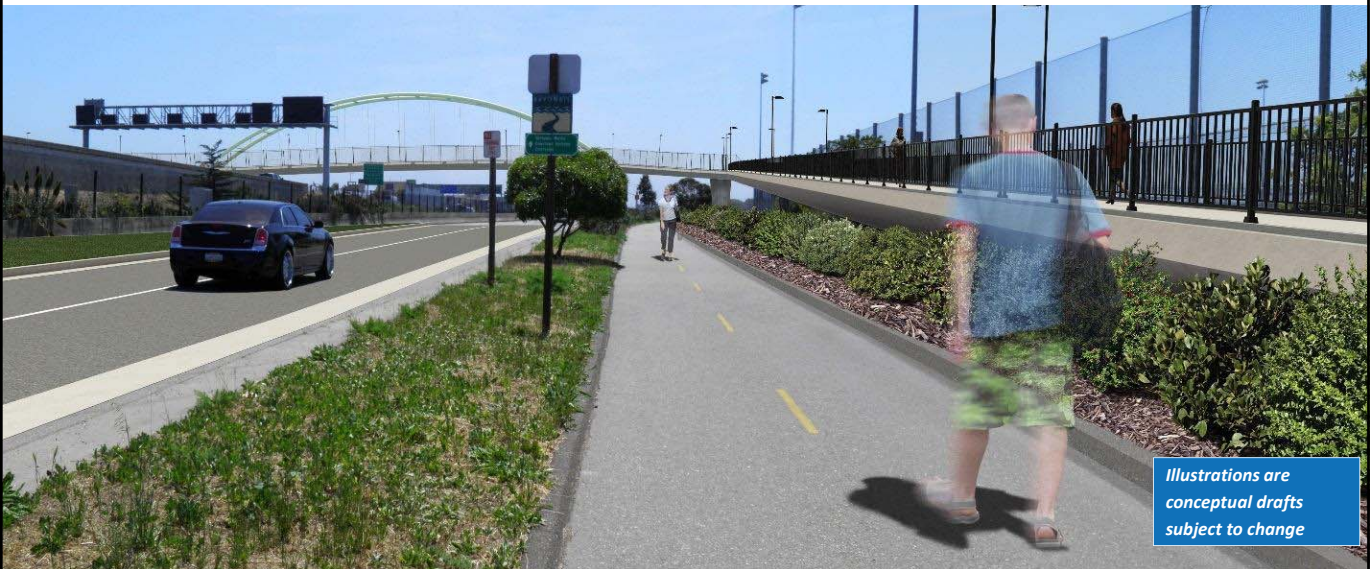


Illustrations are conceptual drafts subject to change

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South Pedestrian Overcrossing Option

Visual simulation from Bay Trail southwest of Gilman Street



Illustrations are conceptual drafts subject to change

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South Pedestrian Overcrossing Option

Visual simulation from Eastshore Highway southeast of Gilman Street



Illustrations are conceptual drafts subject to change

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North Pedestrian Overcrossing Option

Visual simulation from Interstate 80 Westbound looking south



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North Pedestrian Overcrossing Option

Visual simulation from west end of Gilman Street



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North Pedestrian Overcrossing Option

Visual simulation from Harrison Street looking west



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Two-Way Cycle Track



Bancroft Way, Berkeley

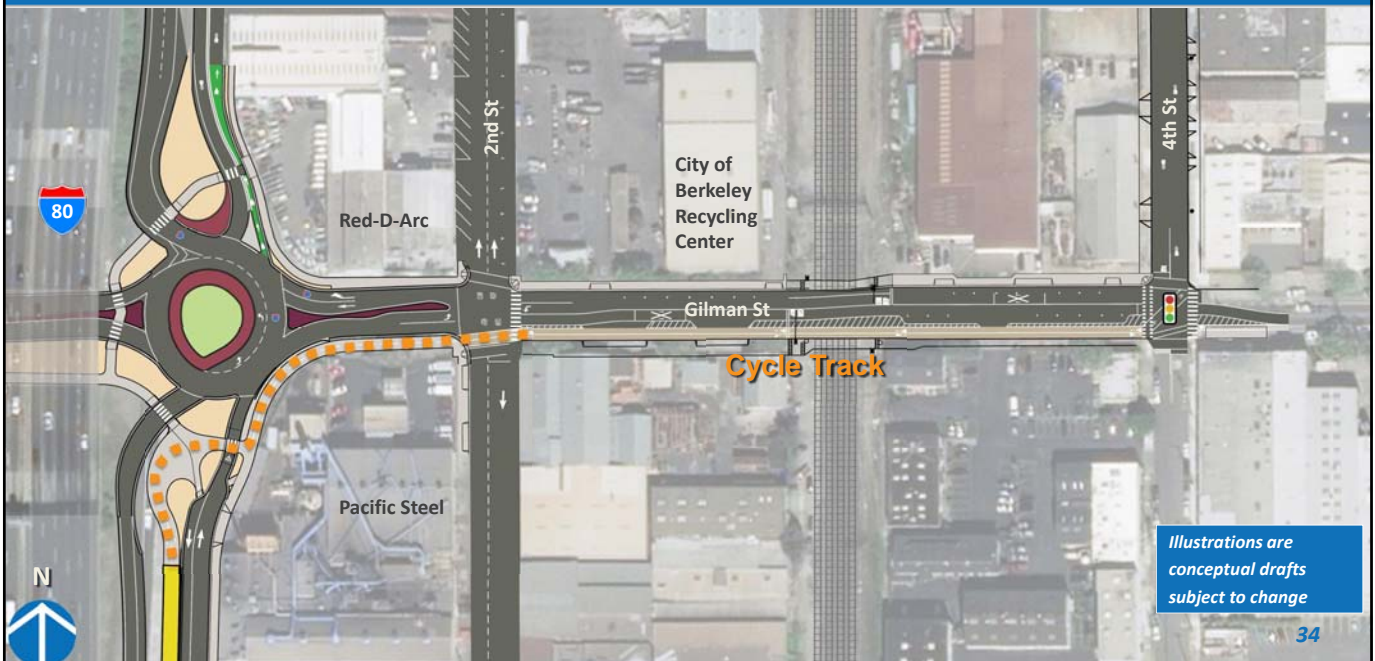


San Pablo Ave, Albany

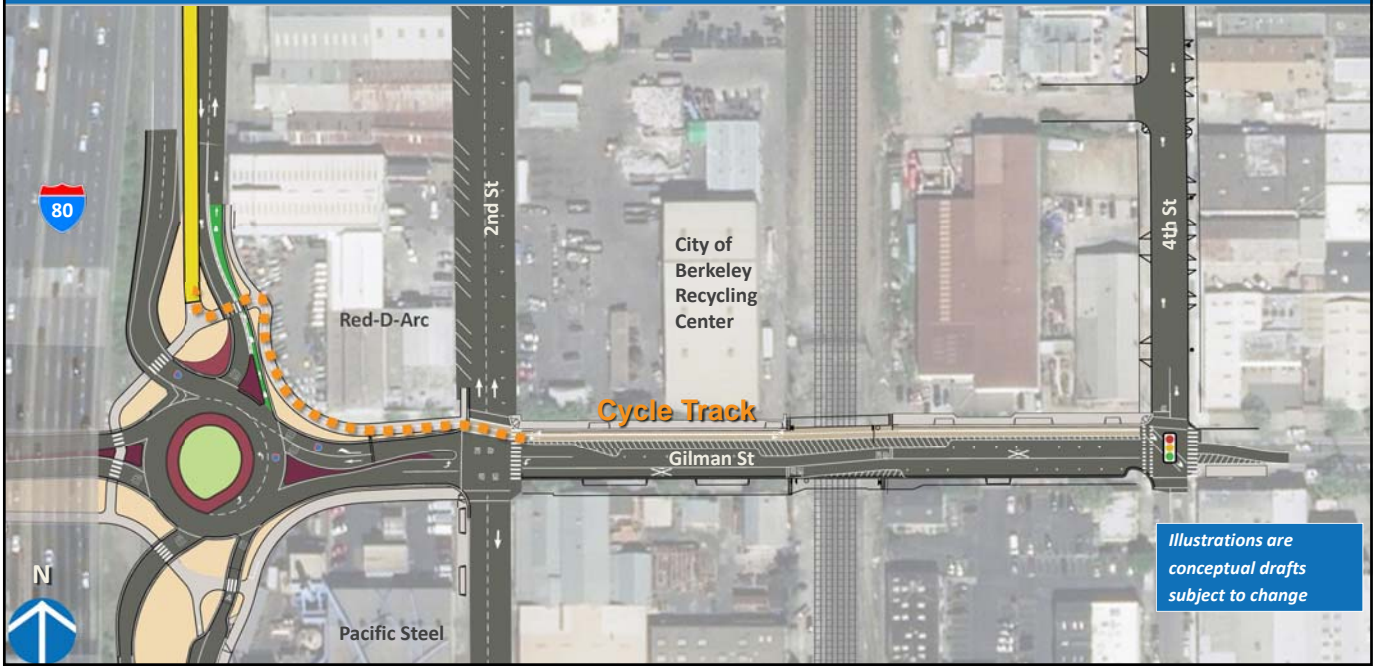


Bancroft Way, Berkeley

Gilman Street Cycle Track (Southern POC)



Gilman Street Cycle Track (Northern POC)



Restriped parking and crosswalks

New bicycle sharrows

New traffic signal at Gilman and 4th St

Gilman St to Codornices Creek Connection

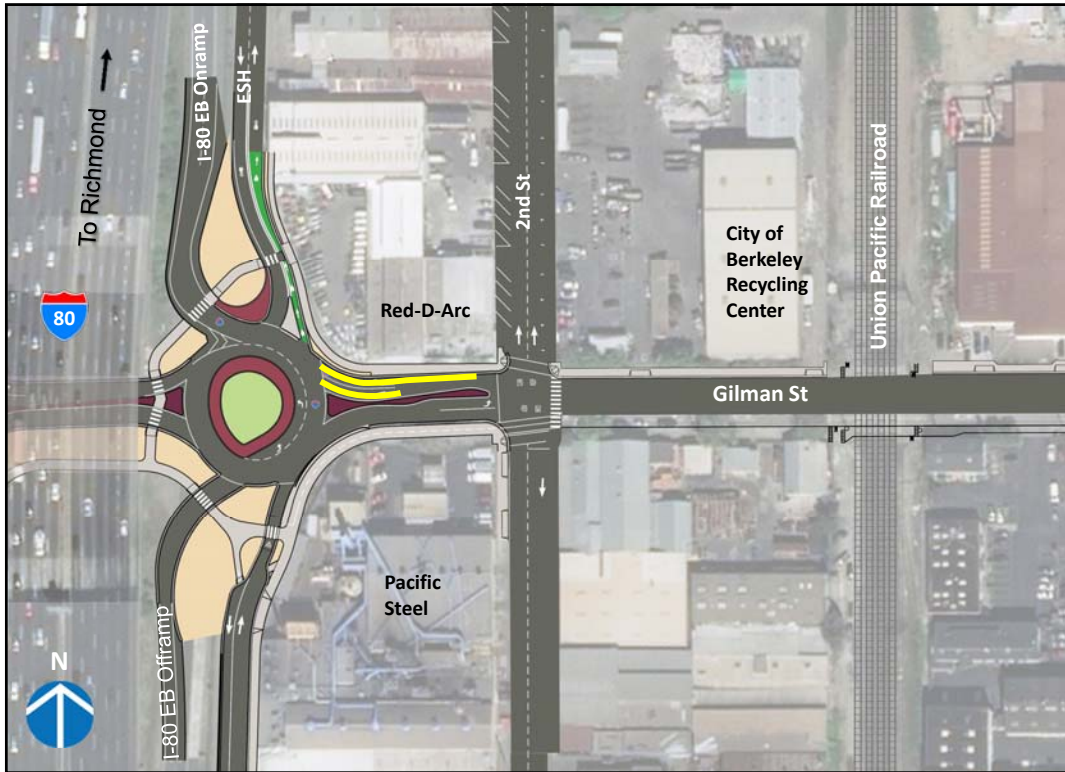
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Bay Trail Gap Closure



Project Implications

- » Vehicle Queuing
- » Right-of-Way issues
- » Change in access between Gilman and Eastshore Highway
- » Changes to Golden Gate Fields access



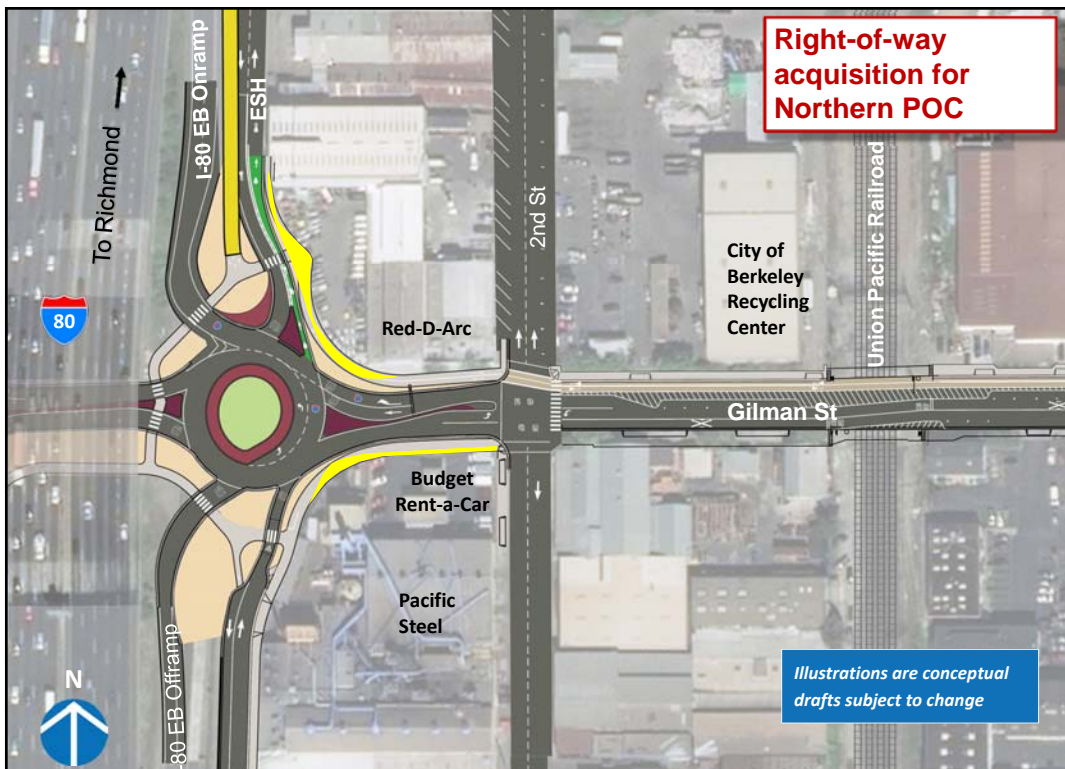
Queuing

Westbound Vehicle queues extend 183'

Vehicle Queue

Illustrations are conceptual drafts subject to change

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Right-of-way acquisition for Northern POC

Right-of-Way Acquisition

The project requires ROW takes on west side of freeway.

Southern POC requires no additional right-of-way acquisitions on east side of freeway.

Northern POC requires limited right-of-way acquisition at Red-D-Arc / Airgas, Pacific Steel and Budget Rent-a-Car (where curb cuts will be moved from Gilman to Second).

Illustrations are conceptual drafts subject to change

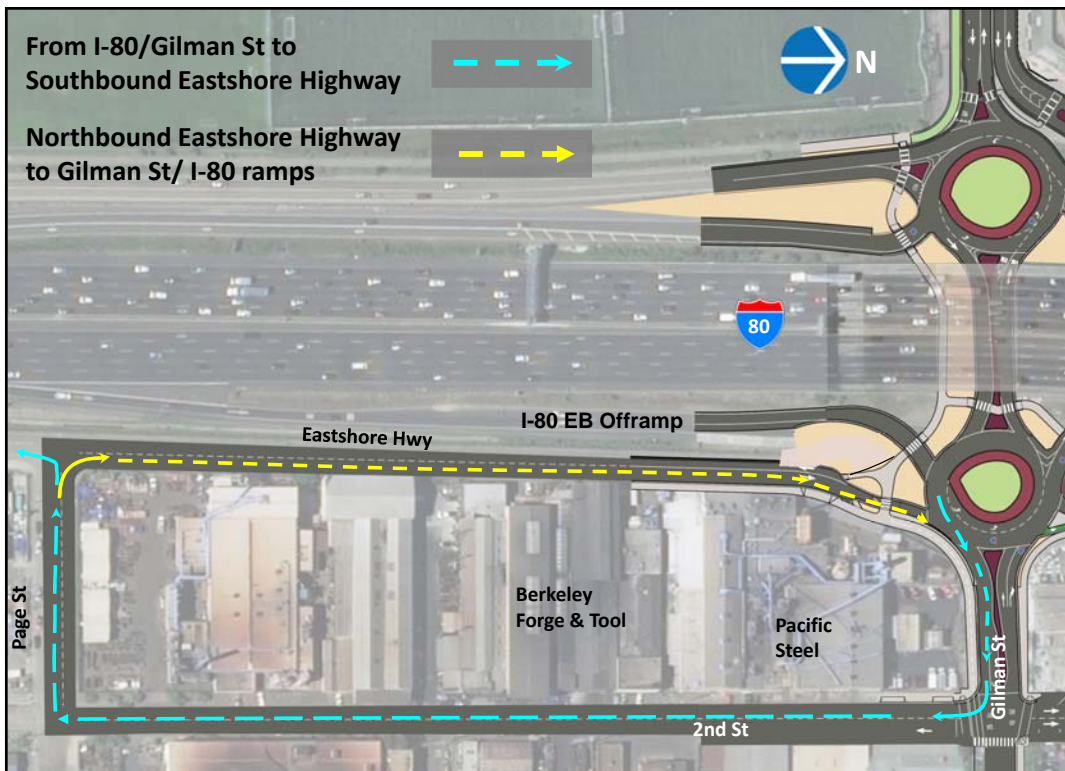
 **Right of way take**

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Change in Vehicular Access

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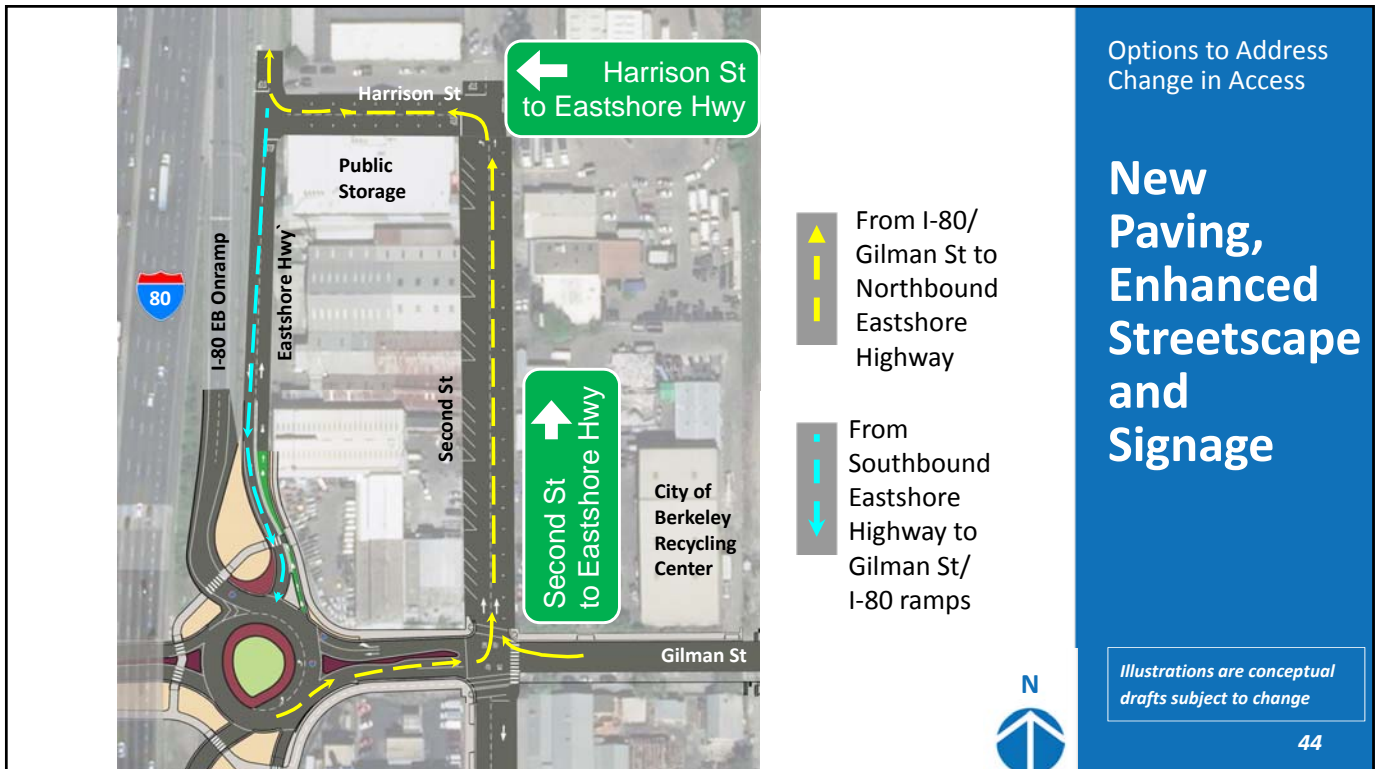


SB Eastshore Highway Access via Second St

Illustrations are conceptual drafts subject to change

Options to Address Change in Access

- » **Enhanced paving, streetscape and signage**
- » **Full roundabout access northbound**
 - Access to and from Eastshore Highway north of Gilman
 - Includes right turn from Gilman westbound to Eastshore Highway northbound
 - Access from Gilman to Eastshore Highway southbound would still be closed
- » **Right turn only northbound**
 - From Gilman westbound to Eastshore Highway northbound only
- » **One-way Second Street south of Gilman Street**
 - From Gilman to Page Street



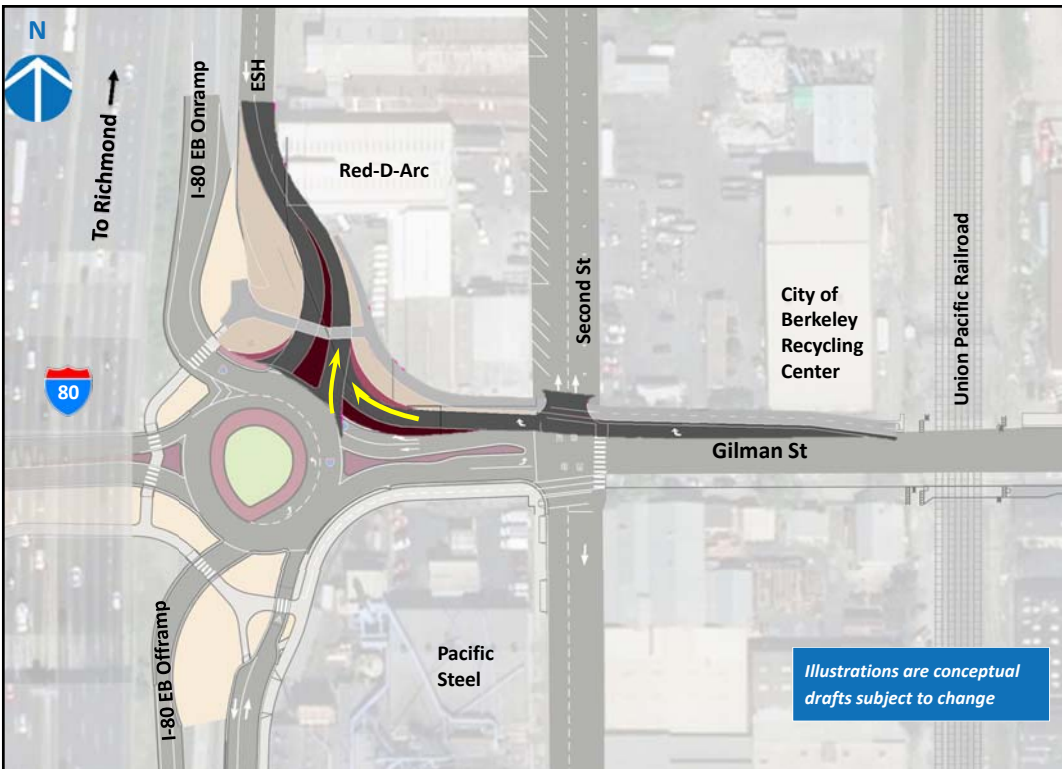


Visual simulation of Second Street looking north from Gilman

Options to Address Change in Access

New Paving, Enhanced Streetscape and Signage

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Options to Address Change in Access

Full Roundabout Access Northbound

- » Bike and vehicle access to northbound Eastshore Highway from the roundabout
- » Right turn lane from Gilman westbound
- » Would not include direct access from roundabout to Eastshore Highway southbound

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Westbound Vehicle queues extend 350' creating conflicts with Second Street.

— Vehicle Queue

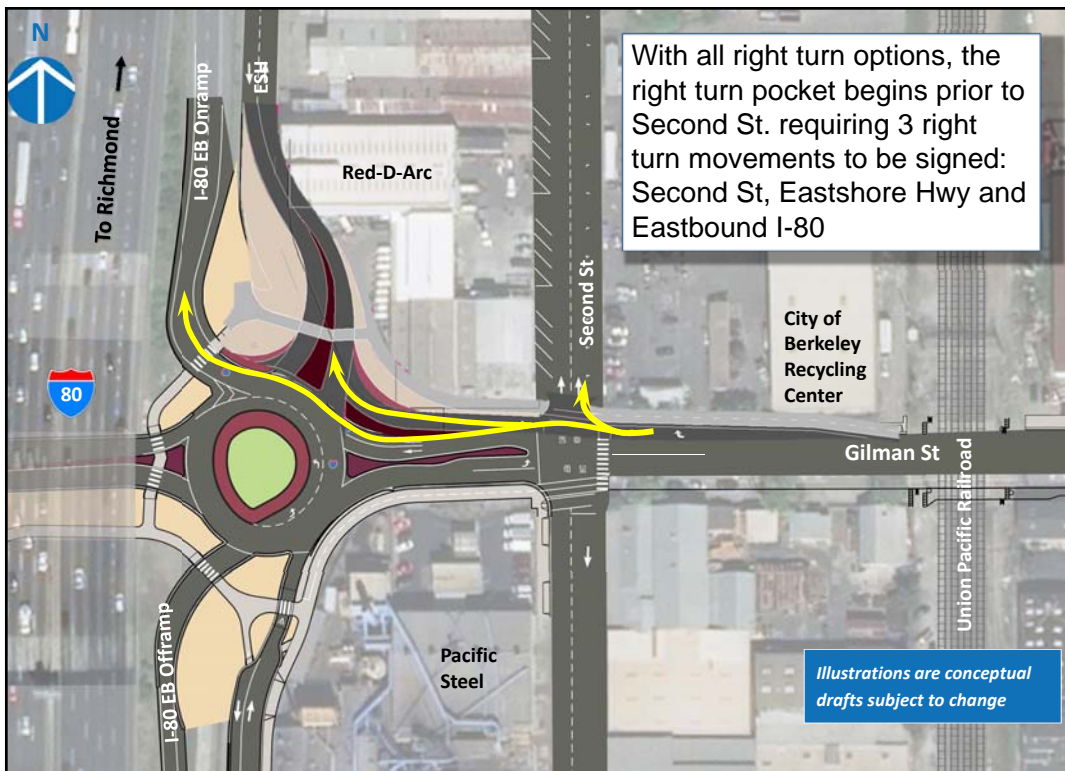
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Options to Address Change in Access

Full Roundabout Access Northbound

Implication #1

Longer, unacceptable queuing



With all right turn options, the right turn pocket begins prior to Second St. requiring 3 right turn movements to be signed: Second St, Eastshore Hwy and Eastbound I-80

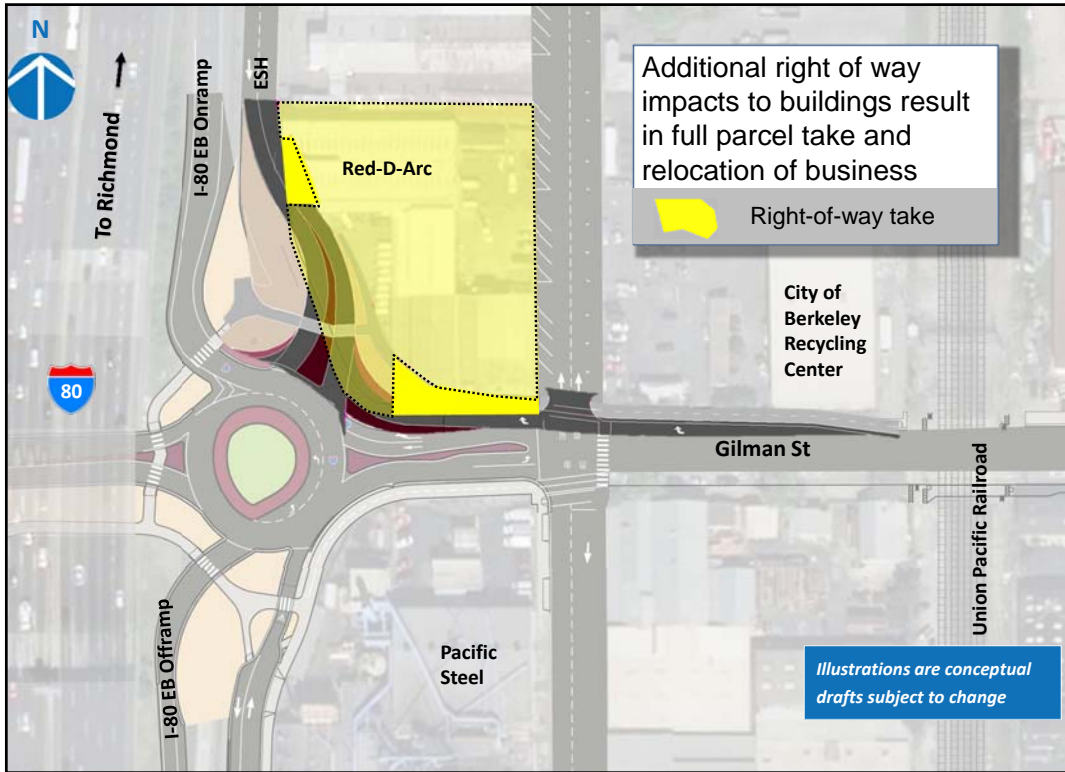
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Options to Address Change in Access

Full Roundabout Access Northbound

Implication #2

Three right turns from a single lane could confuse motorists

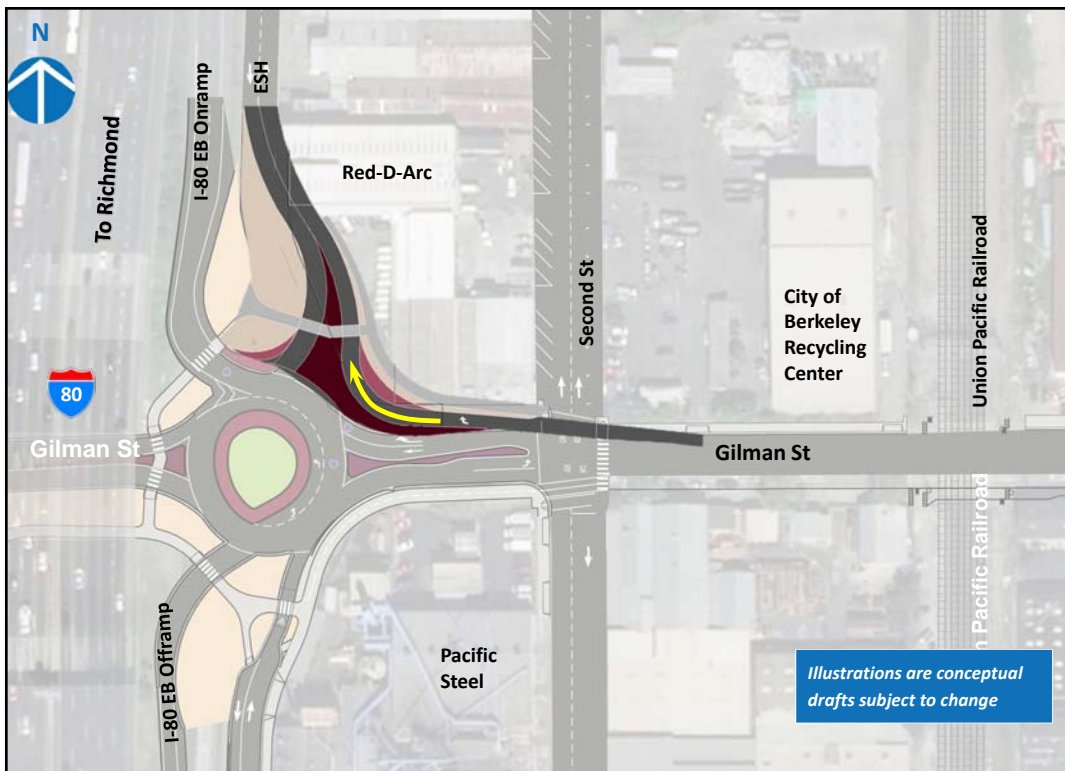


Options to Address Change in Access

Full Roundabout Access Northbound

Implication #3

Full take of Red-D-Arc building and business



Options to Address Change in Access

Right Turn only from Gilman St westbound to Eastshore Highway northbound

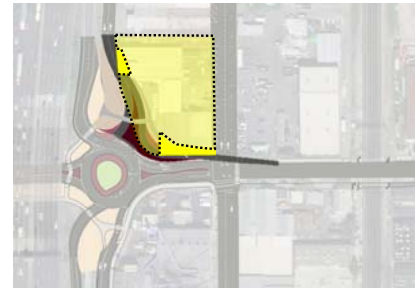
Options to Address Change in Access Right Turn Only Implications



Queuing returns to previously predicted levels



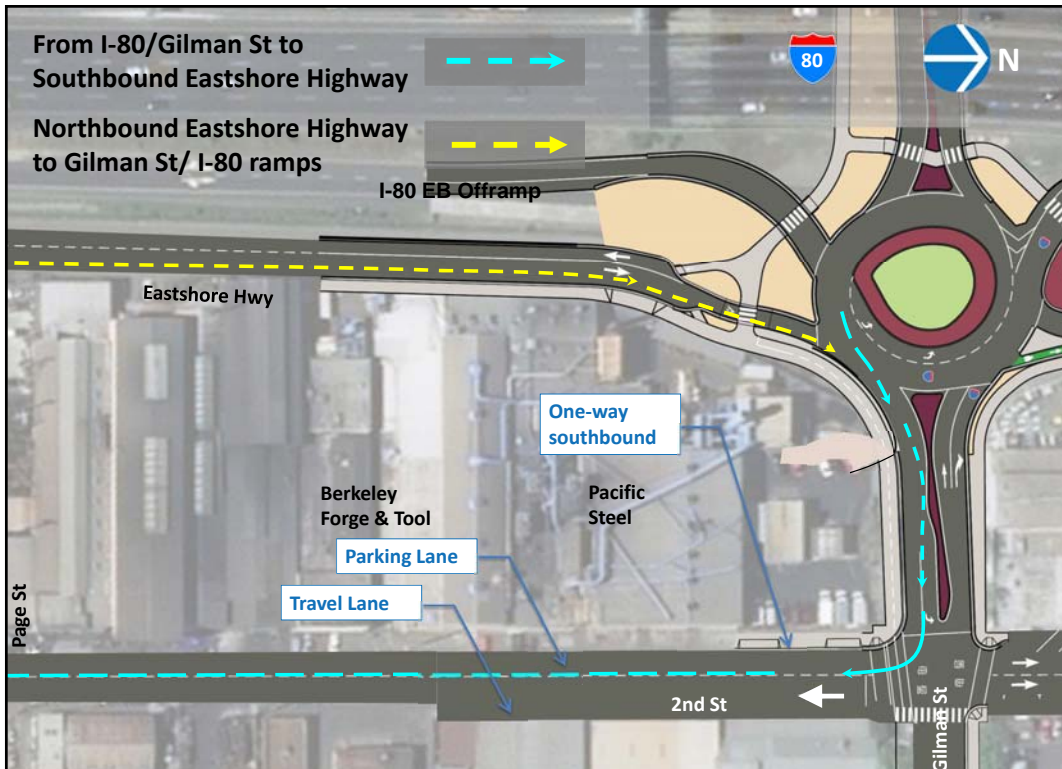
Shorter queuing length means that adequate signage could be provided



Same ROW take as for roundabout with full northbound access



Illustrations are conceptual drafts subject to change



SB Eastshore Highway Access via Second St

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Changes to Golden Gate Fields Access



Future Steps

- » **City presentations**
 - Berkeley Transportation Commission: February or March
 - Albany City Council: February or March
- » **On-going outreach**
- » **Preparation of environmental document**
- » **On-going design and project refinement**
- » **Construction: Late 2019 through 2022**

I-80 GILMAN

I-80 at Gilman Street Interchange Roundabouts

07 February 2018

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