

RAILYARD ALTERNATIVES & I-280 BOULEVARD (RAB) FEASIBILITY STUDY PHASE I: PRELIMINARY OPTIONS ANALYSIS

San Francisco Planning Department
SFCTA Board of Directors – April 26, 2016

San Francisco
Planning

An aerial, black and white photograph of a dense urban area. A major multi-lane highway interchange is visible in the lower-left and center. To the right, a large stadium with a distinctive roof is situated near a body of water. The rest of the image is filled with a grid of buildings, streets, and parking lots.

ABOUT THE STUDY

BACKGROUND: WHY THIS STUDY NOW - MAJOR PIECES OF NEW INFRASTRUCTURE PLANNED

CALTRAIN ELECTRIFICATION



HIGH-SPEED RAIL (HSR)



DOWNTOWN RAIL EXTENSION (DTX)

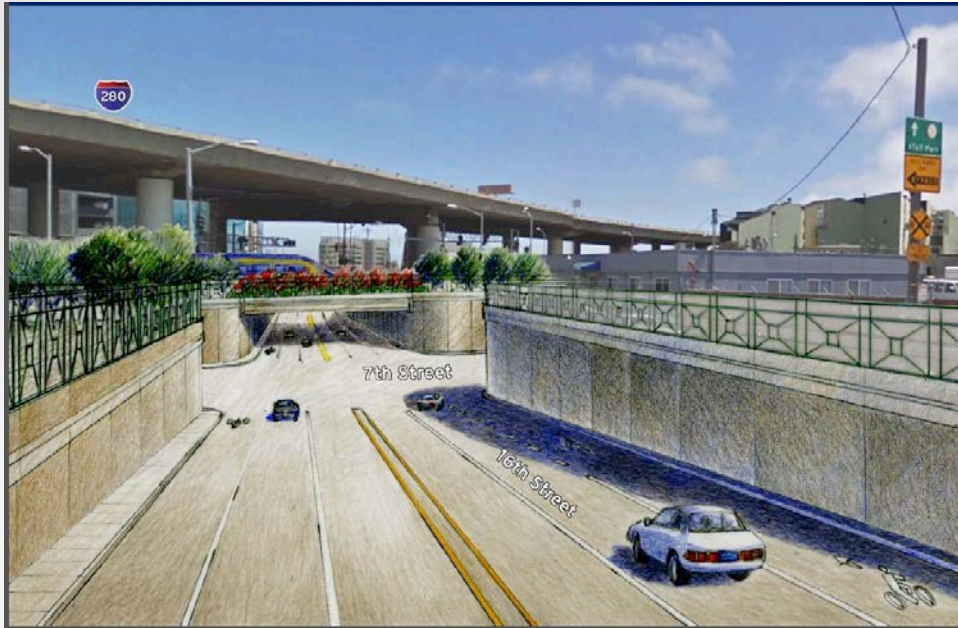


Transbay Transit Center (under construction Jan 2016)

BACKGROUND: CALIFORNIA HIGH SPEED RAIL AUTHORITY (CHSRA) – 2016 DRAFT BUSINESS PLAN

- Silicon Valley to Central Valley
 - Operational by 2025
 - San Jose – North of Bakersfield
 - \$20.7Billion – Fully Funded
- Extension to San Francisco and Bakersfield
 - Operational by 2025
 - Additional \$2.9Billion
- San Francisco – LA/Anaheim
 - Operational by 2029





Potential Grade-Separation of 16th Street



Potential Grade-Separation of Mission Bay Drive Source: CHSRA, 2010



WHAT MIGHT A TRENCHED STREET LOOK LIKE?



Near West Oakland Bart Station – 7th Street

MOVING CHALLENGES TO OPPORTUNITIES

STAND-ALONE PROJECTS

COORDINATE PARTNER EFFORTS

IMPROVE LOCAL AND REGIONAL CONNECTIONS

CONSIDERATION OF BENEFITS/IMPACTS

TEARS IN THE URBAN FABRIC

KNIT TOGETHER CITY FABRIC

PLACEMAKING

UNPLANNED

STUDY GOALS

- **Understand** and coordinate the projects **holistically**.
- Help **shape** the urban environment for the **public's benefit**.

An aerial, black and white photograph of San Francisco, California. The image captures the dense urban landscape of the city, with numerous skyscrapers and buildings. In the background, the Golden Gate Bridge spans across the water, connecting the city to the Marin Peninsula. The sky is overcast, and the overall tone is monochromatic. A prominent orange banner is overlaid across the center of the image, containing the text "STUDY COMPONENTS" in white, bold, sans-serif capital letters.

STUDY COMPONENTS

RAB STUDY COMPONENTS

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

2. TRANSBAY TRANSIT CENTER LOOP

3. RAIL YARD RECONFIGURATION/RELOCATION

4. BOULEVARD I-280

5. OPPORTUNITIES FOR THE PUBLIC'S BENEFIT

STUDY AREA

EACH COMPONENT HAS ITS OWN STUDY AREA



1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

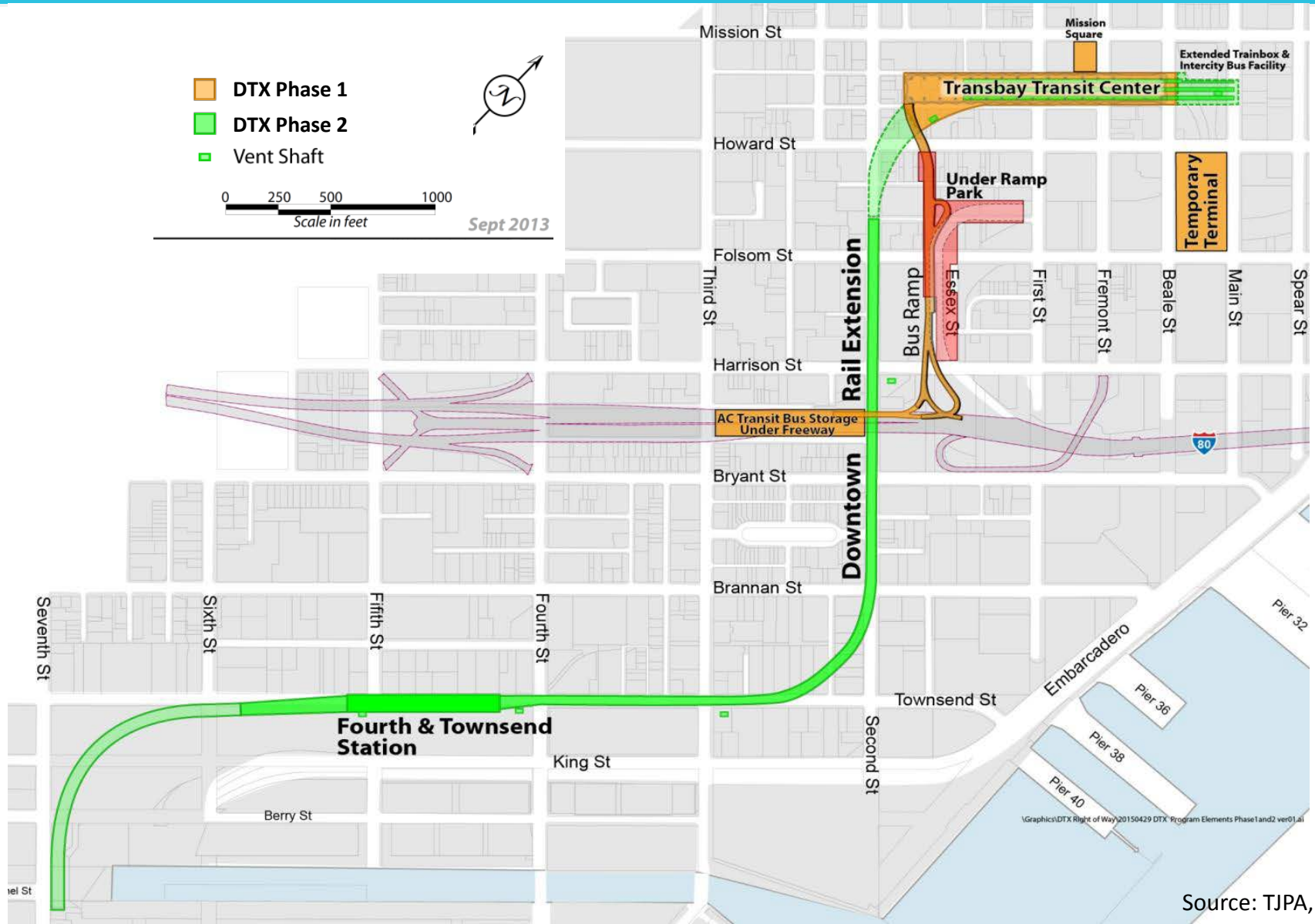
2. TRANSBAY TRANSIT CENTER LOOP

3. RAILYARD RECONFIGURATION/RELOCATION

4. BOULEVARD I-280

5. OPPORTUNITIES FOR THE PUBLIC'S BENEFIT

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT - ANTICIPATED



1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

OPTIONS FOR ALIGNMENT

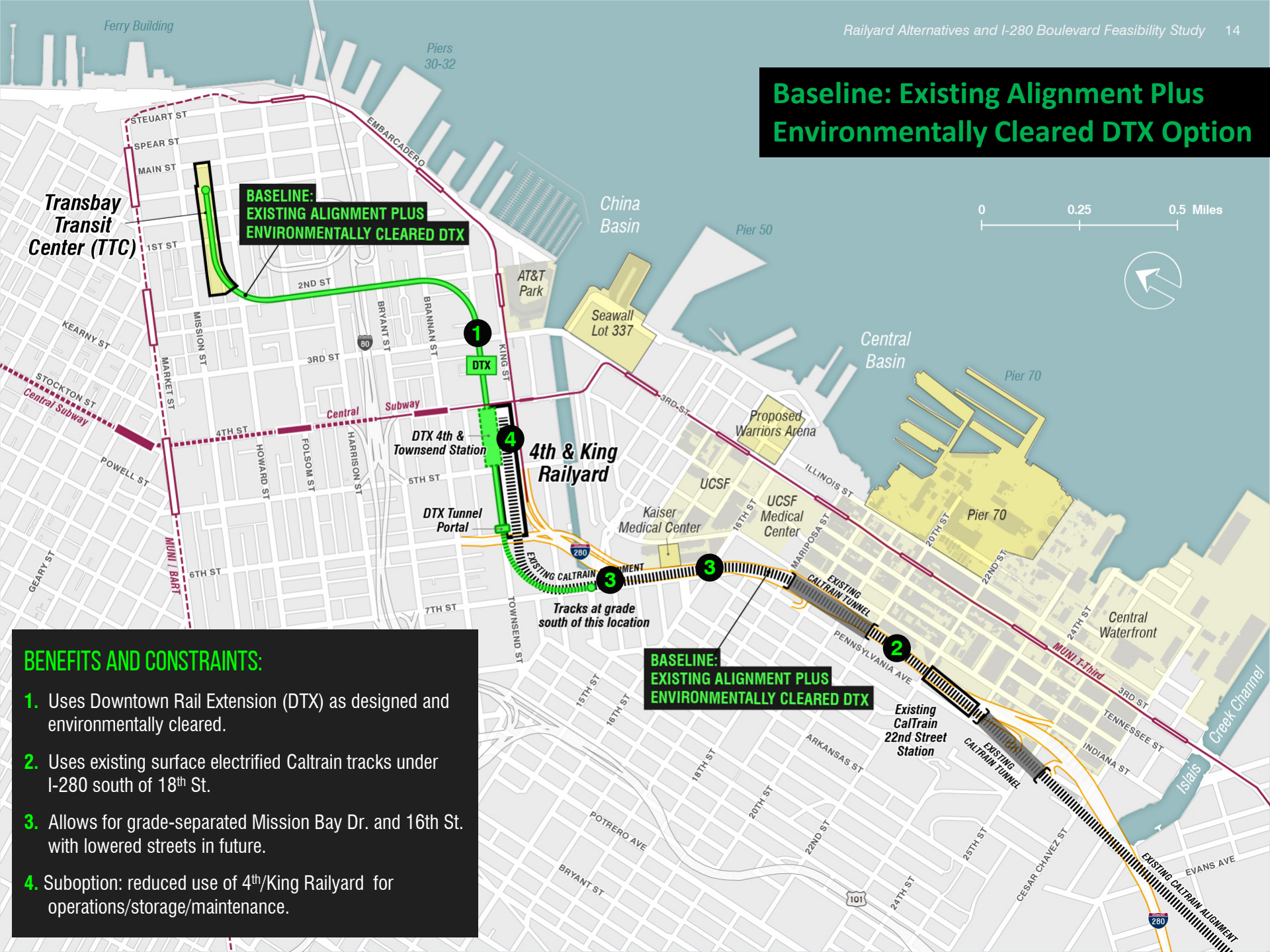
- A. Baseline: Existing Alignment Plus Environmentally Cleared DTX**
 - A.2 SubOption: Reduced 4th/King footprint**

- B. Tunnel Under Existing Alignment**

- C. Pennsylvania Avenue**

- D. Mission Bay (Third Street)**

Baseline: Existing Alignment Plus Environmentally Cleared DTX Option



**BASILINE:
EXISTING ALIGNMENT PLUS
ENVIRONMENTALLY CLEARED DTX**

**BASILINE:
EXISTING ALIGNMENT PLUS
ENVIRONMENTALLY CLEARED DTX**

**Transbay
Transit
Center (TTC)**

**4th & King
Railyard**

BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Uses existing surface electrified Caltrain tracks under I-280 south of 18th St.
3. Allows for grade-separated Mission Bay Dr. and 16th St. with lowered streets in future.
4. Suboption: reduced use of 4th/King Railyard for operations/storage/maintenance.

0 0.25 0.5 Miles



Tracks at grade south of this location

Existing CalTrain 22nd Street Station

DTX 4th & Townsend Station

DTX Tunnel Portal

EXISTING CALTRAIN ALIGNMENT

EXISTING CALTRAIN TUNNEL

EXISTING CALTRAIN TUNNEL

EXISTING CALTRAIN TUNNEL

EXISTING CALTRAIN TUNNEL

EXISTING CALTRAIN TUNNEL

EXISTING CALTRAIN TUNNEL

Central Subway

Central Subway

Central Basin

Central Waterfront

China Basin

Ferry Building

Piers 30-32

Pier 50

Pier 70

Creek Channel

Islais

EVANS AVE

CESAR CHAVEZ ST

25TH ST

24TH ST

24TH ST

24TH ST

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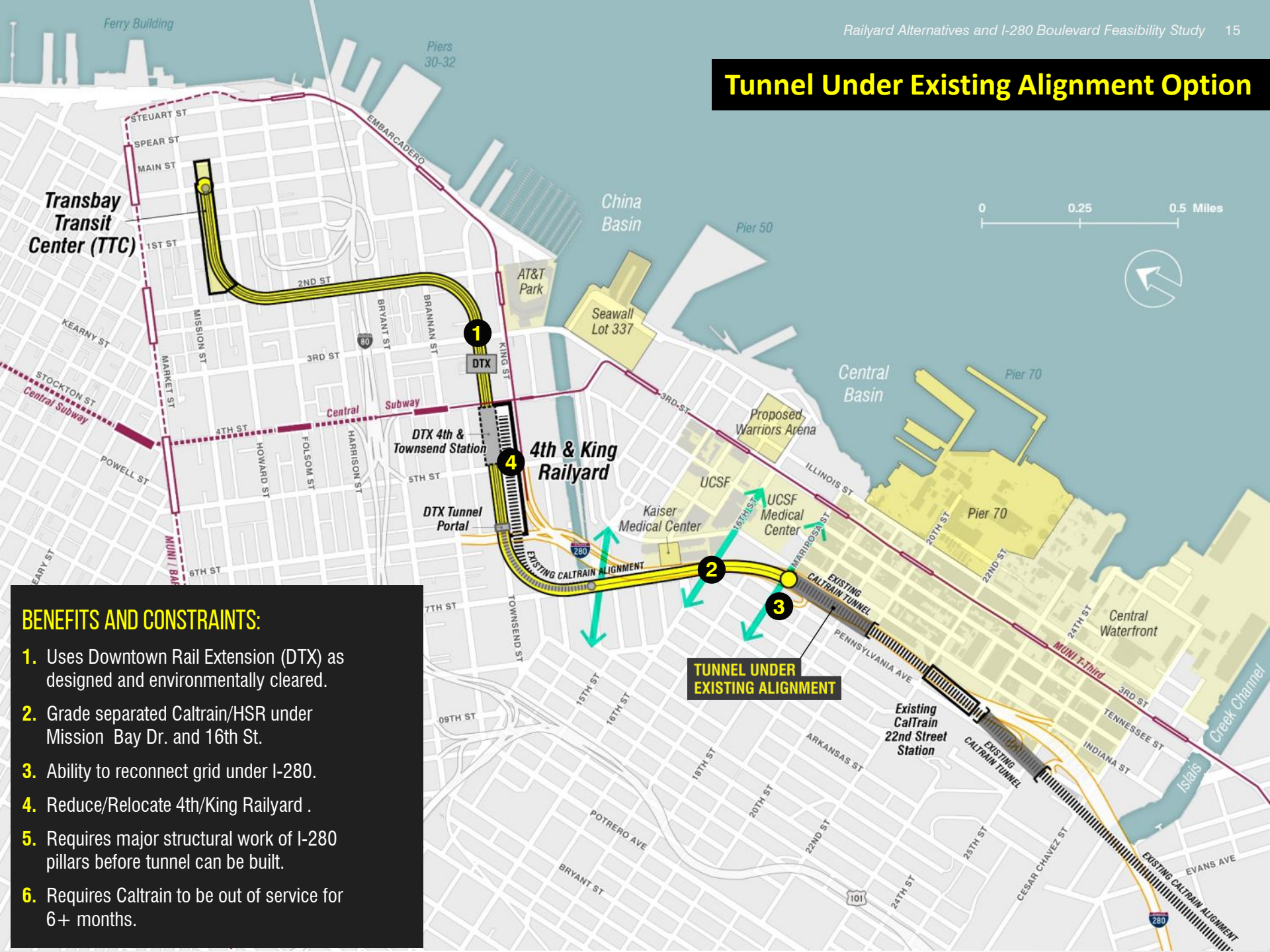
20TH ST

20TH ST

20TH ST

20TH ST

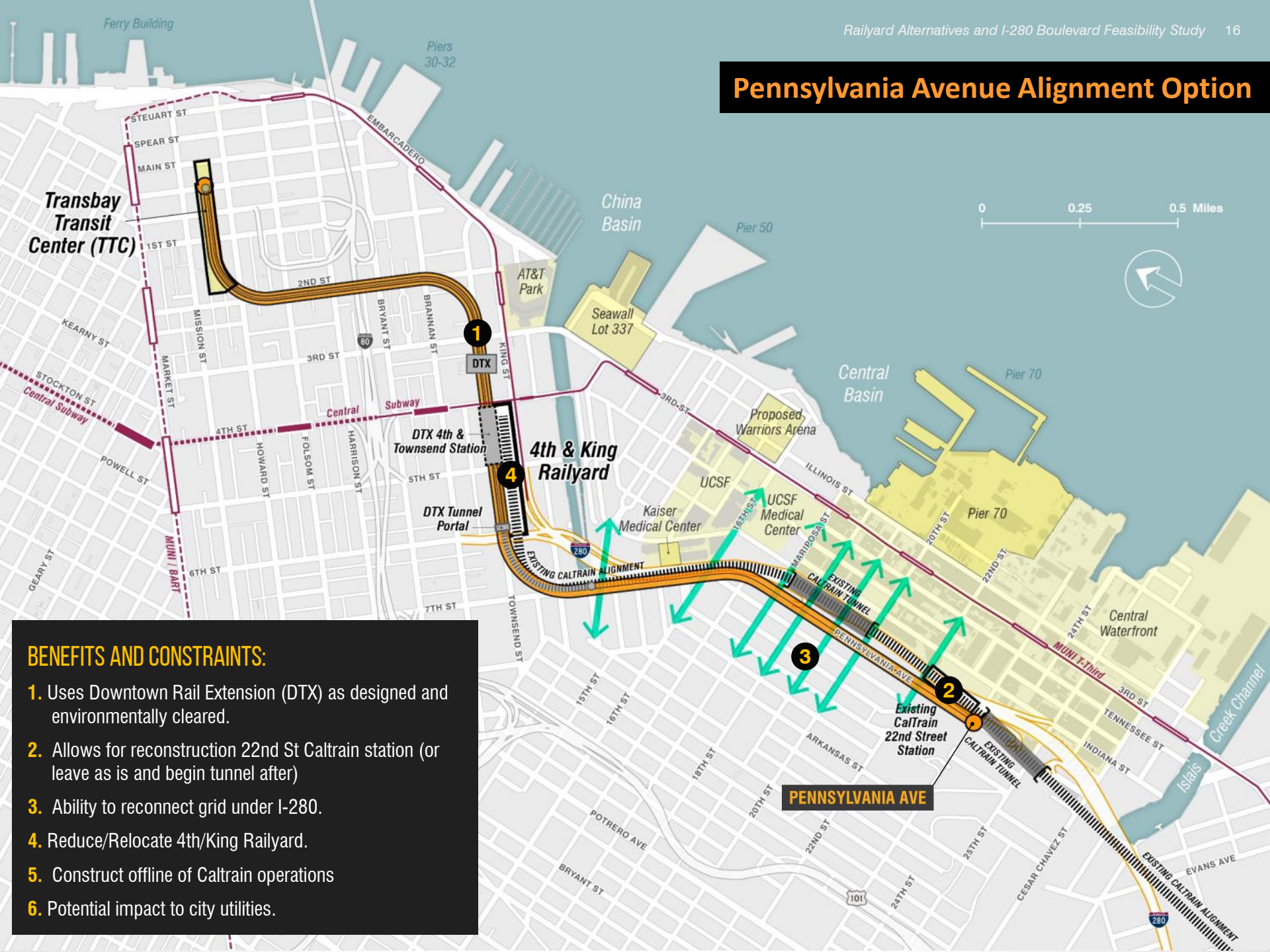
Tunnel Under Existing Alignment Option



BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Grade separated Caltrain/HSR under Mission Bay Dr. and 16th St.
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Rail yard .
5. Requires major structural work of I-280 pillars before tunnel can be built.
6. Requires Caltrain to be out of service for 6+ months.

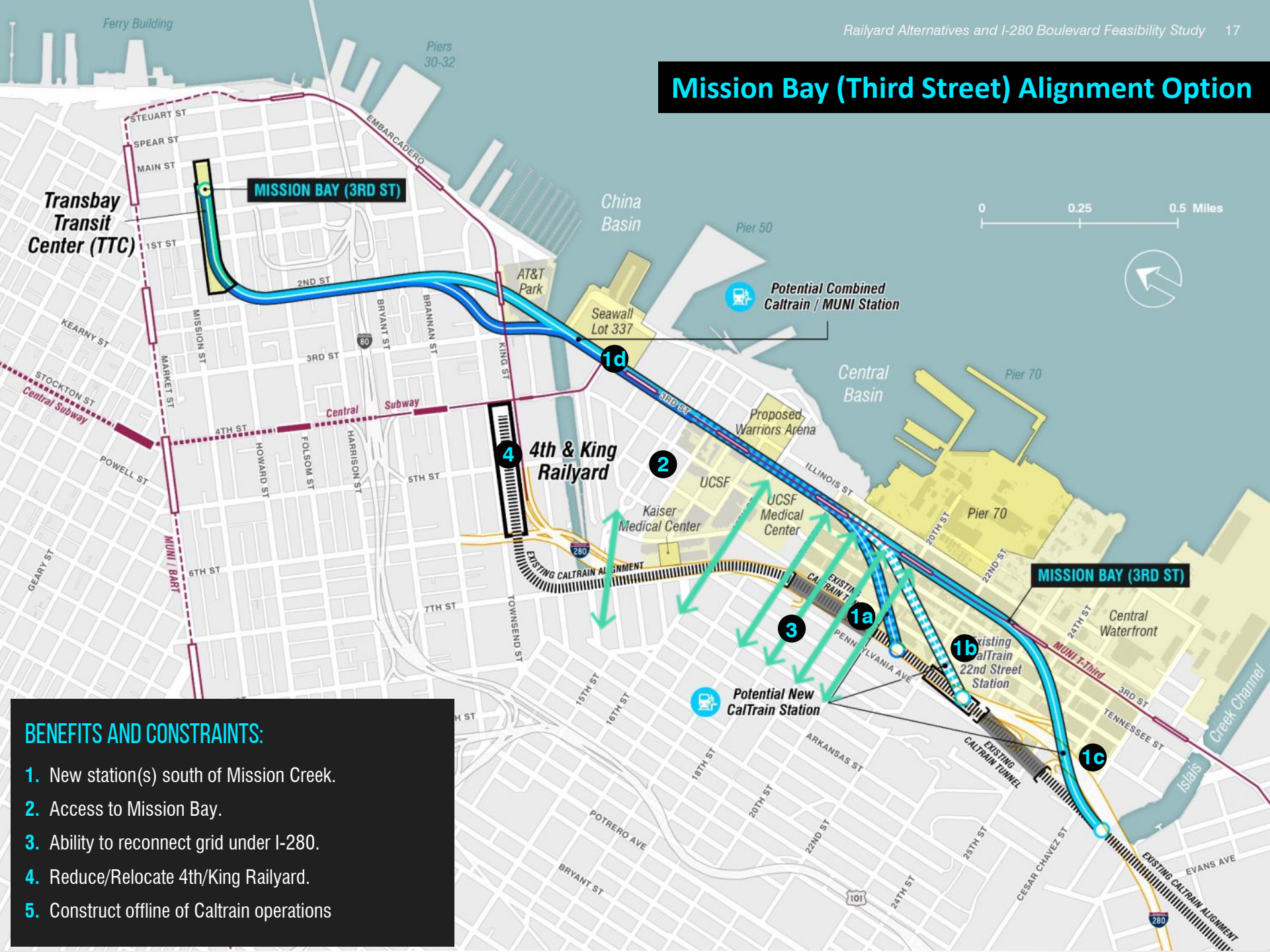
Pennsylvania Avenue Alignment Option



BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Allows for reconstruction 22nd St Caltrain station (or leave as is and begin tunnel after)
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Rail yard.
5. Construct offline of Caltrain operations
6. Potential impact to city utilities.

Mission Bay (Third Street) Alignment Option



BENEFITS AND CONSTRAINTS:

1. New station(s) south of Mission Creek.
2. Access to Mission Bay.
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Railyard.
5. Construct offline of Caltrain operations

1. OPTIONS FOR DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT - SUMMARY



- A. Baseline: Existing Alignment Plus Environmentally Cleared DTX**
A.2 SubOption: Reduced 4th/King Footprint

- B. Tunnel Under Existing Alignment** – removed from further consideration

- C. Pennsylvania Avenue**

- D. Mission Bay (Third Street)**

2. TRANSBAY TRANSIT CENTER LOOP

OPTIONS

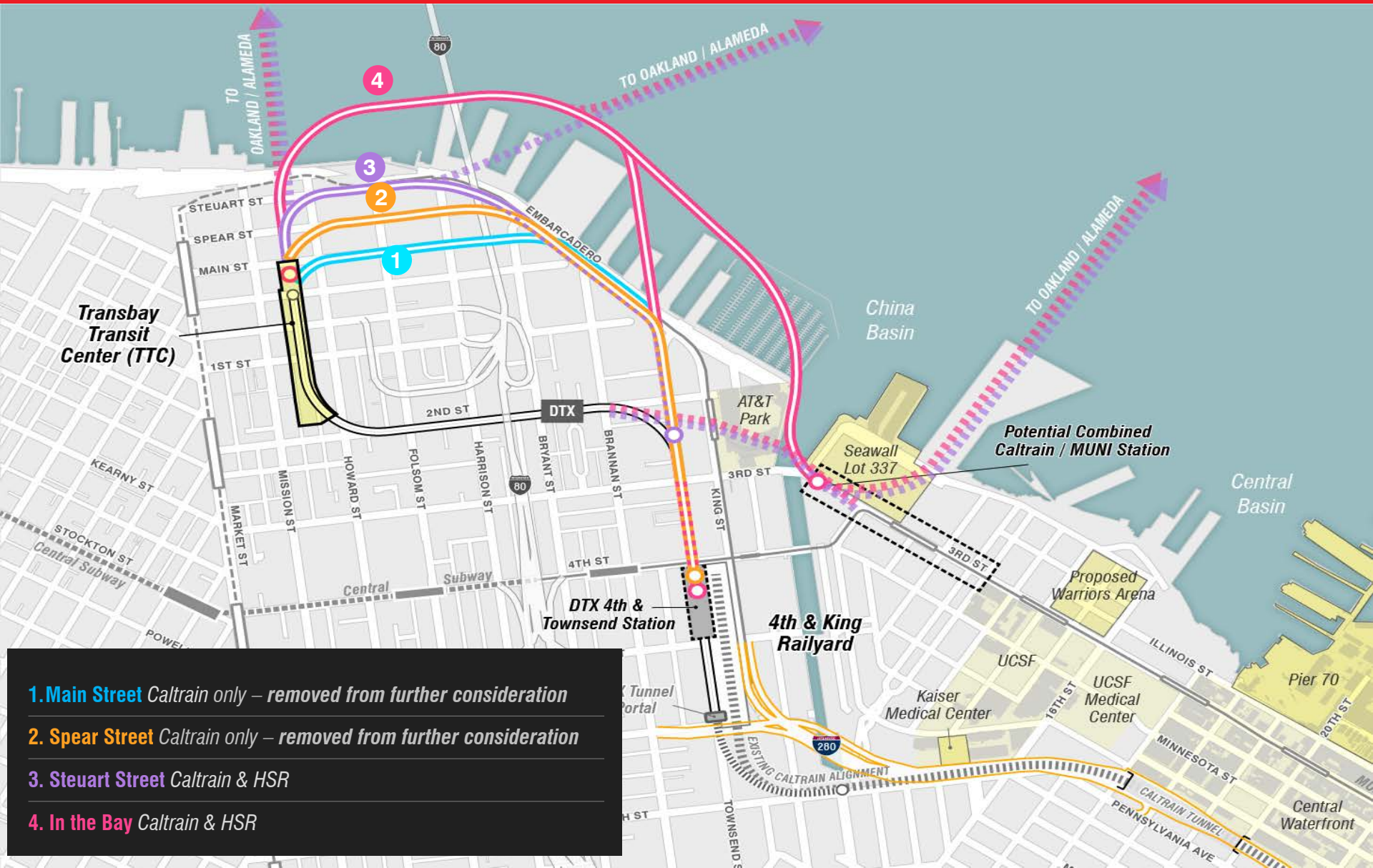
1. **Main Street** *Caltrain only*

2. **Spear Street** *Caltrain only*

3. **Steuart Street** *Caltrain & HSR*

4. **In the Bay** *Caltrain & HSR*

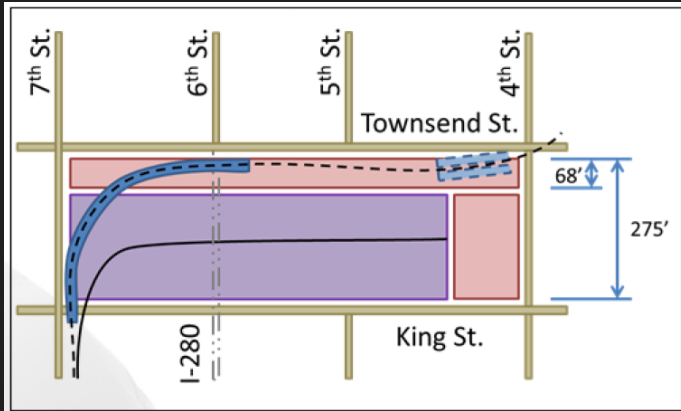
2. TRANSBAY TRANSIT CENTER LOOP - SUMMARY



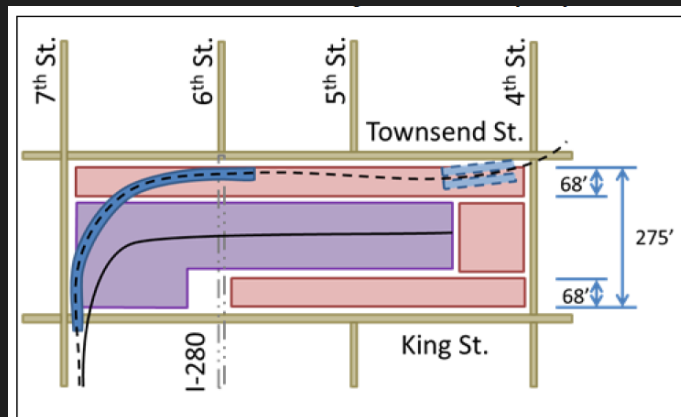
- 1. Main Street Caltrain only – removed from further consideration
- 2. Spear Street Caltrain only – removed from further consideration
- 3. Stuart Street Caltrain & HSR
- 4. In the Bay Caltrain & HSR

3. RAILYARD RECONFIGURATION/RELOCATION

If maintenance, storage, and operations remained at 4th/King after electrification



If maintenance and storage were relocated, but operations remained at 4th/King after electrification



2013 Caltrain completed a preliminary assessment of possible modified footprints at 4th/King at the request of San Francisco

Starting point for analysis

Assumes only Caltrain use of 4th/King

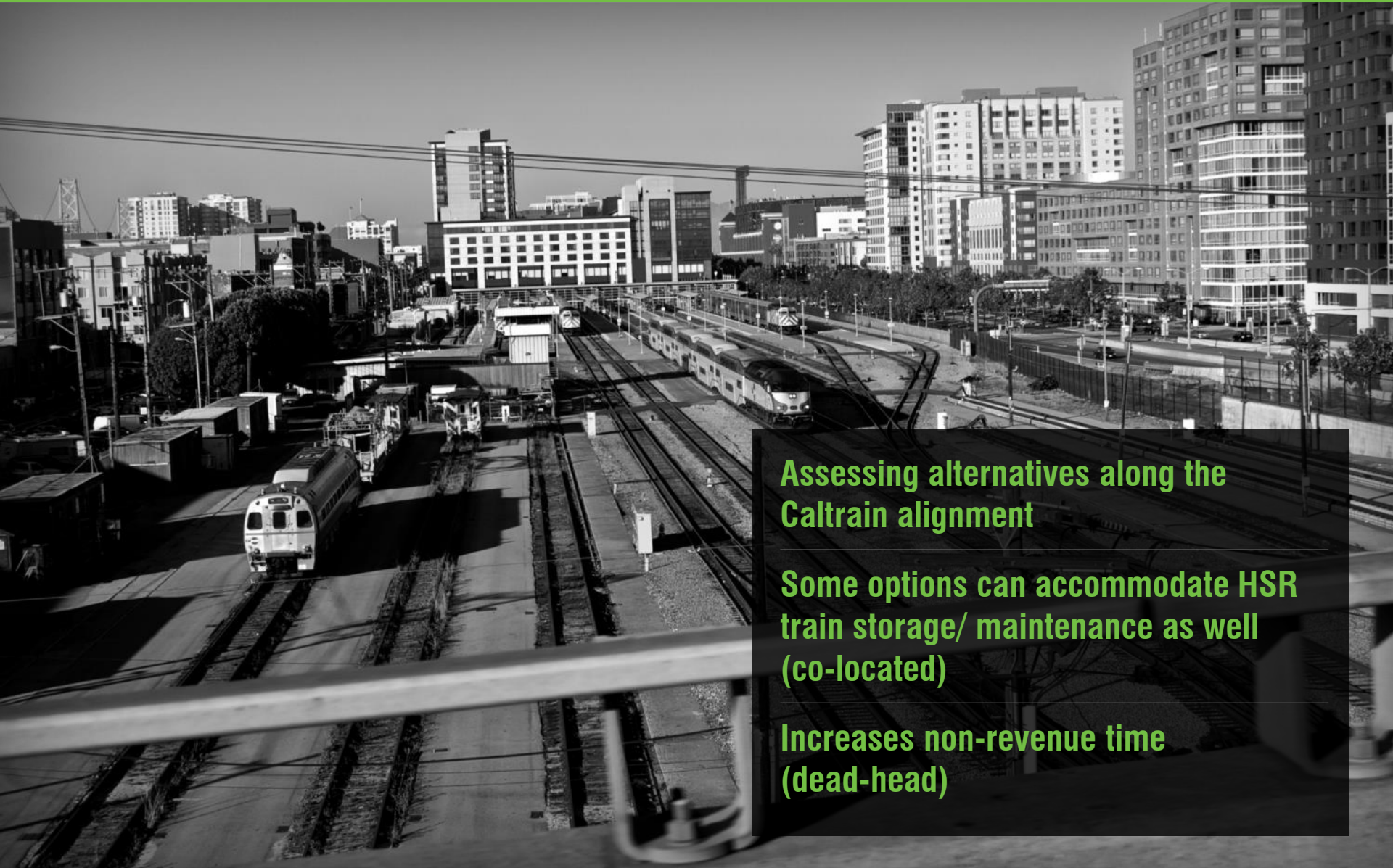
Based on anticipated maintenance, storage, and operations AFTER electrification of Caltrain (anticipated December 2020)

- Blue denotes the DTX alignment (in 2013)
- Purple denotes areas that would be needed for Caltrain use (min)
- Pink denotes areas that could be repurposed for other uses

- DTX alignment (in 2013)
- Minimum area needed for Caltrain use
- Available area for repurpose or other use

Source: Caltrain, 2013

3. RAILYARD RECONFIGURATION/RELOCATION

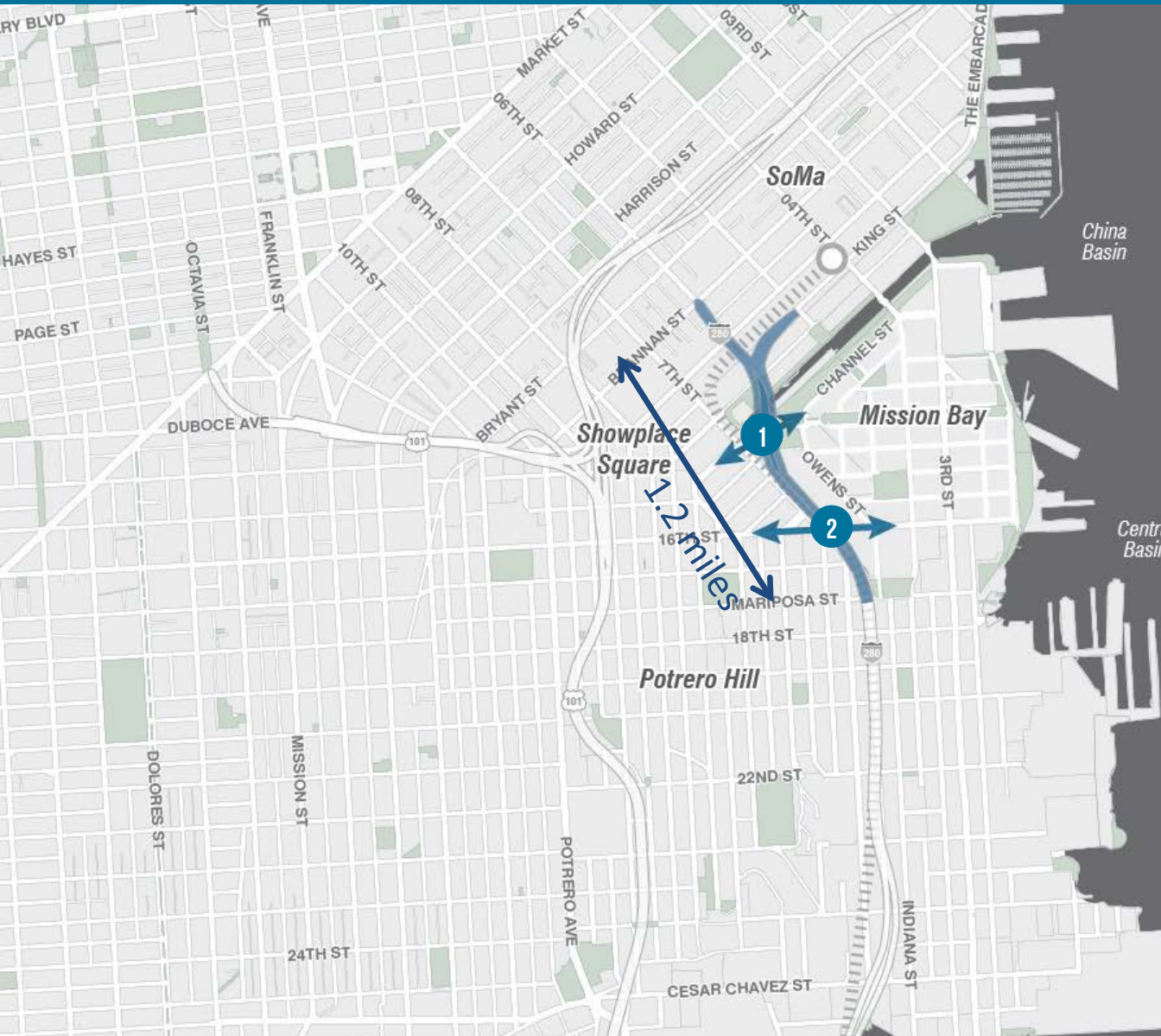


Assessing alternatives along the Caltrain alignment

Some options can accommodate HSR train storage/ maintenance as well (co-located)

Increases non-revenue time (dead-head)

4. BOULEVARD I-280: EXISTING CONDITIONS



ONLY TWO CROSSINGS



4. BOULEVARD I-280: SUMMARY

WHY ARE WE STUDYING?




Prioritize different modes on different streets.

Better connectivity.

Better urban form.

Continue to work with Caltrans, SFMTA, SFCTA on potential configurations

Configurations differ depending on other component elements

-  Existing thru street (limits) – under I-280
-  Existing thru street (limits) – over I-280
-  New/Reconnected street (limits) – (varies based on Alignment option selected)

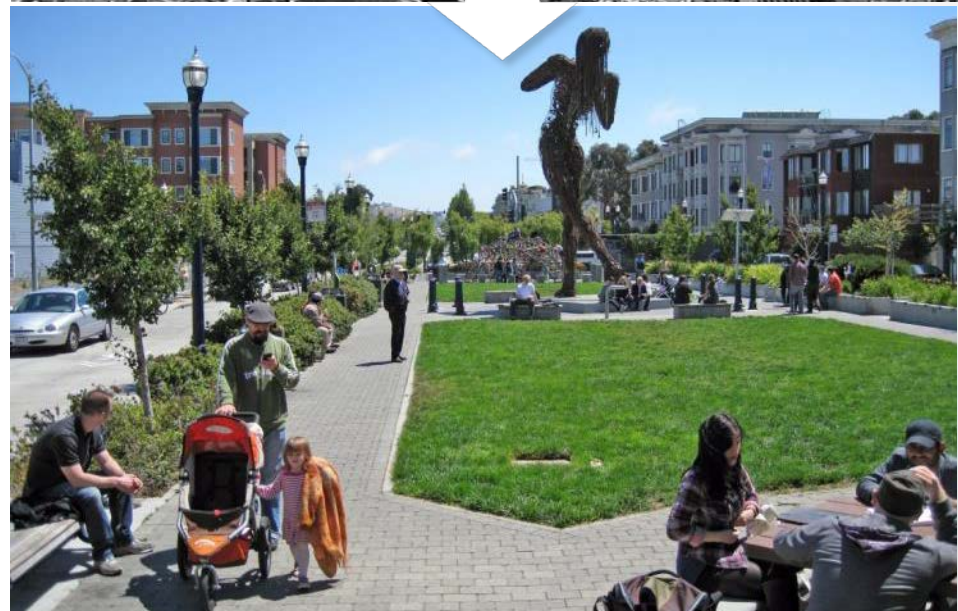


4. BOULEVARD I-280: WHY WOULD WE STUDY

THE EMBARCADERO



OCTAVIA BLVD



SUMMARY OF OPTIONS TO BE STUDIED IN PHASE II

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

- Three of the four alignment options moving forward
- Removed the “Tunnel under Existing Alignment” option

2. TRANSBAY TRANSIT CENTER LOOP

- Two of the four loop track options moving forward
- Removed the Main Street and Spear Street options

3. RAILYARD RECONFIGURATION/RELOCATION

- Continue to work with Caltrain and California High Speed Rail Authority (CHSRA) on possible reconfiguration/relocation options

4. BOULEVARD I-280

- Continue to work with Caltrans, San Francisco Municipal Transportation Agency (SFMTA), San Francisco County Transportation Agency (SFCTA) on traffic operations

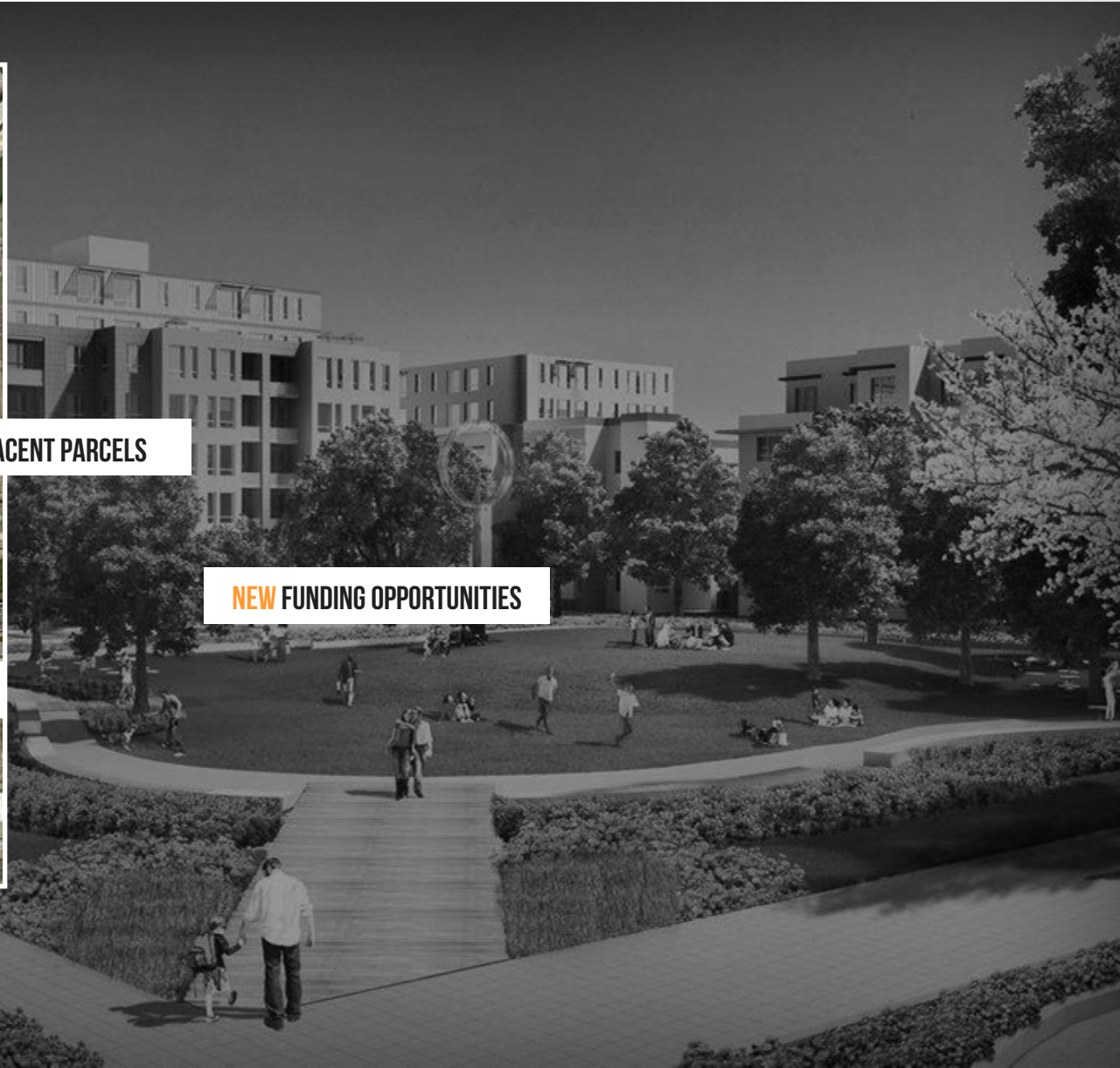
OPPORTUNITIES FOR THE URBAN ENVIRONMENT



RAILYARD (20+ ACRES)

ACTIVATE ADJACENT PARCELS

I-280 CORRIDOR (4+ ACRES)

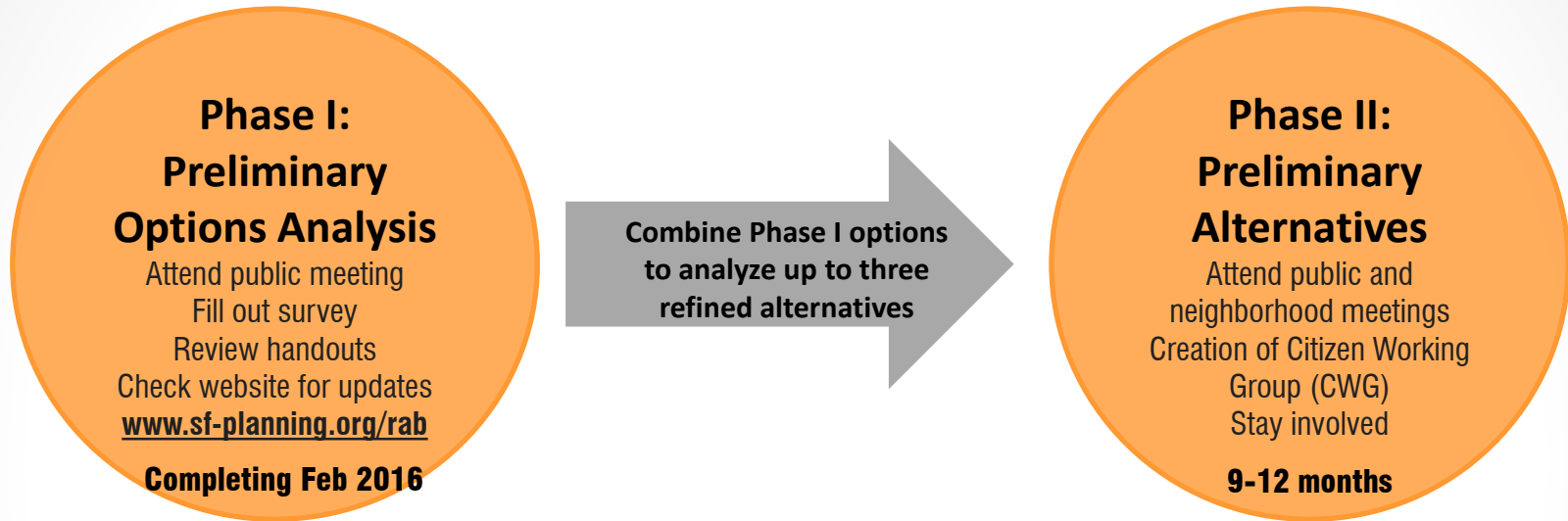


NEW FUNDING OPPORTUNITIES



OUTREACH

COMMUNITY ENGAGEMENT – HOW CAN YOU PARTICIPATE?



WE ARE HERE

FOLLOW-ON PHASES



TIMELINE & NEXT STEPS

PHASE I –

Preliminary Options Analysis
June 2014-Feb 2016

PHASE II –

Alternatives Development
9-12 months

STAKEHOLDER BRIEFINGS UPON REQUEST

PUBLIC MEETING – Feb 2016
Preliminary Options Analysis
Public Input

PUBLIC MEETING – Anticipated Winter 2016
Finalize Alternatives
Public Input

PUBLIC MEETING – Anticipated Fall 2016
Draft Alternatives
Public Input

PHASE III –

Preferred Alternative
12-18 months

PHASE IV –

Environmental Phase
(could be semi-concurrent with Phase III)

PHASE V –

Funding and Implementation

STAKEHOLDER BRIEFINGS UPON REQUEST

PUBLIC MEETINGS at key milestones

FOLLOW-ON PHASES

THANK YOU

www.sf-planning.org/rab

Study Manager
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San Francisco
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