

Core Capacity Transit Study: Project Update

CORE CAPACITY

TRANSIT STUDY



Technical Advisory
Committee

May 25, 2016

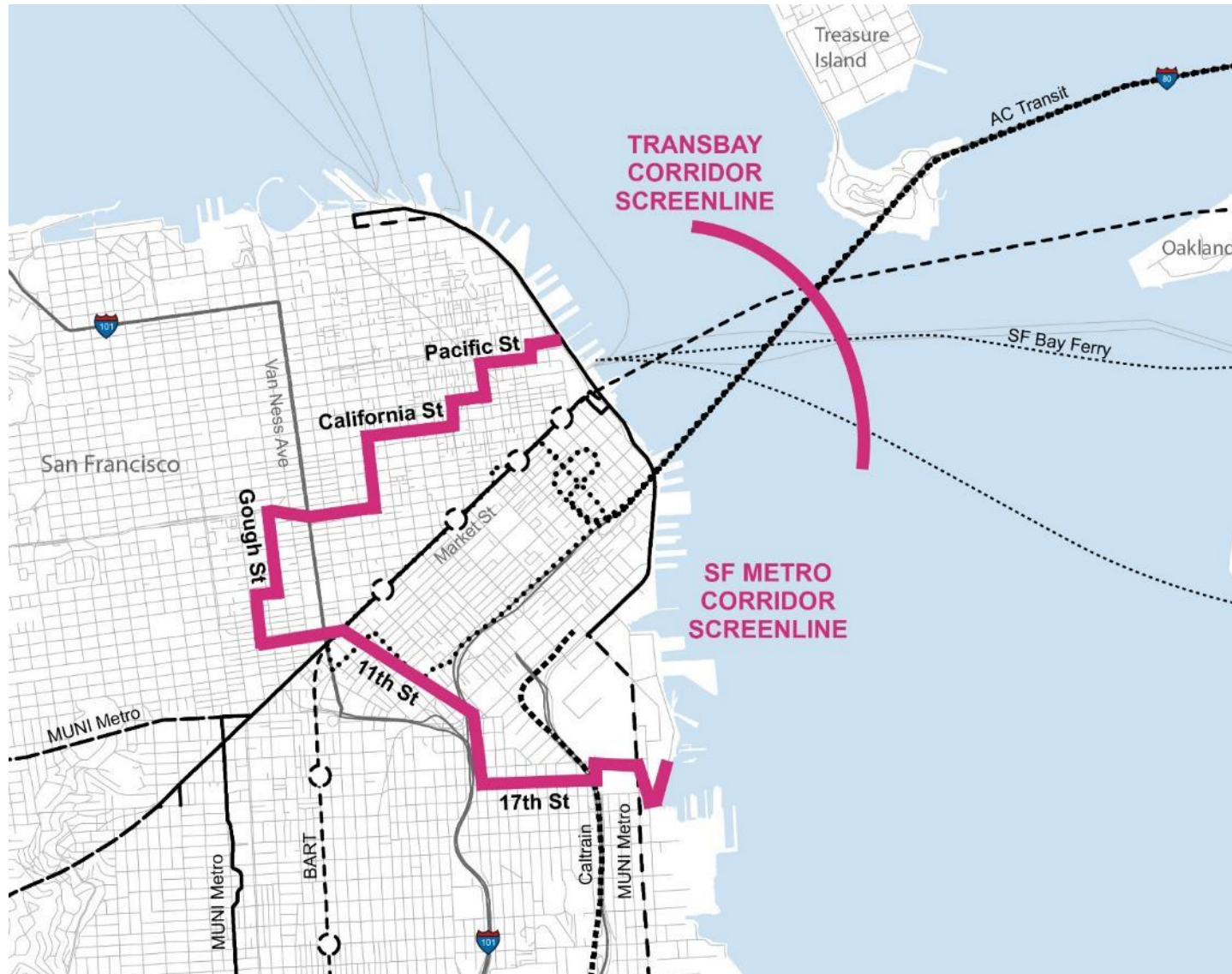
Meeting Agenda

1. Study Purpose and Progress
2. Transbay and SF Metro Corridor Demand and Capacity
3. Short and Medium Term Packages
4. CCTS – Plan Bay Area Integration
5. Project Next Steps and Schedule

Study Purpose and Progress

- Multi-agency effort focused on increasing transit capacity to the San Francisco Core:
 - Develop and recommend projects and strategies by timeframe
 - Short term: to 2020
 - Medium term: 2020-2030
 - Long term: 2030+
 - Use short and medium term projects to inform, identify and consider potential long term strategies
- Study analysis:
 - Transbay and SF Metro corridor capacity and demand analysis
 - Initial second crossing and landing site review
 - SF and Oakland market assessments
 - Compilation, review and development of short and medium term investments for project package consideration

Study Area and Corridors



Transbay Corridor Demand and Capacity

Prerequisite Transbay Projects

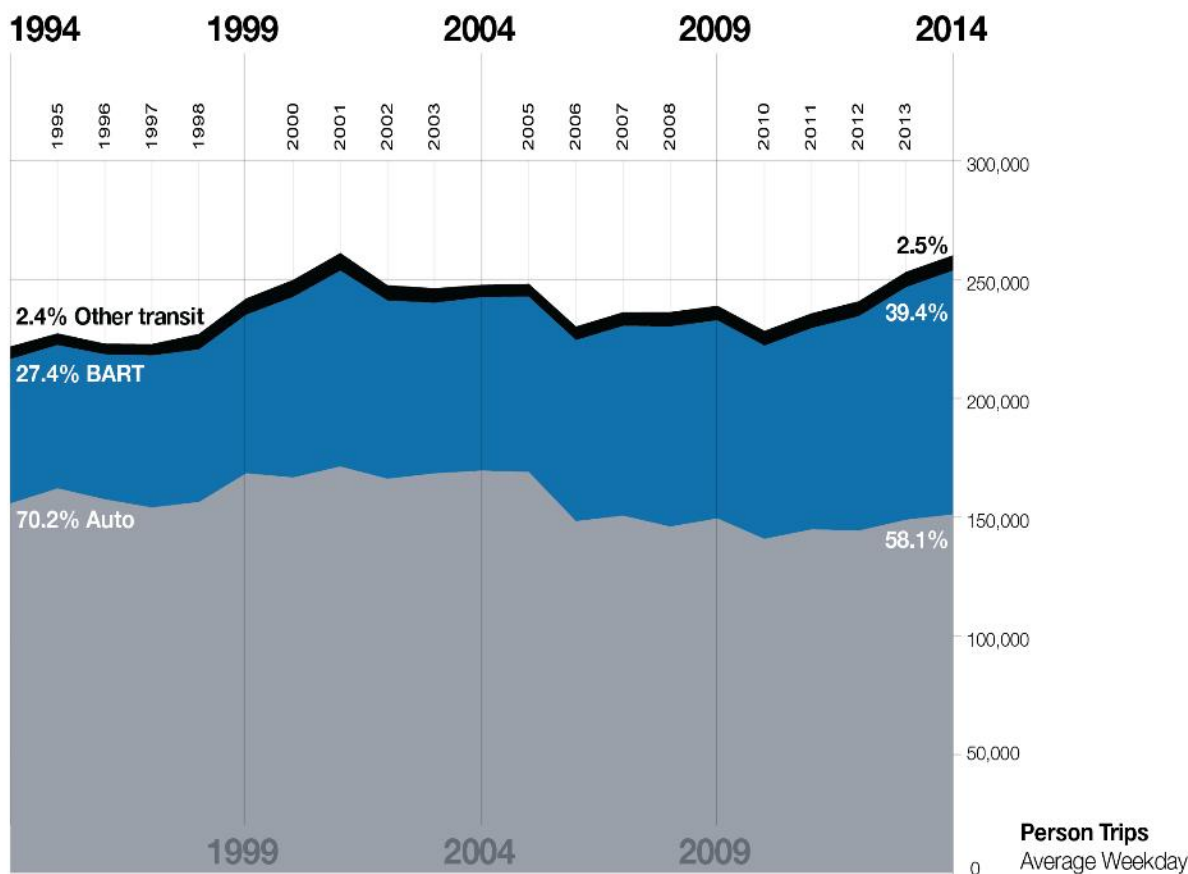
Tier 1: Fully funded

Tier 2: Not Fully Funded

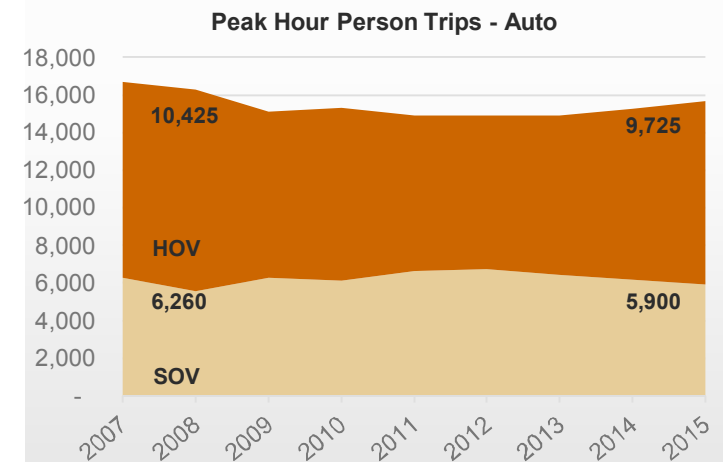
Tier	Timeframe	Sponsor	Project
1	Short Term	AC Transit	AC Transit Richmond Facility Reopening
1	Short Term	BART	BART Additional Cars – Fleet Transition
1	Short Term	WETA	WETA Maintenance Facilities Alameda, Vallejo
1	Short Term	WETA	WETA Richmond-SF Ferry Service
1	Short Term	WETA	WETA SF Ferry Terminal Expansion
1	Short Term	WETA	WETA SF Fleet Replacement & Expansion
1	Short Term	Caltrans	I-80 Integrated Corridor Mobility
1	Short Term	TJPA	Transbay Terminal (Phase 1)
1	Short Term	TJPA	AC Transit Bus Ramp to Transbay terminal
2	Short Term	AC Transit	AC Transit Fleet Expansion (40 buses)
2	Short Term	AC Transit	AC Transit West County Bus Facility (new)
2	Short Term	BART	BART Hayward Maintenance Complex, Phase 1
2	Medium Term	BART	BART Additional Railcars – Core Capacity
2	Medium Term	BART	BART Metro Program
2	Medium Term	BART	BART Traction Power System
2	Medium Term	BART	BART Train Control System
2	Medium Term	BART	BART Hayward Maintenance Complex, Phase 2

Historical Share of Demand

Daily Travel – Transbay Corridor Westbound



Person Trips By Auto - Westbound Peak Hour



Prerequisite Projects By Operator

Transbay Corridor

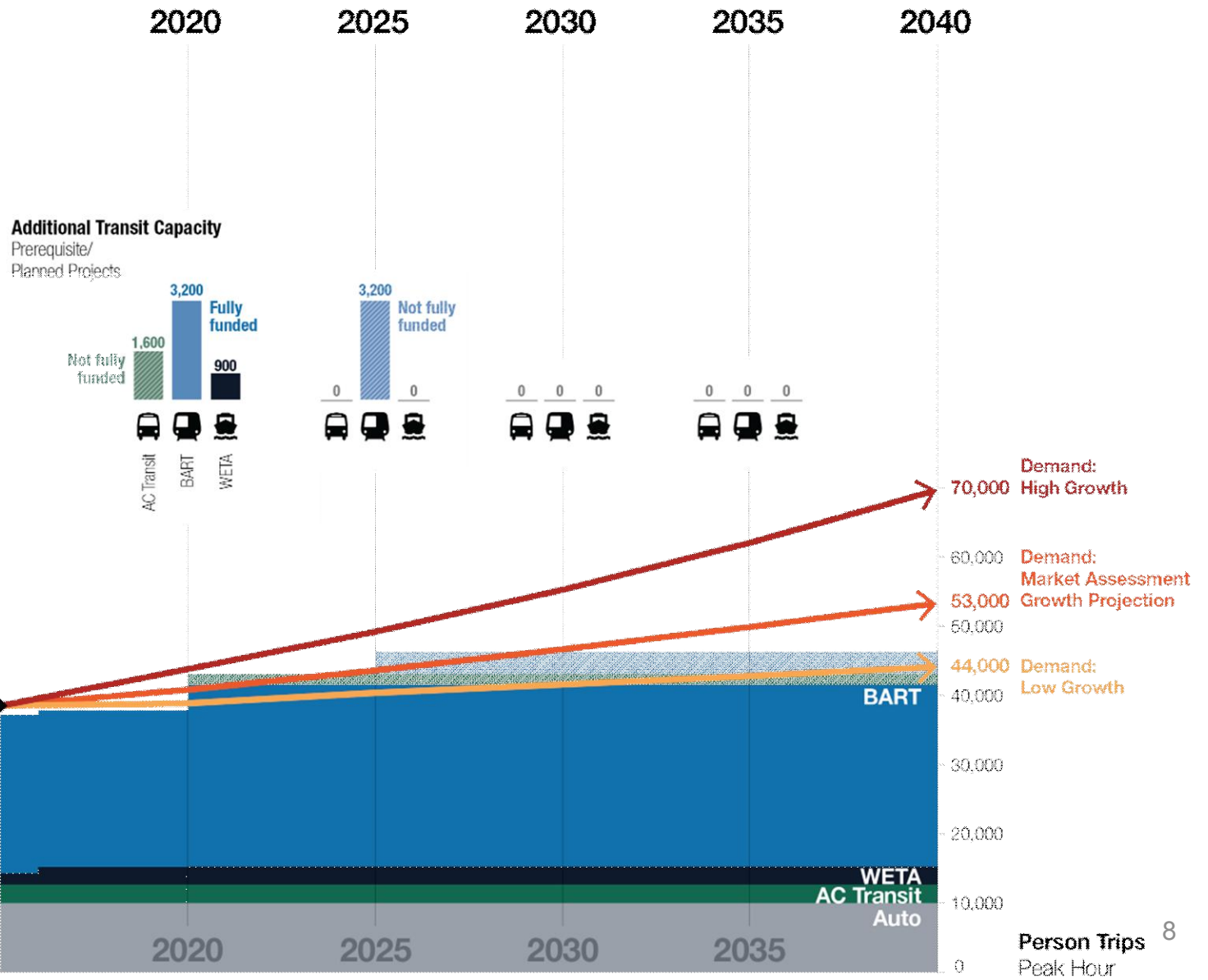
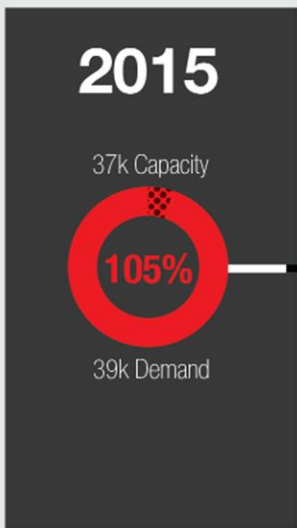
Existing Conditions

Westbound to SF Core
AM Peak Hour

10,000 People in Cars

29,000 Transit Trips

- 2,700 AC Transit & WestCAT bus
- 25,000 BART
- 1,300 WETA ferry



Transbay Corridor Demand Forecast

Transbay Corridor

Existing Conditions
Westbound to SF Core
AM Peak Hour

10,000 People in Cars

29,000 Transit Trips

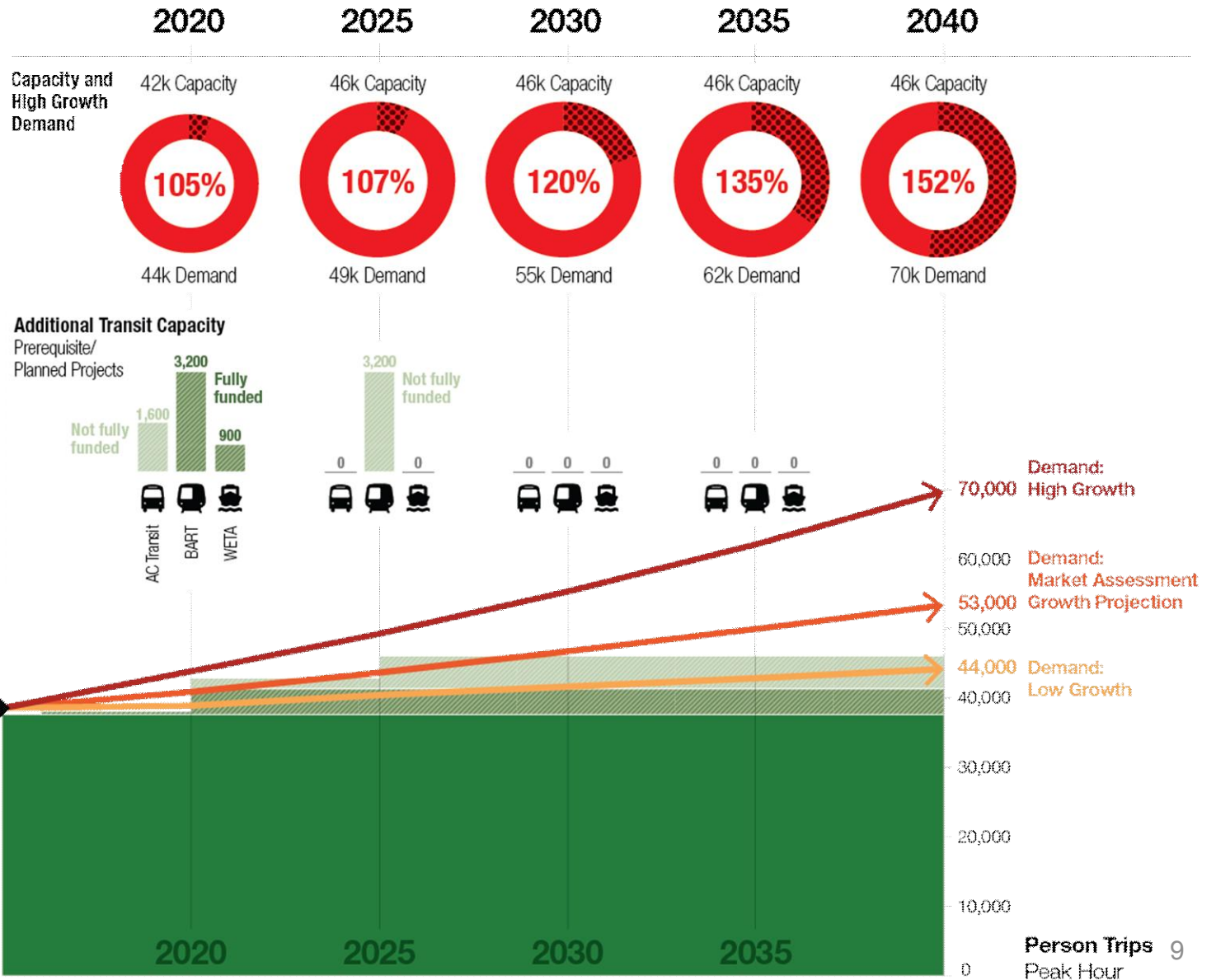
- 2,700 AC Transit & WestCAT bus
- 25,000 BART
- 1,300 WETA ferry

2015

37k Capacity



39k Demand



Transbay Problem Statement - Summary

- The need to fund and implement the Tier 1 and Tier 2 prerequisite projects under all growth scenarios
- An increasing likelihood that growth in demand will outpace capacity
- The need for additional short, medium and long term investments in projects, programs and policies to address increasingly significant shortfalls in capacity
- Some modes may continue to carry a greater share of the Transbay demand, both today and in the future
- There are no planned prerequisite projects after 2025
- Without significant changes in vehicle occupancy, nearly all future growth would need to be met by transit.

SF Metro Corridor Demand and Capacity

Prerequisite SF Metro Projects

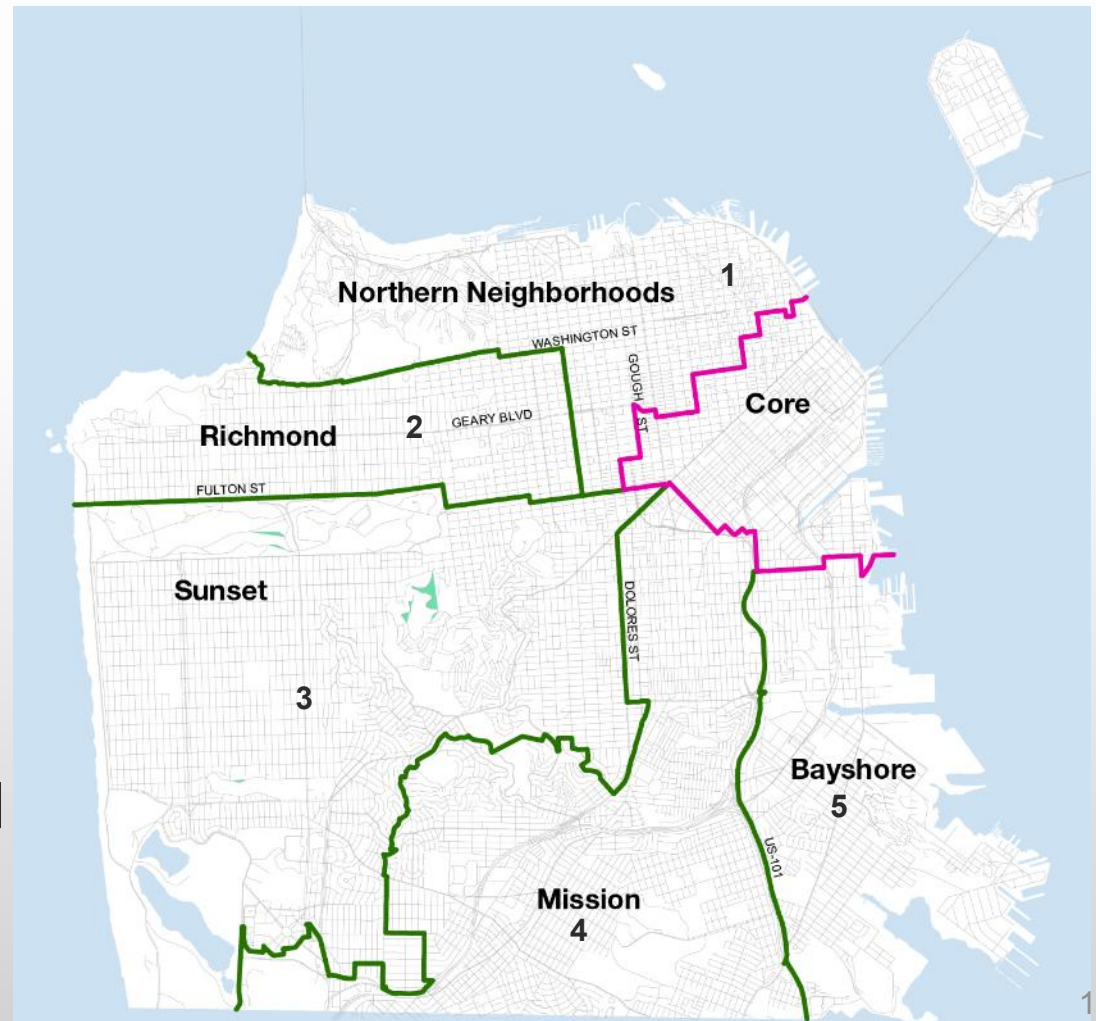
Tier 1: Fully funded

Tier 2: Not Fully Funded

Tier	Timeframe	Sponsor	Project
1	Short Term	SFMTA	SFMTA Central Subway
1	Short Term	SFMTA	SFMTA Candlestick and Hunters Point Express Bus Service
1	Short Term	SFMTA	SFMTA Muni Forward
1	Short Term	SFMTA	SFMTA Van Ness Avenue Bus Rapid Transit
1	Short Term	SFMTA	SFMTA SFgo
1	Short Term	SFMTA	SFMTA T-Third Mission Bay Loop
1	Short Term	SFMTA	SFMTA 16th Street Corridor Transit Priority
2	Short Term	BART	BART Hayward Maintenance Complex, Phase 1
2	Short Term	SFMTA	SFMTA Fleet Expansion (light rail and bus)
2	Short Term	SFMTA	SFMTA Muni Forward Phase 2
2	Medium Term	BART	BART Additional Railcars – Core Capacity
2	Medium Term	BART	BART Metro Program
2	Medium Term	BART	BART Traction Power System
2	Medium Term	BART	BART Train Control System
2	Medium Term	BART	BART Hayward Maintenance Complex, Phase 2
2	Medium Term	Caltrain	Caltrain Electrification
2	Medium Term	Caltrain	Caltrain CalMod 2.0
2	Medium Term	Caltrain	Caltrain Operations Improvements – North Terminal
2	Medium Term	SFMTA	SFMTA Transit Facilities Improvements
2	Medium Term	TJPA	Downtown Extension

SF Metro Corridor Future Growth

- Similar analysis to Transbay, but capacity/demand assessed in 6 sub-areas
- Richmond & Sunset corridors show projected demand above planned capacity
- Other corridors show future planned capacity above projected demand



Sub-Area Findings

	% Capacity Filled (2040 forecast demand/planned capacity)
Northern Neighborhoods	90%
Richmond	114%
Sunset	125%
Mission ¹	65%
Bayshore ²	58%

¹ In Mission corridor, anticipated increase in BART + Muni service should provide sufficient capacity relative to projected demand

² Planned capacity increases are expected to provide sufficient capacity relative to total project demand in the sub-area. It should be noted that capacity increases to Caltrain and Muni respectively, provide limited benefits between different operators serving different travel markets (regional vs. intra-SF trips)

Sunset Sub-area Demand Forecast

Sunset Corridor



Existing Conditions

Inbound to SF Core
AM Peak Hour

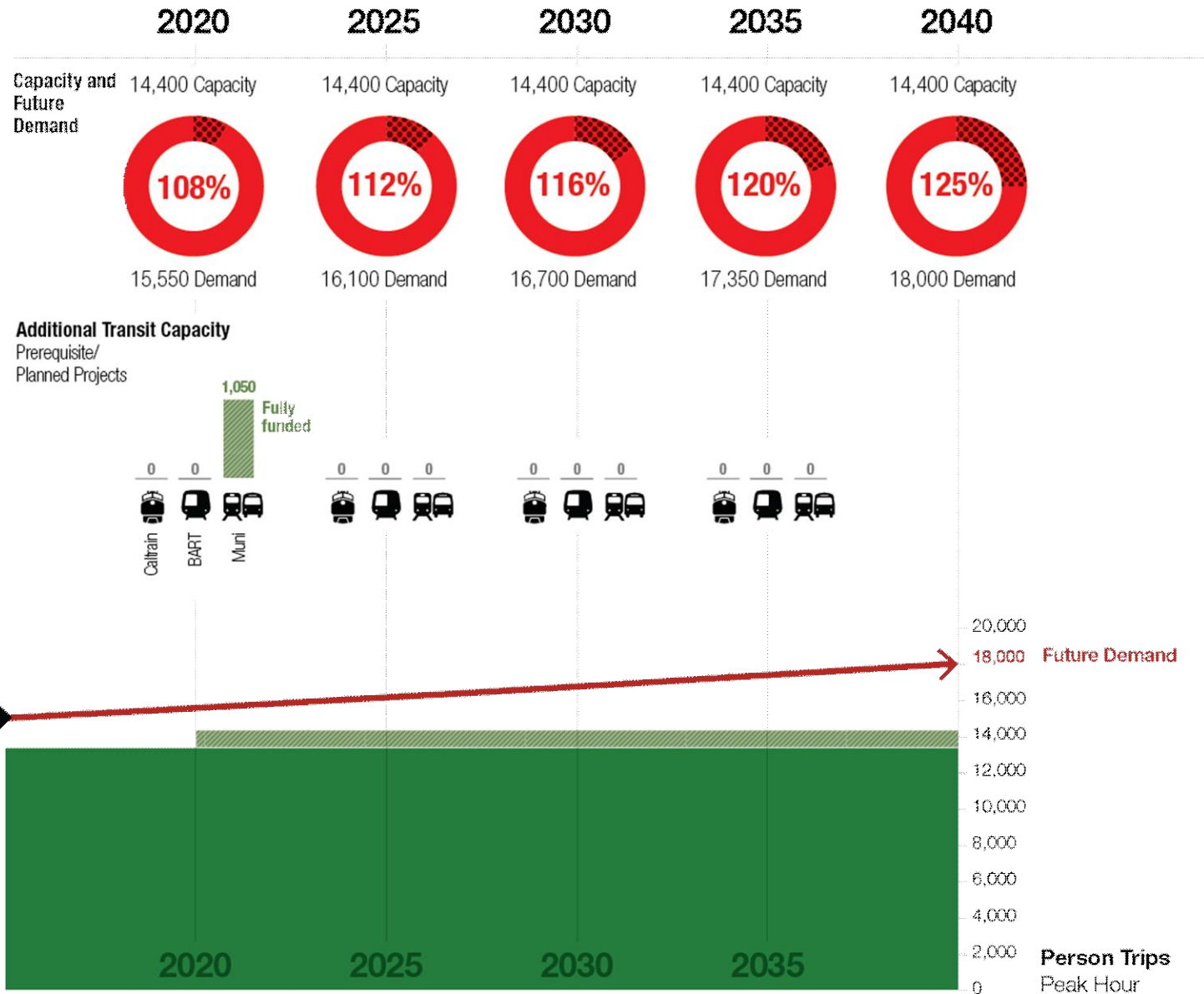
- 4,550 People in Cars
- 8,050 Transit Trips
- 750 Bike/Ped

2015

13,350 Capacity



14,950 Demand



Richmond Sub-area Demand Forecast

Richmond Corridor



Existing Conditions

Inbound to SF Core
AM Peak Hour

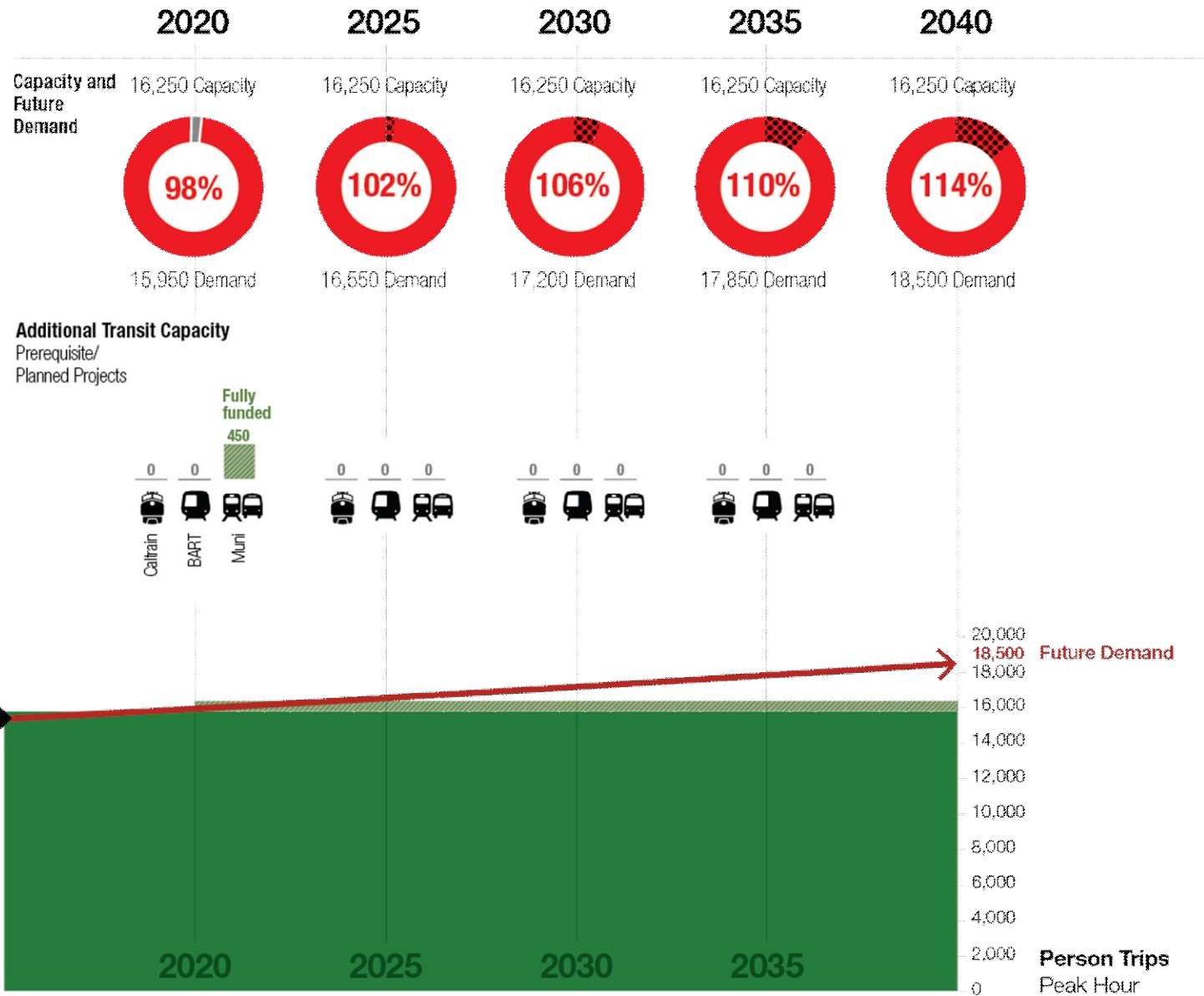
- 4,400 People in Cars
- 6,000 Transit Trips
- 5,400 Bike/Ped

2015

15,800 Capacity



15,350 Demand

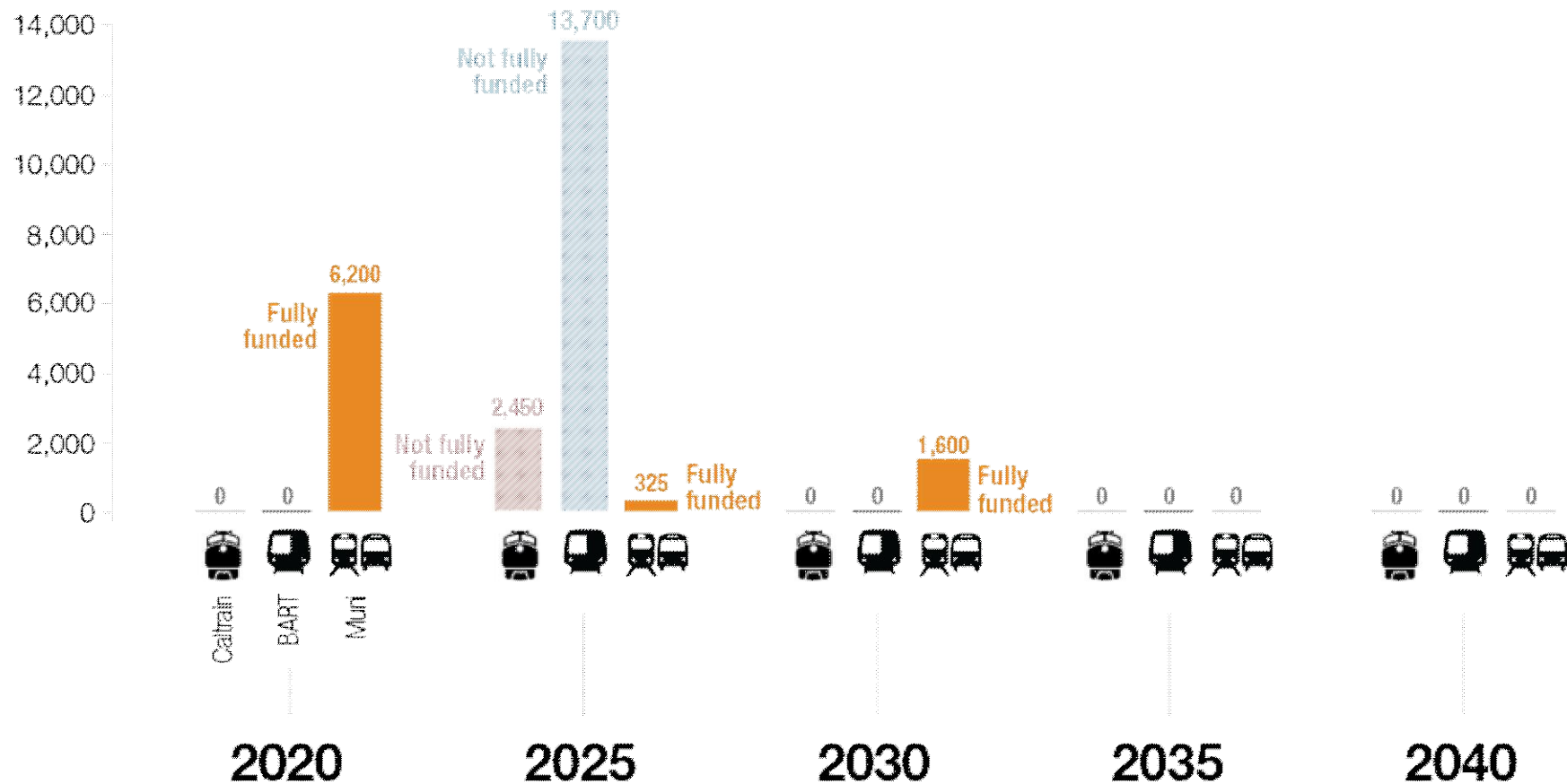


20,000
18,500 Future Demand
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0 Person Trips Peak Hour

Additional Transit Capacity - Prerequisite Projects By Operator

Additional Transit Capacity
Prerequisite/Planned Projects

Total
23,950



SF Metro Problem Statement - Summary

- The need to fund and implement the Tier 1 and Tier 2 prerequisite projects
- Benefits from prerequisite projects in the BART/Mission and Bayshore subareas may be limited between different operators serving different travel markets (regional vs. intra-SF trips)
- Capacity shortfalls are focused on a few sub areas within the corridor – Richmond and Sunset
- The need for additional short, medium and long term investments in projects, programs and policies
- There are no planned prerequisite projects after 2030

Short and Medium Term Packages

Transbay Packages (short & medium term)

PREREQUISITE PROJECTS

[PLUS]

Projects Common to Packages 2, 3, 4a, 4b

- Automated toll collection
- Fare Adjustment Policies
- Additional Transbay bus service and capital investments (50 buses)
- Supportive bus transit facilities
- BART station and system improvements (core-related)
- WETA 30-15 Plan

Transbay Packages (short & medium term)

PREREQUISITE PROJECTS

PROJECTS COMMON TO PACKAGES (2, 3, 4a, 4b)

[PLUS]

Package
Specific
Projects

1
Value Pricing

- Dynamic auto toll increase

2
Value Pricing

- Dynamic auto toll increase

3
Value Pricing,
and
Infrastructure

- Bus tunnel from Mandela to Bay Bridge
- Surface street transit priority connecting to I-80, I-580
- Builds on Package 2

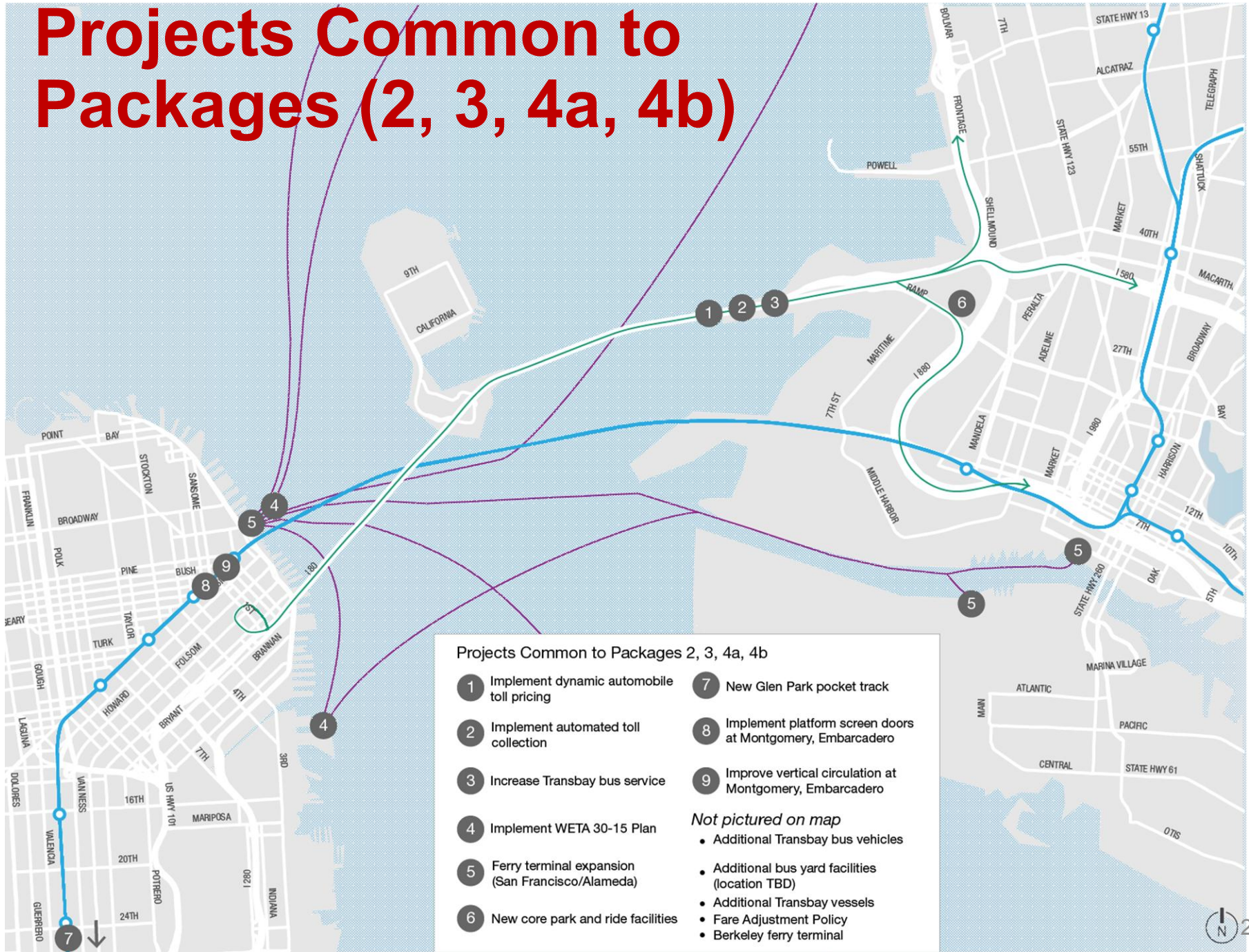
4a
Value Pricing,
infrastructure
and Contraflow
Lane

- Contraflow Lane, Westbound on Lower Deck
- Eastbound PM peak toll
- Builds on Package 2 and 3

4b
Value Pricing,
infrastructure
and HOV Lane

- HOV Lane, Westbound with Flow
- Eastbound PM peak toll
- Builds on Package 2 and 3

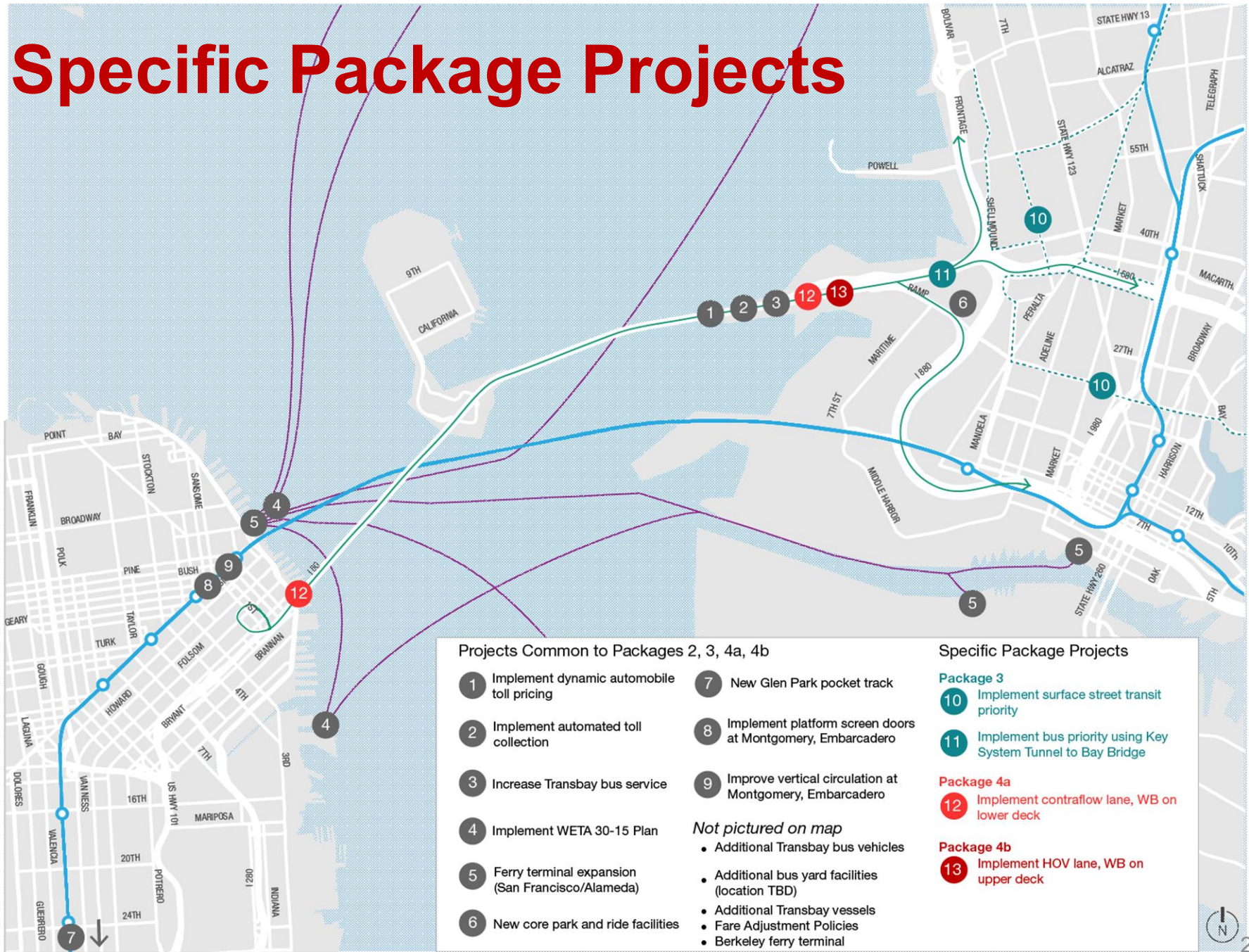
Projects Common to Packages (2, 3, 4a, 4b)



Projects Common to Packages 2, 3, 4a, 4b

- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Implement dynamic automobile toll pricing 2 Implement automated toll collection 3 Increase Transbay bus service 4 Implement WETA 30-15 Plan 5 Ferry terminal expansion (San Francisco/Alameda) 6 New core park and ride facilities | <ul style="list-style-type: none"> 7 New Glen Park pocket track 8 Implement platform screen doors at Montgomery, Embarcadero 9 Improve vertical circulation at Montgomery, Embarcadero |
|---|---|
- Not pictured on map*
- Additional Transbay bus vehicles
 - Additional bus yard facilities (location TBD)
 - Additional Transbay vessels
 - Fare Adjustment Policy
 - Berkeley ferry terminal

Specific Package Projects



Projects Common to Packages 2, 3, 4a, 4b

- 1 Implement dynamic automobile toll pricing
 - 2 Implement automated toll collection
 - 3 Increase Transbay bus service
 - 4 Implement WETA 30-15 Plan
 - 5 Ferry terminal expansion (San Francisco/Alameda)
 - 6 New core park and ride facilities
 - 7 New Glen Park pocket track
 - 8 Implement platform screen doors at Montgomery, Embarcadero
 - 9 Improve vertical circulation at Montgomery, Embarcadero
- Not pictured on map*
- Additional Transbay bus vehicles
 - Additional bus yard facilities (location TBD)
 - Additional Transbay vessels
 - Fare Adjustment Policies
 - Berkeley ferry terminal

Specific Package Projects

- Package 3**
- 10 Implement surface street transit priority
 - 11 Implement bus priority using Key System Tunnel to Bay Bridge
- Package 4a**
- 12 Implement contraflow lane, WB on lower deck
- Package 4b**
- 13 Implement HOV lane, WB on upper deck



SF Metro Packages (short & medium term)

PREREQUISITE PROJECTS

[PLUS]

Projects Common to all Packages

- Solution at Forest Hill and West Portal to enable four-car trains in tunnel
- Geary BRT
- Add and optimize 4-car turn-around capacity at Embarcadero
- SF Better Market Street
- Infrastructure support for service/capacity increases
- System flexibility (e.g. new and enhanced turn-backs)

SF Metro Packages (short & medium term)

PREREQUISITE PROJECTS

PROJECTS COMMON TO ALL PACKAGES

[PLUS]

Package Themes

1a

Longer trains through surface improvements

1b

Longer trains through coupling

2a

Simplified Metro Network

Specific projects pending further definition, feasibility screening, tradeoffs analysis, internal and external stakeholder vetting

CCTS – Plan Bay Area Integration

RTP Investment Strategy

Potential “Core Capacity” Investment Strategy in PBA 2040

- Prerequisite Projects
- Placeholder for Short- and Mid-Term Package Projects
- Future Planning for Long-Term “Big Move” Projects

Next Steps

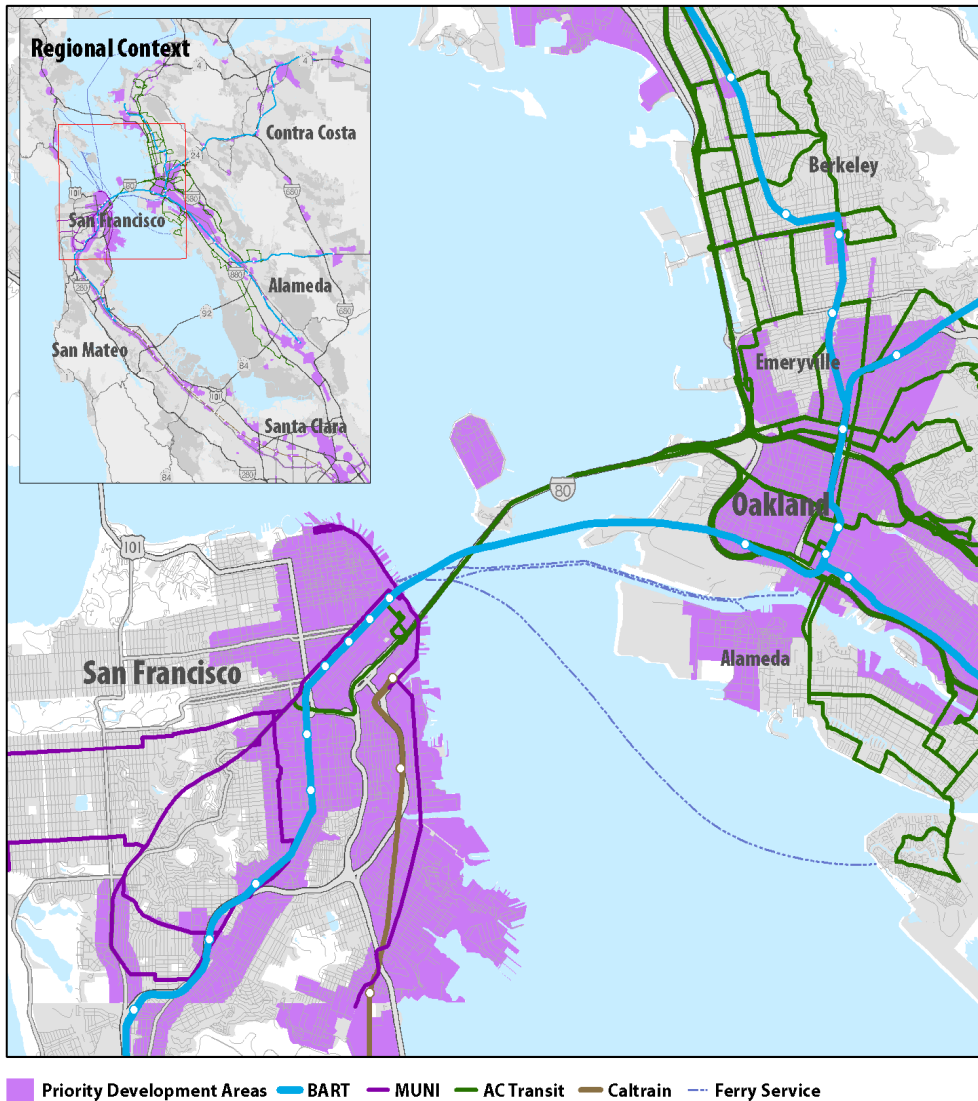
- Identify short- and mid-term projects
- Identify list of “big moves”
- Develop funding request for high-priority CCTS projects
- Fiscally constrain CCTS projects in a PBA40 investment package

MTC adopts the preferred RTP Investment Strategy in **September 2016**

MTC adopts Plan Bay Area 2040 in **June 2017**

Project Next Steps and Schedule

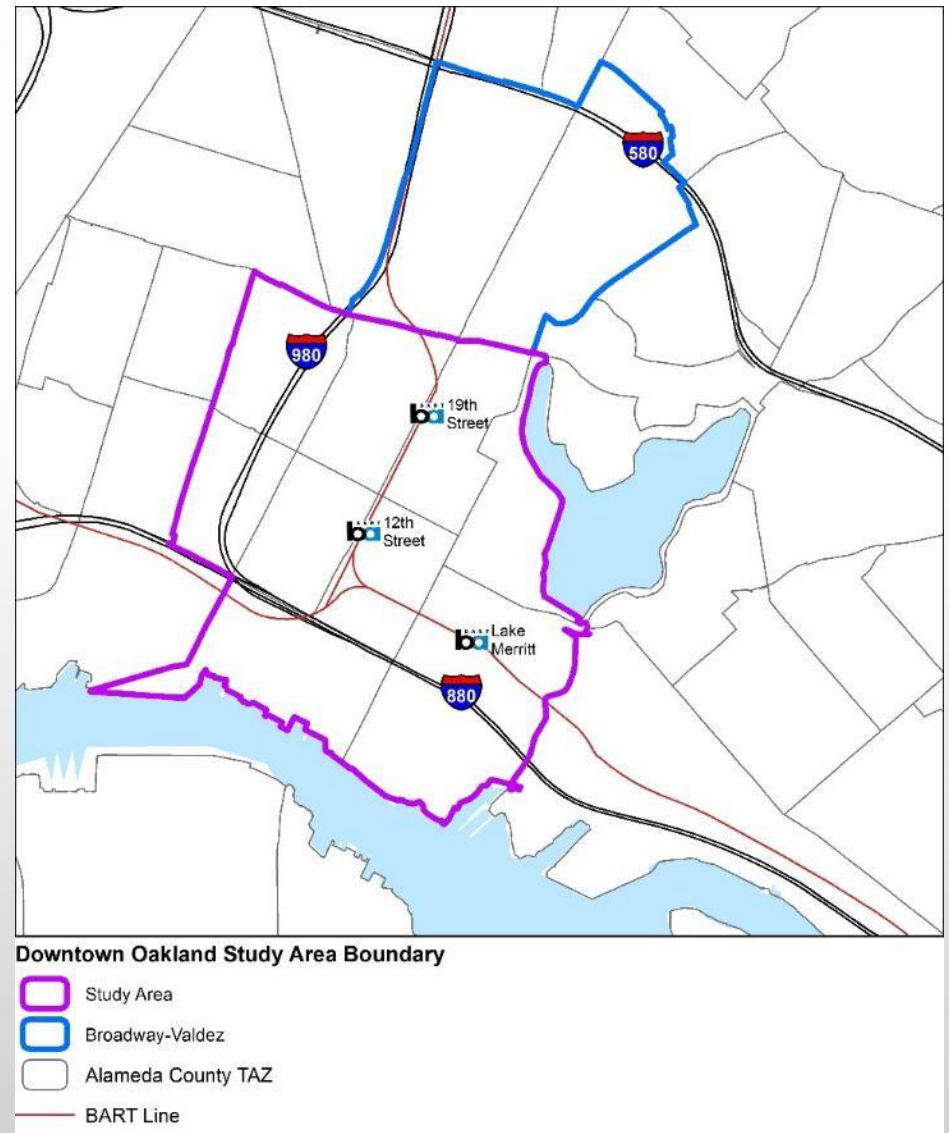
SF Market Assessment



- Goal: Provide a range of employment growth projections for key subareas within the San Francisco core
- Between 2010 and the end of 2014, San Francisco added 97,000 new jobs
- Estimates 100,000-140,000 new jobs in the SF Core between 2015-2040.

Oakland Market Assessment

- Goal: Understand the potential for future employment and residential growth in Downtown Oakland
- Between 2011 and 2014, the study area added 5,000 new jobs
- Estimates between 12,100 and 23,900 net new jobs by 2040



Market Assessment Synthesis

- Address the potential growth in both Downtown Oakland and the SF Core, and their relationship to each other and the region
- Provide additional guidance on:
 - The need to provide transit investments to specific locations
 - When potential transit investments are needed based on employment and residential demand
 - If employment growth in Downtown Oakland has the potential to be strong enough to relieve demand in the corridor and shift needed transit investments

Long Term Strategies – Study Activities

1. Review study, policy, operator and engineering considerations including:
 - a. Study guiding principles and criteria
 - b. Operator perspectives and study assumptions
 - c. Relationship of market assessment finding's to long term themes
 - d. Local, regional, and state policy considerations
 - e. Impact of transportation trends, including impact of emerging technologies such as autonomous vehicles
2. Conduct public outreach
 - a. Engage community stakeholders and members of the public on long term themes post November 2016

Project Schedule

- Complete evaluation methodology (May 2016)
- Complete package project definitions with PMT (June 2016)
- Evaluate project packages (June - September 2016)
- Assess long term strategies (June - October 2016)
- Participate in outreach activities (Multiple phases 2016)
 - Contribute to Plan Bay Area outreach events – focused on Study Purpose and Problem Statement (June 2016)
 - Conduct stakeholder and public outreach (December 2016)

Project Schedule

2016

2017

Apr May Jun Jul Aug Sept Oct Nov Dec Jan Feb Mar

