Core Capacity Transit Study

San Francisco County Transportation Authority

October 17, 2017

Study Purpose

- Multi-agency effort focused on increasing transit capacity to the San Francisco Core

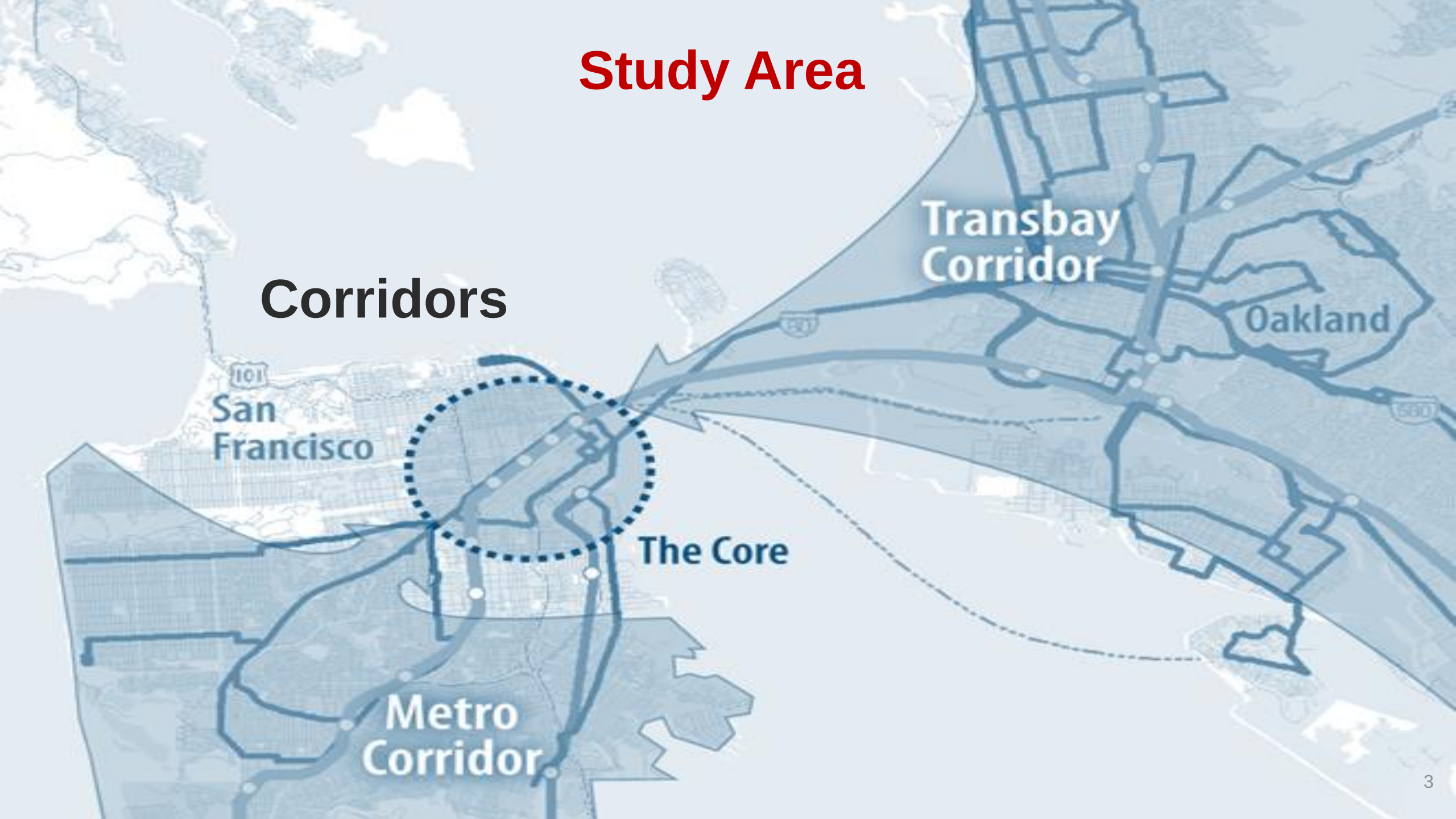
PROJECT MANAGER

PROJECT TEAM

- Study investigates *short, medium, and long term* transit solutions that:
  - Increase transit capacity to meet expected demand
  - Improve transit reliability
  - Manage demand
- Tests multiple packages to understand tradeoffs between infrastructure investments and policy changes
- Identifies project synergies between short, medium and long term projects

Study Area

Corridors

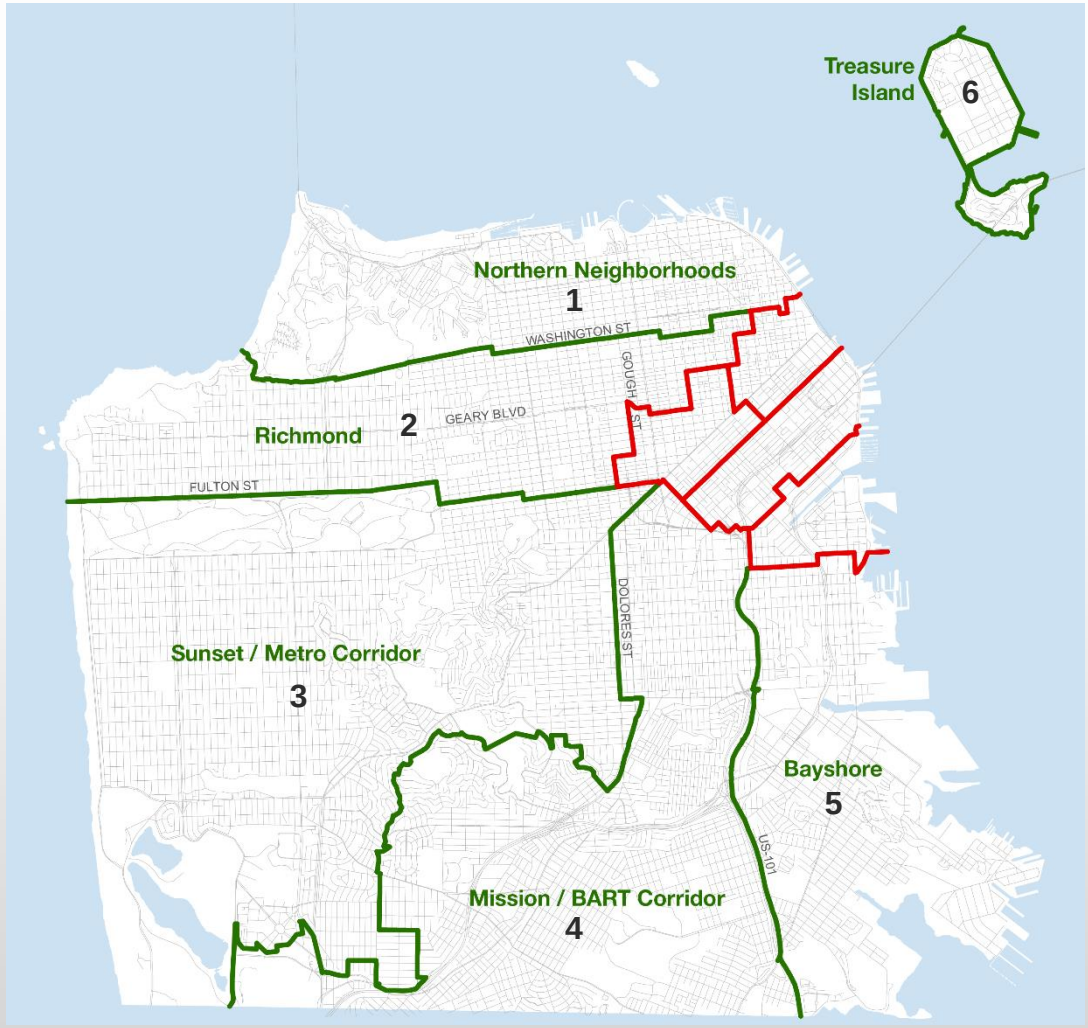


SF Metro

Short and Medium Term Evaluation

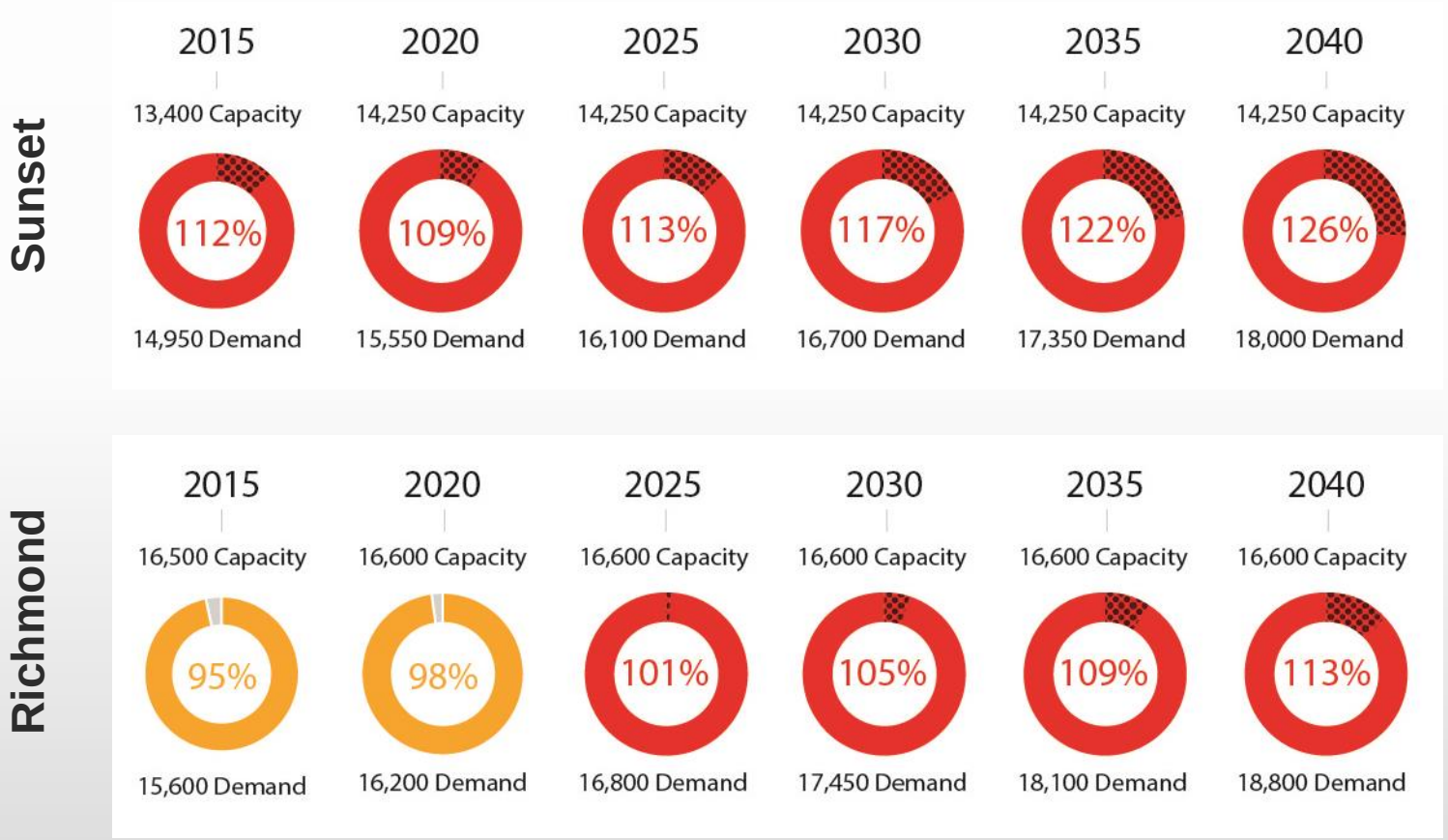
SF Metro Corridor Future Growth

- 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



CORE CAPACITY TRANSIT STUDY

Transportation Trends: Most Constrained SF Sub-Areas

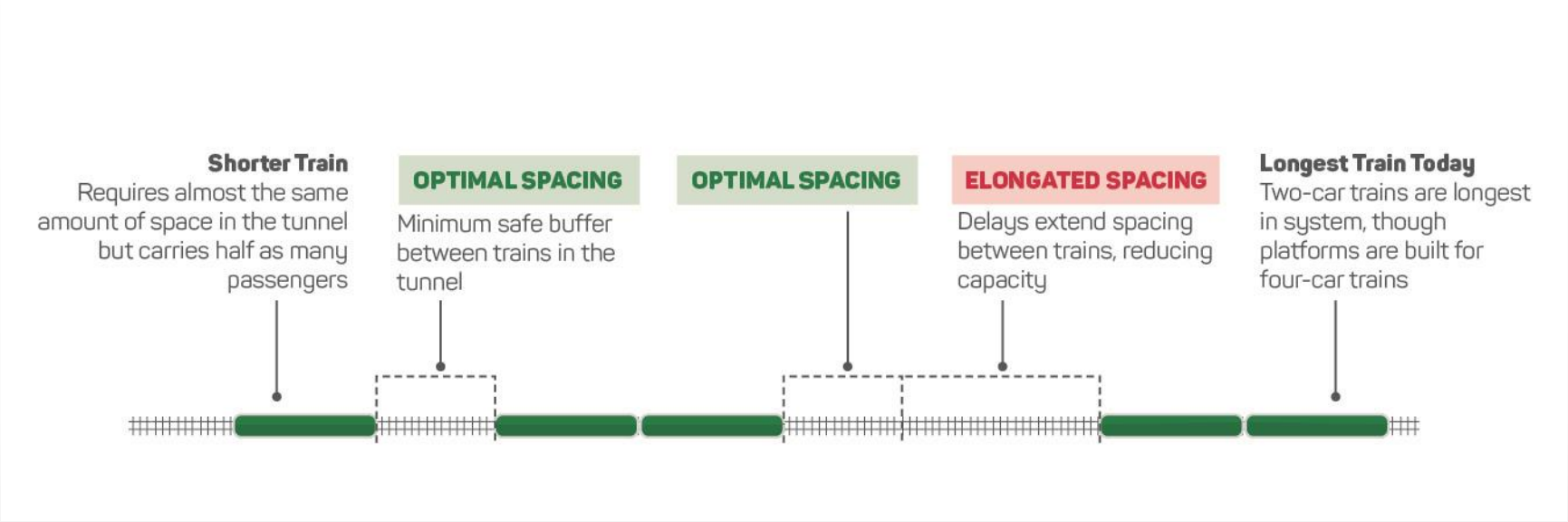


SF Metro: Prerequisite Projects

Tier 1: Fully funded Tier 2: Not Fully Funded

Tier	Timeframe	Sponsor	Project
1	Short Term	SFMTA	Central Subway
1	Short Term	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	SF Better Market Street
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	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

Sunset Corridor: Key Challenge



Key causes (among others):

- Delays from traffic on surface streets
- Complicated operations where lines merge

Recommended Package: Capital & Operating Costs

Prerequisite & Recommended Capital Projects		Estimated Cost
1	SFMTA – Fleet and Yard	$787m
2	Surface Light Rail Safety & Capacity Project	$100m
3	Surface Improvements – Station, Roadway & Transit Priority Traffic Control	$51m
4	Geary Corridor Bus Rapid Transit (BRT)	$300m
	Total Recommended Capital Package	$1.2bn

Operating Costs		Estimated Cost
1	SFMTA : Light rail	$19m/yr
2	SFMTA: Geary Corridor BRT	$12.5m/yr
	Total Annual Operating Costs	$31.5m/yr

SF Metro Capacity and Demand w/ Recommended Package

Sunset Corridor

Existing Conditions (Capacity)
Inbound to SF Core
AM Peak Hour

4,550	People in Cars
8,100	People on Transit
750	People Biking & Walking

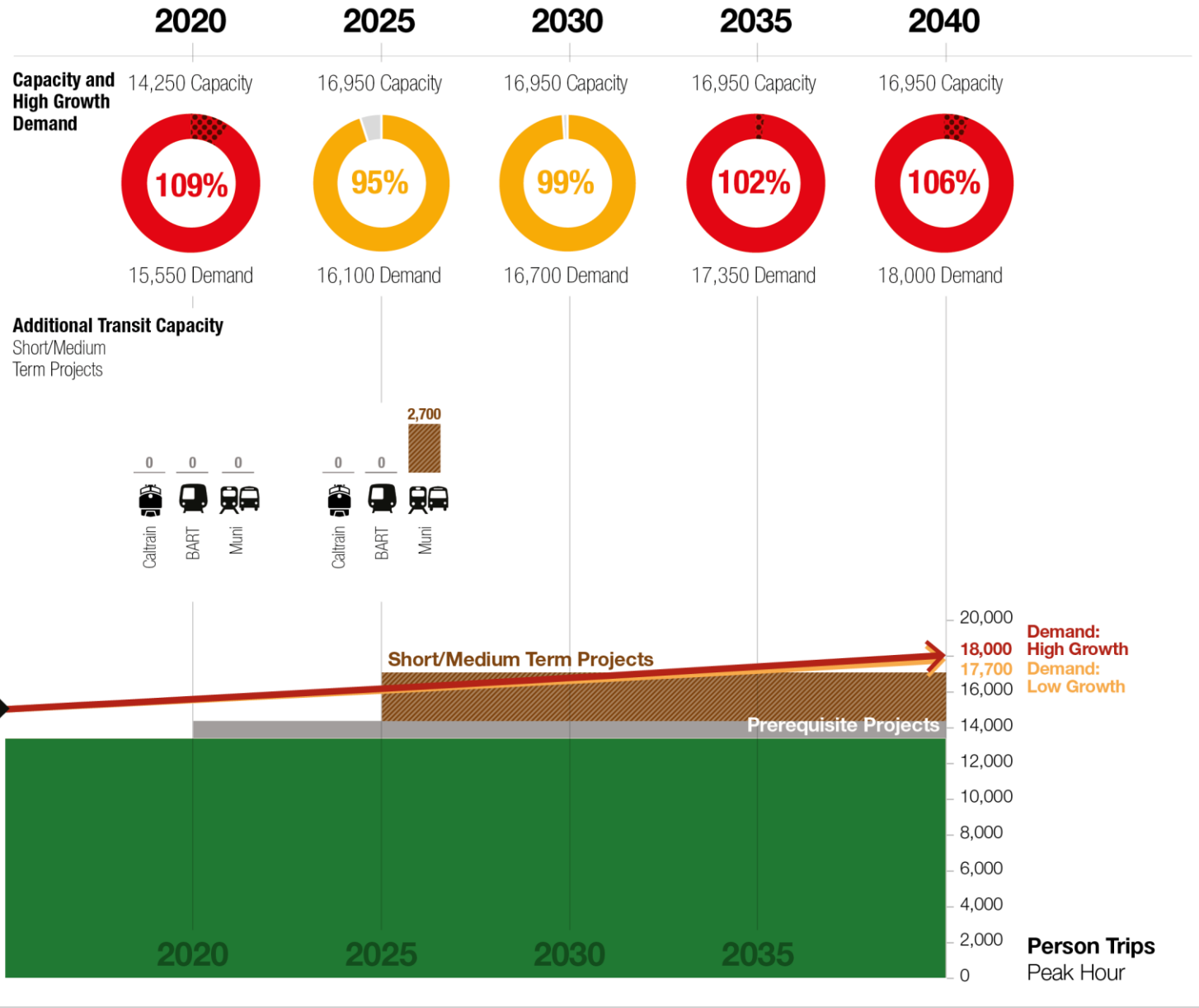
2015

13,400 Capacity

112%

14,950 Demand

Totals may not sum due to rounding



CORE CAPACITY TRANSIT STUDY

SF Metro Capacity and Demand w/ Recommended Package

Richmond Subarea

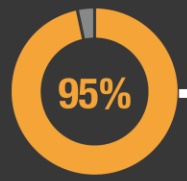
Recommended Package
Estimated transit capacity increases

Existing Conditions (Capacity)
Inbound to SF Core
AM Peak Hour

4,400	People in Cars
6,700	People on Transit
5,400	People Biking & Walking

2015

16,500 Capacity



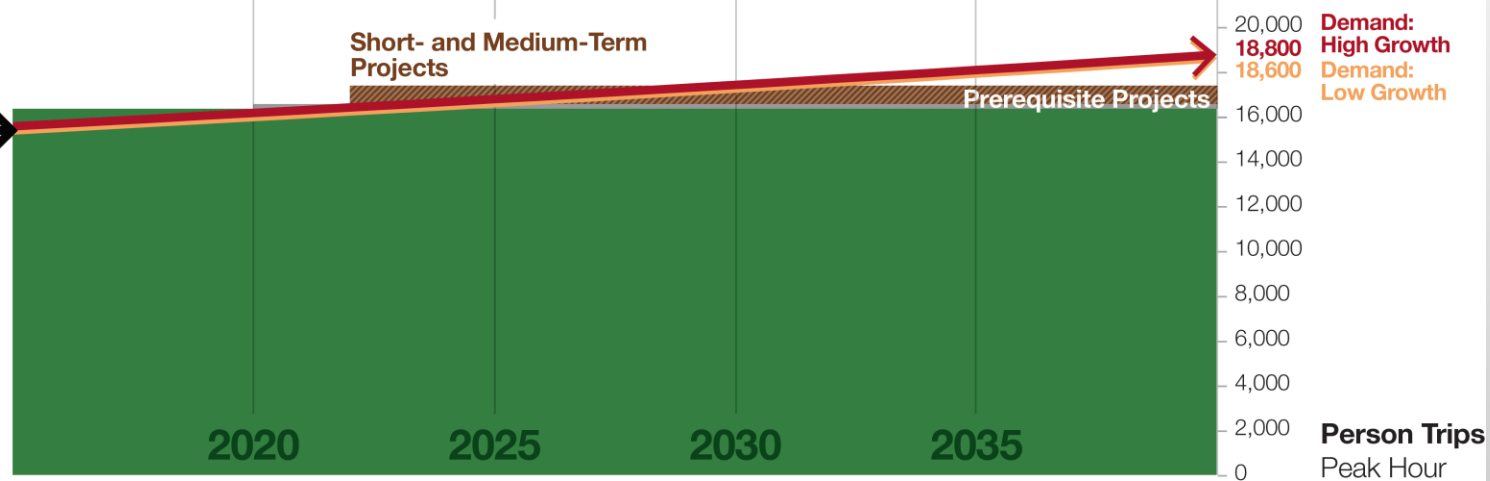
15,600 Demand

Totals may not sum due to rounding

	2020	2025	2030	2035	2040
Capacity and High Growth Demand	16,600 Capacity	17,400 Capacity	17,400 Capacity	17,400 Capacity	17,400 Capacity
	98%	97%	100%	104%	108%
	16,200 Demand	16,800 Demand	17,450 Demand	18,100 Demand	18,800 Demand

Additional Transit Capacity
Short- and Medium-Term Projects

	2020	2025
Caltrain	0	0
BART	0	0
Muni	0	800

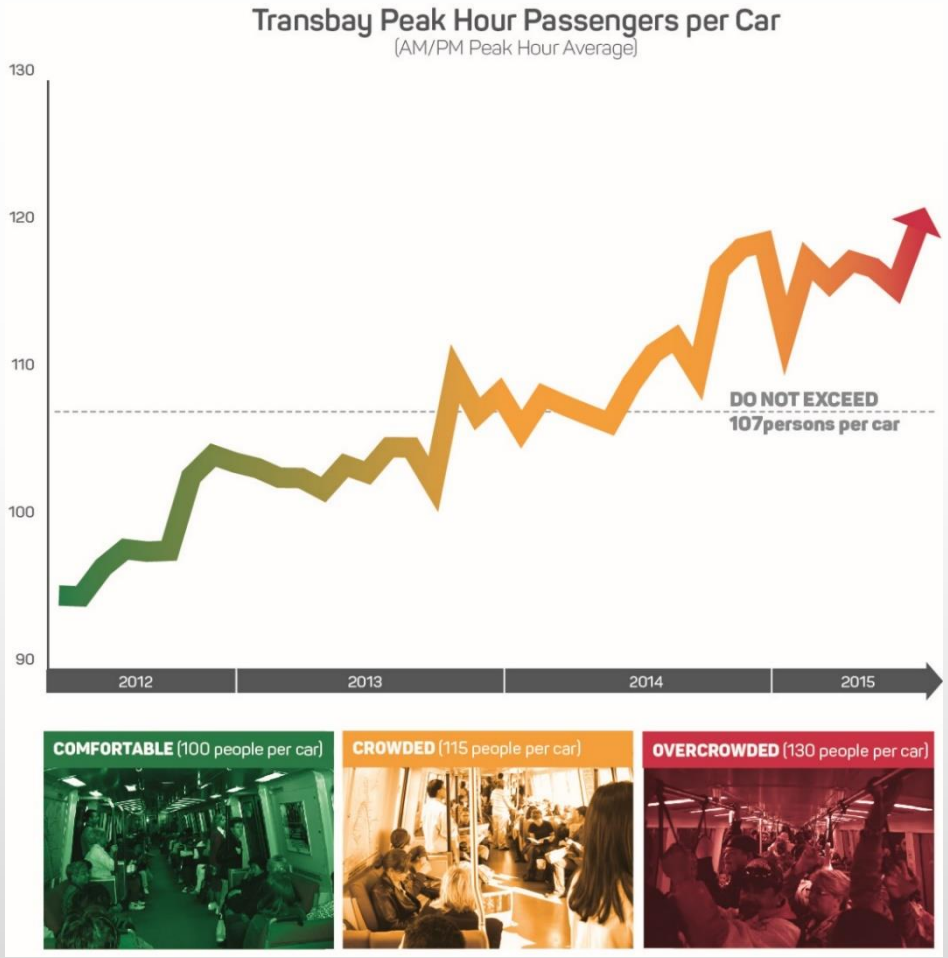


CORE CAPACITY TRANSIT STUDY

Transbay Corridor

Short and Medium Term Evaluation

Transbay Corridor- Challenges and Constraints

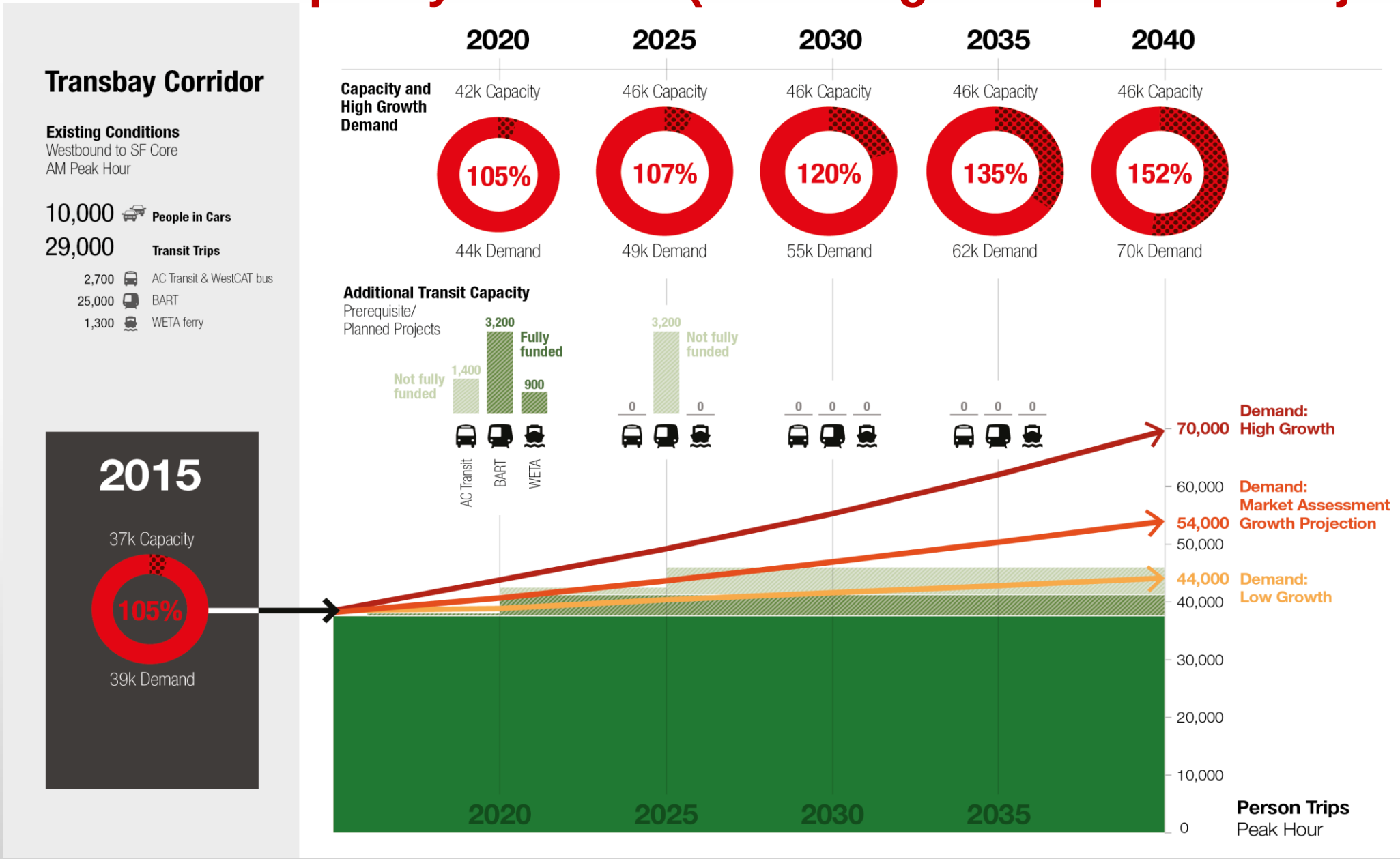


Transbay: Prerequisite Projects

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
1	Short Term	MTC	Bay Bridge Forward
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

Transbay Corridor Capacity/Demand (including Prerequisite Projects)



CORE CAPACITY TRANSIT STUDY

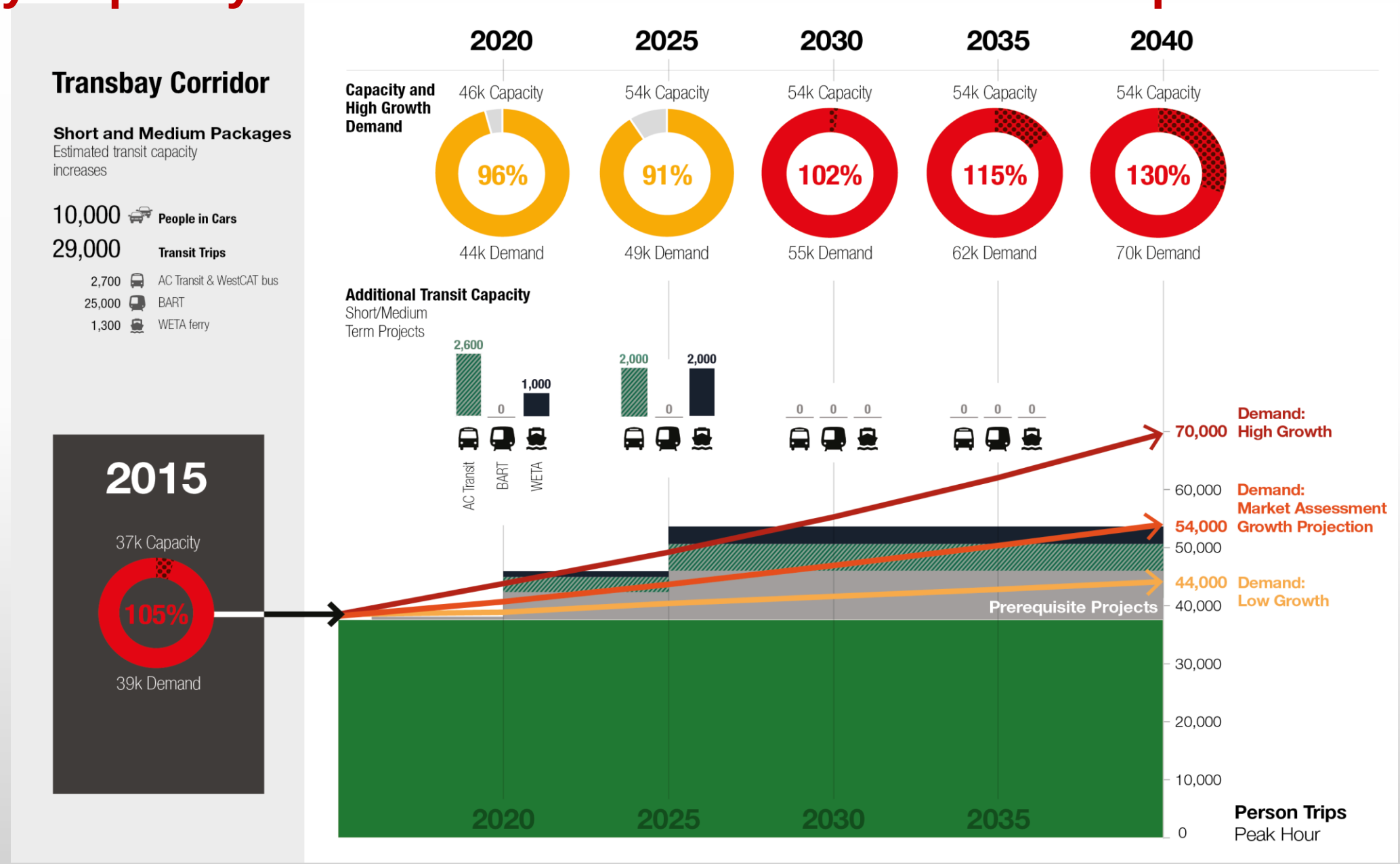
Recommended Package: Capital Costs

Unfunded Prerequisite Projects + Short and Medium Term Improvements		Unfunded Portion
AC Transit		
1	Fleet – 110 Buses	$90M
2	West County Bus Facility	$100M
3	Infrastructure - Park and Ride, Bus Transitway, Surface Street Transit Priority, Bus Tunnel	$240M
4	Ferry feeder service	$15M
	Subtotal AC Transit	**$445M**
WETA		
1	Fleet – 11 Boats	$206M
2	Terminals - Alameda Main Street, Harbor Bay, Oakland (all enhanced) - Berkeley, Downtown North Basin, Mission Bay, Seaplane Lagoon (new)	$168M
	Subtotal WETA	**$374M**

Recommended Package: Capital Costs

Unfunded Prerequisite Projects + Short and Medium Term Improvements		Unfunded Portion
BART		
1	Transbay Core Capacity Project (fleet, train control, traction power, HMC Ph2)	$3.5B
2	BART Metro	$362M
3	Other supportive projects - Montgomery & Embarcadero platform screen doors, vertical circulation - Glen Park pocket track	$180M
	Subtotal BART	**$4B**
	Subtotal AC Transit	$445M
	Subtotal WETA	$324M
	Subtotal BART	$4B
	Total All Projects	**$4.8B**

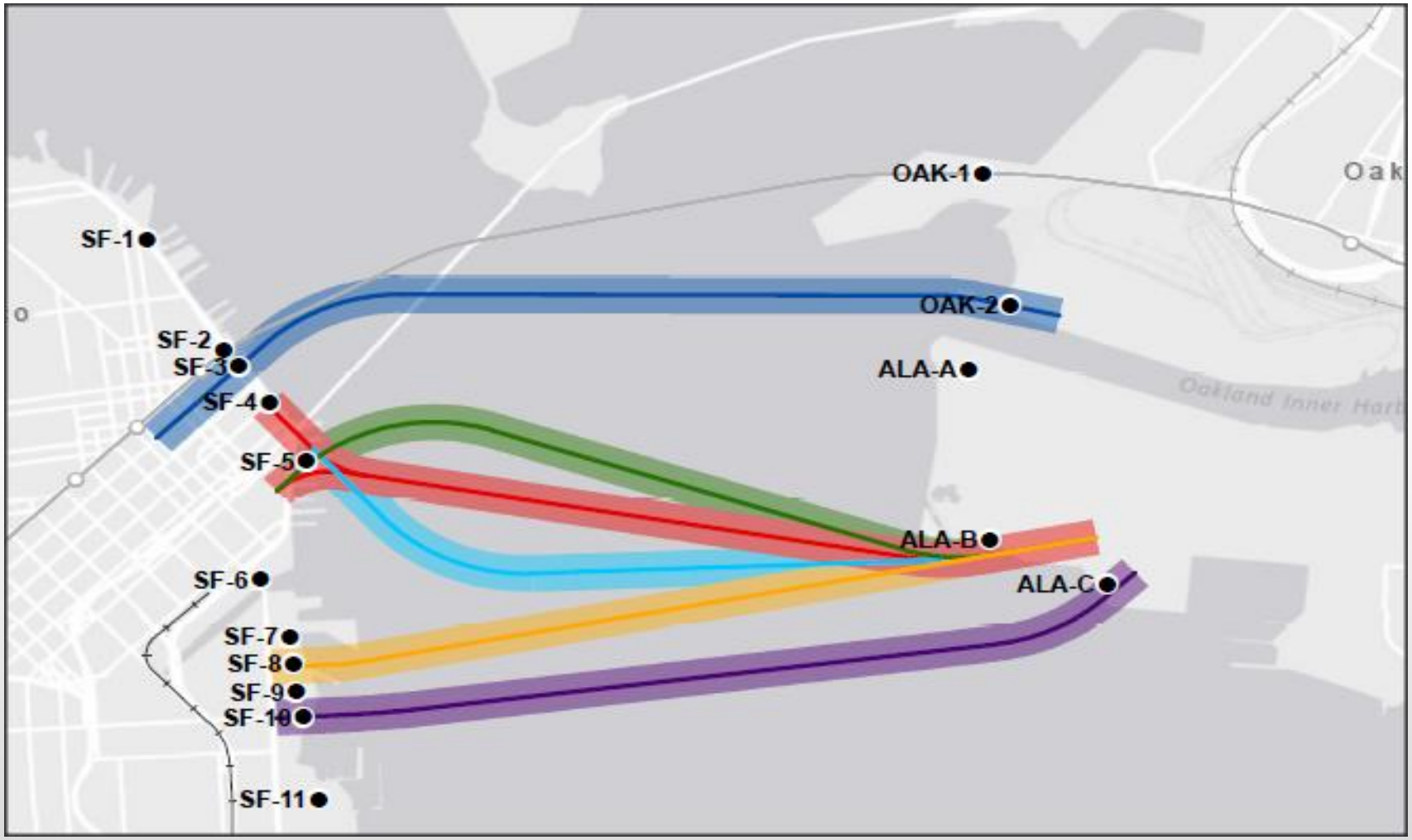
Transbay Capacity and Demand: Short and Mid-Term Improvements



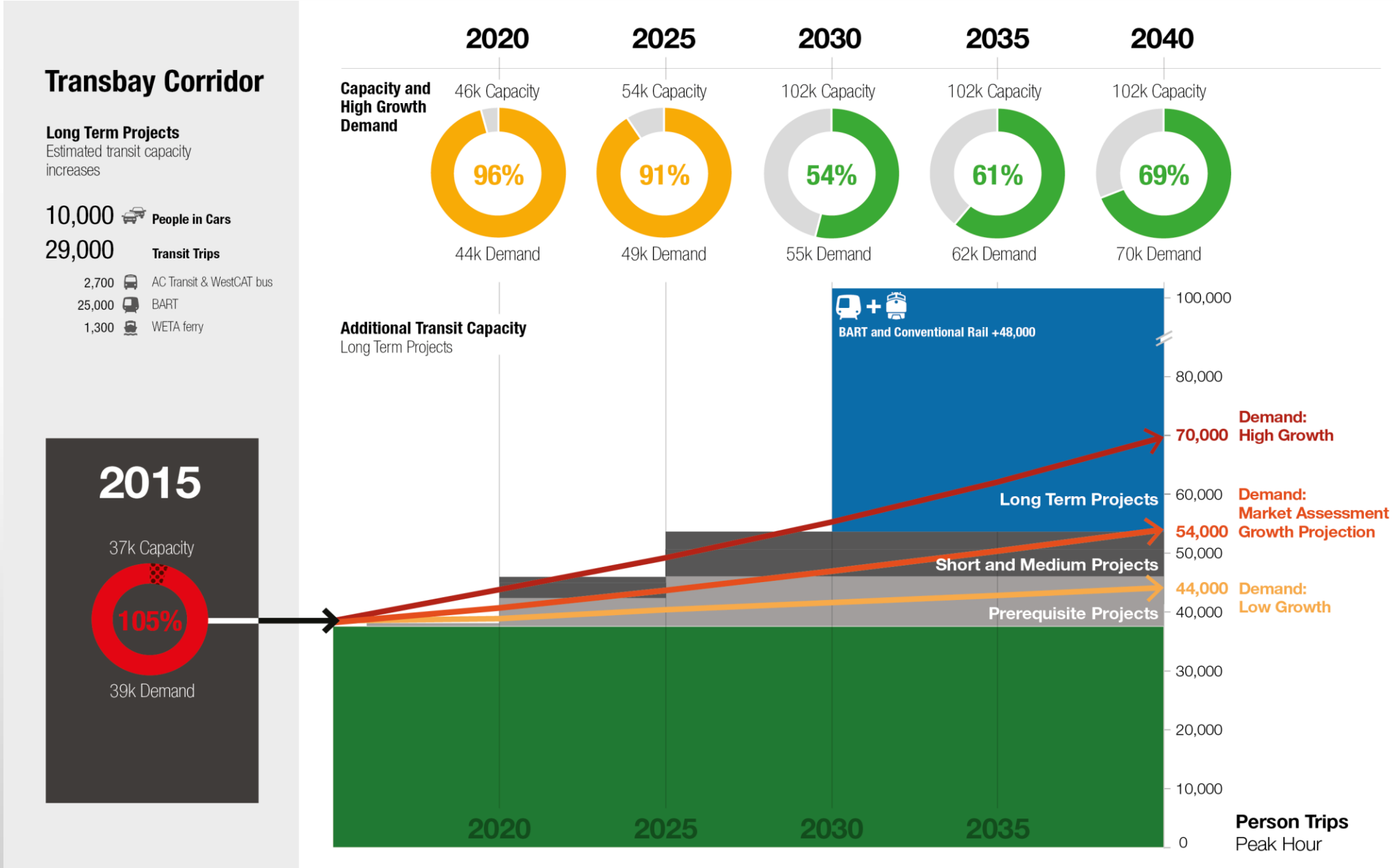
CORE CAPACITY TRANSIT STUDY

Long Term

Long-Term: Alignments Used for Comparison



Transbay Capacity and Demand: BART + Conventional Rail



CORE CAPACITY TRANSIT STUDY

Next Steps

- Final report canis online at www.mtc.ca.gov
- Second crossing continuation study
  - Includes BART and conventional rail option for analysis
  - Need to Identify study leaders
    - Identify program management role and who does it
    - BART will lead BART portion
    - Responsible entity to lead conventional rail portion needs to be identified/created
- Key scoping questions
  - Geographic scale: corridor, regional, mega-regional?
  - Institutional governance and other policy considerations
- A scoping effort is needed ASAP to develop a second crossing continuation study framework.

Questions?