



Emission Zero Program



CAC Meeting July 26, 2023

Program Scope

- California Air Resources Board Innovative Clean Transit (ICT) Regulation
- Vehicle Replacement
- New Infrastructure
- Facility Modifications
- Work Force Training

Emission Zero Program

- Zero Emission Vehicles
 - Battery Electric Buses (BEBs)
 - Hydrogen Fuel Cell Electric Buses (FCEBs)
- BEB Infrastructure
 - Interim Chargers at South Base and North Base
 - Long-Term Charging Infrastructure at South Base
- FCEB Infrastructure
 - Interim and Long-Term Fueling Stations at North Base
 - Maintenance Building Modifications at North Base

Zero Emission Vehicles

- 319 Fixed-Route Buses
 - Battery Electric Buses (BEBs)
 - Hydrogen Fuel Cell Electric Buses (FCEBs)
- 70 Paratransit Vehicles



Criteria	BEBs	FCEBs
Range		✓
Fueling Time		✓
Infrastructure		✓
Maintenance	✓	
Energy Costs	✓	
GHG Reduction	✓	
Resilience		✓
Battery Usage		✓

Updated Fleet Procurement Plan

Zero Emission Buses (ZEBs)	Purchase Year												Total ZEBs
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
	Procured			To be Procured									
FCEBs (North Base)	0	10	0	105	26	0	0	0	0	0	0	31	172
BEBs (South Base)	7	30	0										37
ZEBs (South Base)				0	36	0	0	0	50	0	0	24	110
	7	40	0	105	62	0	0	0	50	0	0	55	319



40-Foot BEB at North Base

South Base

- Interim charging for 20 BEBs
- Construction work is in progress
- 10 chargers scheduled to be commissioned by late 2024





Long-Term BEB Charging Infrastructure at South Base

South Base Location of Charging Bays for 37 BEBs

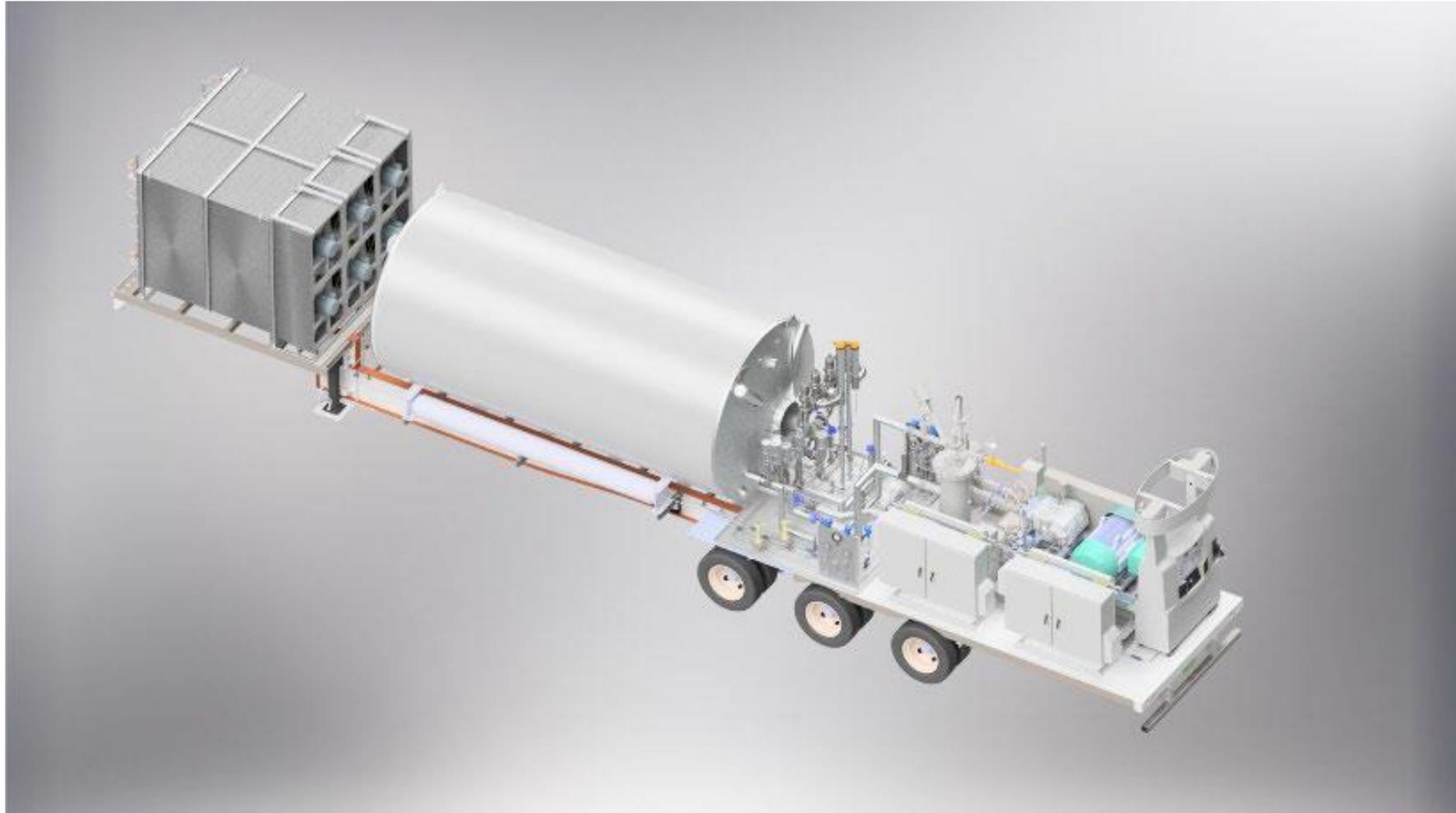


North Base

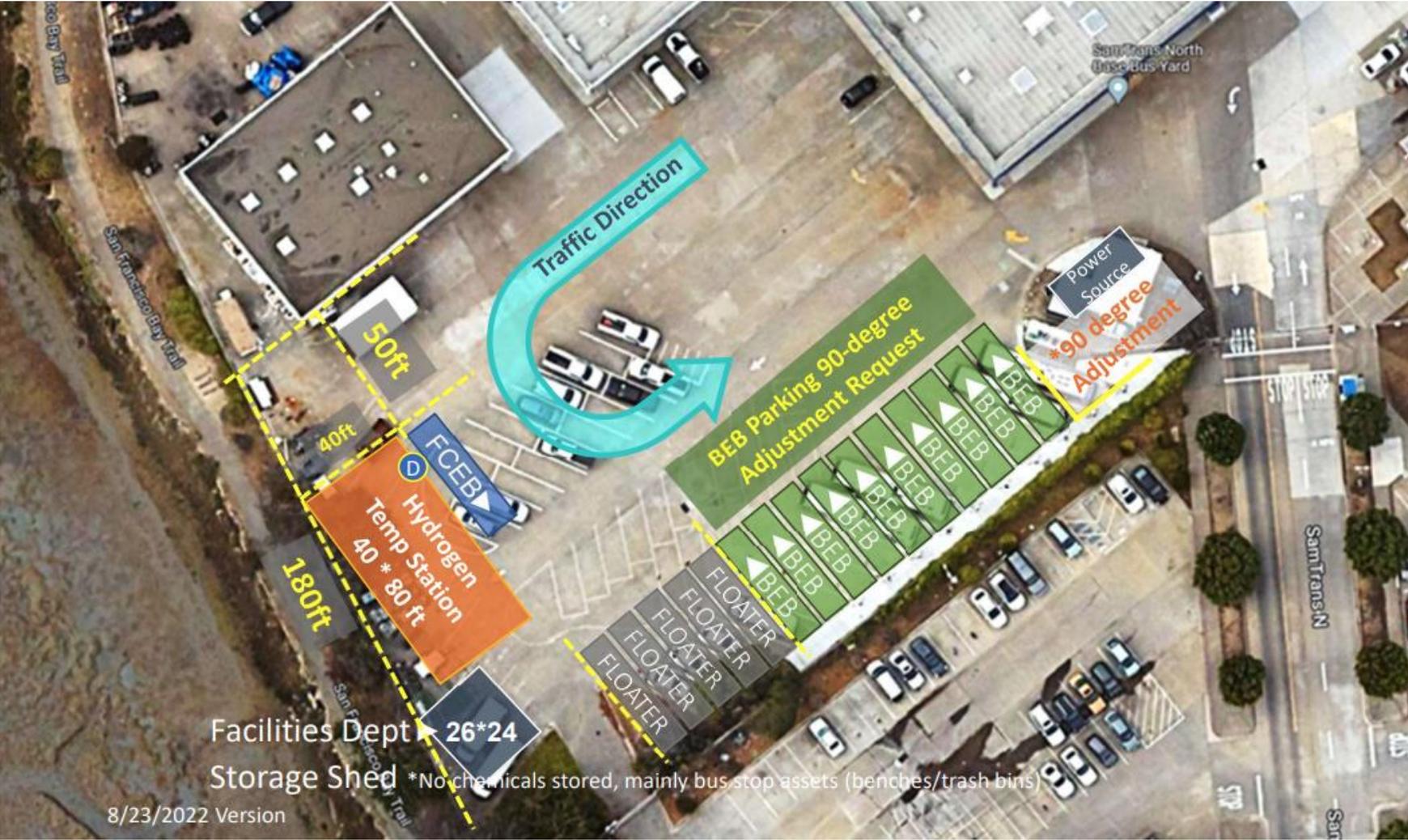
- Interim charging for 17 BEBs
- Construction work is complete
- 10 chargers commissioned in May 2023



Interim Hydrogen Fueling Station at North Base



North Base Location of Interim Hydrogen Fueling Station



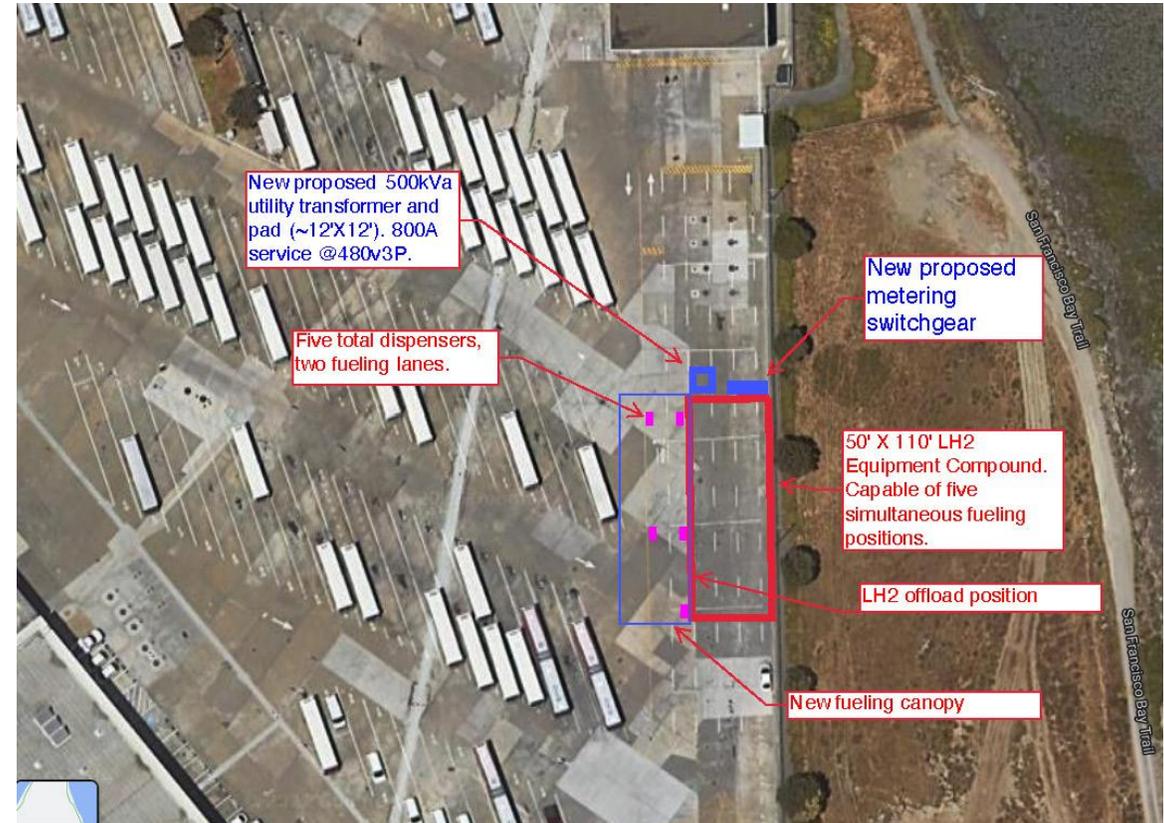
8/23/2022 Version

*No chemicals stored, mainly bus stop assets (benches/trash bins)

North Base Bldg. 100 Modifications – 4 Bays



FCEB Fueling Station at North Base





North Base Bldg. 100 Modifications – Remaining Bays

Work Force Training



Other Transit Agencies in CA

- Bay Area Transit Agencies
 - BEBs: SF MTA
 - BEBs & FCEBs/FCEB Plans: AC Transit, VTA, Golden Gate
- At least 19 Agencies have FCEBs/ FCEB Plans
 - AC Transit: 70% FCEBs – 30% BEBs
 - Foothill Transit: 1 Facility for FCEBs, 1 Facility for BEBs
 - FCEBs: 157 by 2023; 1500 by 2031
 - H2 Stations: 12 by 2023; 34 by 2031

Funding

- FTA Formula Funds for Fleet
- Hybrid & Zero-Emission Bus Voucher Incentive Project
- Potential Funding: Competitive Grants
 - FTA Low-No Emission & Bus & Bus Facilities
 - Department of Energy's Federal Hydrogen Hub
 - CTC Local Partnership Program (LPP)

Questions?