Track & Facility Capital Projects Needed to Maximize Fleet Utilization

**BART Metro Phase 1 (up to 500,000 trips/day)**
- 24th / Mission (Upgrade) and Richmond Crossovers
- Hayward Maintenance Complex Phase I

**BART Metro Phase 2 (500,000 to 750,000 trips/day)**
- Train Control System Modernization Project
- Glen Park Pocket Track
- Bay Fair Connection
- Hayward Maintenance Complex Phase II: Eastside Storage Yard
Station Capacity is a Peak Period Issue at Embarcadero & Montgomery

Combined Station Entries & Exits in 15 Minute Increments
Sample Date: November 15, 2012
Two Concerns: AM Escalator Queues & PM Platform Crowding

VTA-BART Core Station Impact Study (2010) had the following conclusions:

AM Escalator Queues
• @735,000 riders: Embarcadero & Montgomery each had an escalator whose queue did not clear in under 2 min during minor delay events

PM Platform Crowding
• @487,000 riders: Embarcadero & Montgomery platforms were OK during normal service, but failed during an extreme delay event
• @735,000 riders: Embarcadero was stressed during normal service and failed during minor and extreme delay events. Montgomery only failed during an extreme delay event
Interim Measures to Address Station Capacity

- Replacement or removal of under-utilized platform furniture: benches for seating disks, fewer pay phones
- Platform Screen Doors: Gain 1,400 sq. ft. of usable net space per platform (*EM current is 7,500, MT current is 12,000*)
- Metering Measures: real time platform headcount system
- Skip Stop Service: Montgomery has more capacity than Embarcadero (New Years Eve Plan)
- In Station Crowd Management (Giants Parade Day)
- Higher Performance Escalators (Hong Kong & Shanghai)
- Additional High Capacity Elevators (Portland MAX, Sound Transit)
The Ultimate Solution to these Station Capacity Issues: “Saddlebag Platforms”

Total Estimated Construction Cost: $615 million (2009 dollars)
Mission Critical Improvement as ridership starts to exceed 500,000 per weekday
“Two Birds with One Stone”
Measures to address both Vehicle and Station Capacity

Objective: To flatten out peak demand without negatively impacting overall ridership levels

Demand Management
• Peak of the peak period, peak direction fare surcharges (WMATA, NJ Transit, LIRR, Metro North)
• Embarcadero and Montgomery Station peak premium fares

Station Access (reduce the AM rush to find parking)
• Expanding the market-based reserved parking program
• Transit Oriented Development, increasing walk-access
• Bicycle facilities improvements and operating rule changes
• Making feeder bus work: speed improvements and joint fares
Conclusions

Weekday ridership could be 500,000 within 5 years and 750,000 a decade thereafter.

Three big ticket capacity improvement projects are on the near-term critical path:

1. 225 more cars → 1,000 Rail Vehicle Fleet
2. Closer running trains → Train Control System Modernization
3. Expanded / Improved maintenance facilities → HMC

Approximate cost = $2.1 billion (BART Share $650 Million)

Price tag for other key capacity projects is $1.5 Billion: (HMC eastside, Saddlebags, Crossovers, Connector, Pocket Tracks, Elevators)