Key Discussion Items

- Original Plan
- Alternative Plan
- Two Timeframes
  - 2020 electrified service
  - Future blended service (with level boarding)

Note: Board Workshop May 20th Discussion
Original Plan

Goal: Maximize Caltrain Capacity

- Growing Demand
  - Weekday ridership today: 60,000+
  - Weekday ridership future: 110,000+

- Today
  - 20+ mile trips
  - 95%-125% peak weekday capacity
  - 11% bikes on board

- Future
  - Share train slots (6 Caltrain / 4 HSR) per hour / direction
Exceeding Capacity Today

Terminology

- Caltrain EMU Floor ATOR: 22”- 25” (for this presentation ~25”)
- HSR Train Floor ATOR: 48”- 51” (for this presentation ~50”)
Original Plan

**Timeframe: 2020 Electrified Service**

- 2 double doors (located: ~25” floor)
- Passengers step (1-2) from platform
- ADA passengers and bikes located ~25” level
- ADA use mini highs and wayside lifts

Similar to Today’s Bombardier
Request for Information
Summer 2014

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Industry Confirmation</th>
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<tbody>
<tr>
<td>Maximize Capacity</td>
<td>• Bi-level (versus single level)</td>
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<tr>
<td>Previously Made</td>
<td>• Service proven options</td>
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<td>• Saves costs / time</td>
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<td>US Regulation</td>
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<td>Compliance</td>
<td>• Buy America</td>
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<td></td>
<td>• FRA Waiver / Alternative Compliant Vehicles Criteria</td>
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<td>• Meet Caltrain Technical / Quality Standards</td>
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<tr>
<td>Floor Threshold</td>
<td>• 2 double doors per car (low level boarding)</td>
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<td>• ~22” to ~25” most common</td>
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Note: Anticipate adequate competition for the RFP

Original Plan
Timeframe: Future Blended (with level boarding)

- 2 – 3 HSR/Caltrain Stations w/ New Platforms
  - Transbay Transit Center, Millbrae, Diridon
  - HSR at ~50”
  - Caltrain at ~25”
- 27 Caltrain Stations with Modified Platforms
  - Level boarding at ~25”
  - Remove / fill-in steps in cars
  - Longer EMU trains and extend platforms
Original Plan: Level Boarding Assumption

Transition level boarding (~25") 27 Caltrain stations

New platforms 2-3 HSR / Caltrain stations

Stakeholder Request for EMU Modification
Request for Vehicle Modification

- HSR vehicles high door boarding (~50”)
- Can Caltrain EMUs be modified to support high door boarding?
- Enables common platforms in future
  - Caltrain & HSR access to all platforms
- Provides system operational flexibility
  - Regular incident recovery
  - Emergency / disaster recovery

Analysis Process

- December 2014 to May 2015
  - Carbuilder interviews w/ HSR
  - Technical analysis w/ HSR
  - Caltrain operational assessment
  - Policy discussion / decisions
  - Boards
  - Stakeholders
Car Builder Interviews

- Seven car builders participated
- Proposed modification solutions
  1. **Cars with more doors**
     - 2 ~25” double doors and 2 ~50” single/double doors
     - Seat loss: 60-100 potential range per 6-car train
  2. **Cars with traps**
     - 2 single ~50” doors w/ traps and 2 single ~50” doors
     - no seat loss
- Positive
  - Redesign existing vehicles (not starting from scratch)
  - Vehicle delivery (2020 revenue service)
  - Competition adequate

Alternative Plan
Caltrain Operations Assessment

_Timeframe: 2020 Electrified Service_
Alternative Plan A
Cars with More Doors (2020)

- 4 double doors (located: ~25” & ~50”*)
- Passengers / bikes use ~25” doors (1-2 steps)
- ADA location TBD
  - Located at ~50” (use high doors: need high blocks / wayside lift)
  - Located at ~25” (use low doors: need mini high / wayside lift)

*Double ~50” doors may not be feasible
Alternative Plan B

**Cars with Traps (2020)**

- 2 single doors w/ traps, 2 single doors no trap
  - All doors to ~50” floor
- Single door access (longer dwell)
- Passengers/bikes use 2 single doors w/ traps (3-5 steps)
  - Taller first step or step stool needed
  - Bikes located ~25” level (use additional internal steps down)
- ADA location ~50” level
  - At stations high blocks / wayside lifts
- Automatic / manual traps
Alternative Plan
Caltrain Operations Assessment

Timeframe: Future Blended (with level boarding)

Future Scenario 1
Share Platform 2-3 HSR/Caltrain Stations

- Caltrain/ HSR stations level boarding ~50”
- Caltrain stations level boarding ~25”
  - Existing station footprint and visual impact

- Alternative Plan A cars with more doors
  - Continue using both doors
  - Seats cannot be restored
  - Interior lift needed if ADA ~25” level
  - Potential mitigation by car reconfiguration

- Alternative Plan B cars with traps
  - Continue using traps
Future Scenario 2

Shared Platforms All 27 Stations

- Level boarding ~50”
  - Existing station footprint and visual impact
- For Caltrain cars with more doors
  - Seal low doors and use high doors only
  - Interior reconfiguration / restore seats
  - Bike circulation and storage challenge
  - Interior lift needed if ADA ~25” level
  - Potential mitigation by car reconfiguration
- For Caltrain cars with traps
  - Seal traps
  - Bike circulation and storage challenge

Next Steps

- JPB May 20 Workshop
  - Compatible boarding height discussion
  - Seats/Bikes/Bathroom balance
- JPB July Board Action
  - Release EMU RFP
  - Updated Funding Plan / HSR Additional Funding Commitment