Context
Capacity and Access Challenges

- Between 11% and 19% of customers make “bike-based” trips to and/or from system
- Majority (~90%) involve taking a bike on-board the train
- Peak load trains often over capacity for bikes and people
- Bike riders sometimes “bumped” or denied boarding due to capacity limits

Caltrain Electrification

- Increase in service levels, capacity and performance
- 6 peak hour trains
- 8:1 seats to bike ratio on new trains (vs existing 9:1)
- Future blended system with CAHSR and service to Transbay Terminal
Growing bike-based trips on Caltrain

- Caltrain ridership projected to double by 2040
- Caltrain wants to grow both the number and share of bike-based trips to the system
- Expansion of on-board bike capacity included in electrification but must be balanced against overall capacity needs
- Long term growth in the number of bike-based trips to the system will also require increased utilization of wayside facilities (bike parking and bike share)

Example distribution of future bike access modes
Key Questions

• What is the market for bike parking at Caltrain?
  – What will the future demand for bike-based trips to Caltrain be?
  – What mix of bike parking will best serve Caltrain customers?
  – Which customers will always choose to bring their bike on board vs. which ones might choose to park a bike if better facilities were available?

Key Questions Continued

• How can Caltrain deliver high-quality bike parking?
  – What goals and standards should apply to our bike parking system?
  – What is the best model for managing and operating a bike parking system? What resources may be needed?
  – How should we focus and phase investments in the bike parking system?
Scope & Schedule

General Schedule

- Data Collection and Customer Research:
  - Start: Now
  - Duration: 5 months

- Performance Goals and Targets:
  - Start: August 2016
  - Duration: 5 months

- Management & Implementation
  Recommendations:
  - Start: December 2016
  - Duration: 4 months
Scope Flow Chart

- Customer Travel Patterns
- Intercept Survey
- Focus Groups
- Bicycle Parking Goals and Measures
  - Existing System Assessment
  - Management Options
  - Administrative Options
- Agency Data and Processes
- Bike Parking Usage
- Bicycle Parking Plans
- Future Bicycle Parking Demand
- Future System Assessment
  - Assessment of Management Options
  - Assessment of Administrative Options
  - Recommendations
  - Implementation Plan

Data Collection and Customer Research and Outreach
Key Activities

- **Data Collection**
  - Analysis of MTC Survey Data
  - Parking occupancy and turnover data collection
- **Customer Research**
  - Intercept Survey of “Bikes on Board” users (Summer 2016)
  - Web-based Open Survey (Summer 2016)
  - Keyed Locker User Survey (Summer 2016)
  - Focus Groups (Fall 2016)
- **Outreach**
  - Caltrain BAC and CAC
  - Study Technical Advisory Committee
  - Project Website/Comment Form
  - Additional Public meetings as requested by stakeholders

Existing Bike Parking System

<table>
<thead>
<tr>
<th>Parking Type</th>
<th>~Quantity</th>
<th>~ Occupancy Levels</th>
<th>Ownership / Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racks</td>
<td>660</td>
<td>Varies widely by station</td>
<td>Generally Caltrain, but variable by station</td>
</tr>
<tr>
<td>Mechanical</td>
<td>1025</td>
<td>80% system wide</td>
<td>Caltrain</td>
</tr>
<tr>
<td>Electronic Lockers</td>
<td>60</td>
<td>TBD – but generally well utilized</td>
<td>Cities, other Transit operators</td>
</tr>
<tr>
<td>Bike stations / shared facilities</td>
<td>380</td>
<td>TBD – but generally well utilized</td>
<td>Varies</td>
</tr>
</tbody>
</table>
MTC Data

- Survey period: October/November/December 2014
- Sample size: 5,704 trips on Caltrain, including 1,094 bike-based trips
- Data types: Trip Type (Home to Work, Home to College/University, etc), Trip Origin, Access Mode, Origin Station, Access Mode, Egress Mode, Exit Station, Trip Destination, Socioeconomic Information
- Detailed information about bicycle access, including type of bike parking used at the entrance station and whether bike was brought on board

San Francisco
San Jose

Additional Data Collection

- Observe midday bike rack usage at top stations
- Collect data on usage of keyed, eLocker and shared bike facilities
- Observe “efficiency” of keyed locker usage at top stations
 Intercept Survey

- Collect 320+ completed surveys by interviewing passengers in the bike cars during July
- Focus will be customers who currently bring their bike on board
- Intercept methodology used to insure representative sample
- Questions explore trip patterns observed in the MTC data and examine customers’ interest / ability to store bike at a Caltrain station rather than take it on board

Questionnaire – Keyed Locker Users

- Collect 20+ completed surveys from the users of keyed lockers though an email / mailback questionnaire
- Questions will aim to explain observed usage of these lockers and identify positives and shortcomings of current parking system
Web-Based Survey

- Open to everyone
- Will occur after onboard survey
- Will provide more general format for input
- Questions related to trip patterns, bike parking needs and options
- Not a representative sample

Focus Groups

- Three focus group meetings planned for early fall
- Will be held along the Caltrain corridor, likely in the afternoon / evening commute period
- Focus group participants will be selected through respondents to the intercept survey who provide their contact information
- Focus groups will be used to explore ideas and concepts for bike parking improvements
Imagining A Better Bike Parking System

Corrals / large-scale rack installations

San Francisco

UC Davis
Electronic Bike Lockers

San Francisco

UK

Civic Center BART

Caltrain

OPEN ACCESS
BIKELINK CONTROLLED ACCESS
Berkeley BART

Washington, DC
Dorchester, MA

Amsterdam
Czech Republic