Meeting Topics

- BART to Livermore status and schedule
- Evaluation of proposed project and build alternatives
- Tri-Valley San Joaquin Valley Regional Rail Authority
BART to Livermore (LVX) Status

- Jul 31, 2017: Draft EIR Released
- Oct 16, 2017: Comment Period Closed
- Feb 21, 2018: Released Evaluation of Alternatives Report
  bart.gov/Livermore
- Feb-Mar, 2018: Public Outreach
- May 2018: Release Final EIR

BART Board

- Mar 8, 2018: Evaluation of Alternatives to Board
- Apr 12, 2018:* Preliminary LVX Recommendation to Board
- May/June 2018: Board Consider Certifying EIR and Taking LVX Action

* Tentative
Schedule Considerations

• Livermore required to adopt a Ridership Development Plan (RDP) before BART can adopt a project
  • Livermore plans to adopt RDP May 14, 2018*

• AB758 created Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRA)
  • TVSJVRRA can not infringe on BART's process to plan, develop, and deliver a BART extension to Isabel
  • Restriction expires July 1, 2018 if the BART does not adopt a BART extension to Isabel by June 30, 2018

* Tentative
Public Outreach (Feb – Mar 2018)

- Objectives
  - Share Evaluation Report findings
  - Obtain feedback
- Feb 26: Oakland public open house
- Feb 27: Livermore public open house
- Mar 6: Pleasanton Council
- Mar 20: Dublin Council
- Meet with key neighborhood and stakeholder groups
- Meet with key policymakers
Proposed Project
Conventional BART to Isabel
Alt 1 Diesel Multiple Unit (DMU) or Electric Multiple Unit (EMU)
Alt 2 Express Bus/Bus Rapid Transit (BRT)
Alt 2 Express Bus/BRT at Dublin/Pleasanton Station

Above shows cross-section at the station
Express Bus/BRT Example

Harbor Transitway, Los Angeles
Alt 3 Enhanced Bus
## Transit Travel Time

### From Selected Locations to Downtown SF (AM peak period)

<table>
<thead>
<tr>
<th>Station</th>
<th>No Project</th>
<th>Conventional BART</th>
<th>DMU/EMU</th>
<th>Express Bus/BRT</th>
<th>Enhanced Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isabel</td>
<td>80</td>
<td>57</td>
<td>60</td>
<td>66</td>
<td>71</td>
</tr>
<tr>
<td>Downtown</td>
<td>90</td>
<td>71</td>
<td>74</td>
<td>74</td>
<td>90</td>
</tr>
<tr>
<td>Tracy</td>
<td>124</td>
<td>113</td>
<td>116</td>
<td>117</td>
<td>124</td>
</tr>
</tbody>
</table>

Red bars represent Isabel Station travel times, blue bars represent Downtown Livermore travel times, and green bars represent Downtown Tracy travel times.
Transit Travel Time

From Downtown Oakland to Selected Locations (AM peak period)

<table>
<thead>
<tr>
<th>Location</th>
<th>No Project</th>
<th>Conventional BART</th>
<th>DMU/EMU</th>
<th>Express Bus/BRT</th>
<th>Enhanced Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Las Positas College</td>
<td>71</td>
<td>44</td>
<td>47</td>
<td>50</td>
<td>59</td>
</tr>
<tr>
<td>National Laboratories</td>
<td>80</td>
<td>55</td>
<td>58</td>
<td>55</td>
<td>75</td>
</tr>
<tr>
<td>Downtown Livermore</td>
<td>91</td>
<td>55</td>
<td>58</td>
<td>58</td>
<td>79</td>
</tr>
</tbody>
</table>
2040 Increase in BART Systemwide Boardings (average weekday)

- Conventional BART: 11,900
- DMU/EMU: 7,000
- Express Bus/BRT: 3,500
- Enhanced Bus: 400

11,900 Additional Systemwide Boardings
Isabel Versus Other BART Stations

Conventional BART Alternative
2040 Average Weekday Boardings + Exits

Isabel
16,200 in 2040

Source: BART Financial Planning, 2017
BART Systemwide Boardings

Adding Livermore Isabel Neighborhood Plan (INP)

Increase in 2040 BART Systemwide Boardings

- Base BART Alternative: 11,900
- With INP: 13,400

Increase: +13%
2040 Reduction in Vehicle Miles Traveled

Average Weekday

- Conventional BART: 244,000
- DMU/EMU: 140,600
- Express Bus/BRT: 92,600
- Enhanced Bus: 6,500
2040 Reduction in GHG Emissions

Metric Tons of CO2e per Year

- Conventional BART: 11,200
- DMU: 3,500
- EMU: 6,000
- Express Bus/BRT: 3,700
- Enhanced Bus: -600
LVX Project Cost (YOE$*)

*Year of expenditure dollars

**Conventional BART includes 25% of a BART shop
LVX Project Funding

*Design & Construction*

- $533 million total committed design & construction funding
  - $398 million Alameda County Measure BB
  - $80 million AB1171 (bridge tolls)
  - $15 million RM1 (bridge tolls)
  - $40 million Livermore Traffic Impact Fees
Annual Operations & Maintenance Cost

Year 2040

<table>
<thead>
<tr>
<th>Mode</th>
<th>Cost (Millions of 2016 $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional BART*</td>
<td>$22.8</td>
</tr>
<tr>
<td>DMU</td>
<td>$16.8</td>
</tr>
<tr>
<td>EMU</td>
<td>$16.6</td>
</tr>
<tr>
<td>Express Bus/BRT</td>
<td>$3.0</td>
</tr>
<tr>
<td>Enhanced Bus</td>
<td>$1.7</td>
</tr>
</tbody>
</table>

*Conventional BART includes 25% of a BART shop
Operating Revenue

Year 2040

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating Revenue (Millions of 2016 $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional BART</td>
<td>$20.1</td>
</tr>
<tr>
<td>DMU</td>
<td>$12.1</td>
</tr>
<tr>
<td>EMU</td>
<td>$12.1</td>
</tr>
<tr>
<td>Express Bus/BRT</td>
<td>$5.9</td>
</tr>
<tr>
<td>Enhanced Bus</td>
<td>$0.7</td>
</tr>
</tbody>
</table>
Farebox Recovery

Opening Year

Conventional BART: 58%
DMU: 60%
EMU: 61%
Express Bus/BRT: 140%
Enhanced Bus: 7%
Farebox Recovery

Year 2040

- Conventional BART: 88%
- DMU: 72%
- EMU: 73%
- Express Bus/BRT: 193%
- Enhanced Bus: 40%
Annual Capital Rehabilitation/Replacement Cost

- Conventional BART: $21.1
- DMU: $18.8
- EMU: $19.4
- Express Bus/BRT: $5.1
- Enhanced Bus: $0.3
Cost* per New BART Boarding

Year 2040

* Cost to build, operate, maintain, rehabilitate, and replace
Cost* per New BART Boarding (net of fares)

* Cost to build, operate, maintain, rehabilitate, and replace

Year 2040

- Conventional BART: $14.7
- DMU: $24.6
- EMU: $25.4
- Express Bus/BRT: $8.4
- Enhanced Bus: $15.5
BART System Expansion Policy (SEP)

- Process and criteria required for all BART system expansion projects
- Criteria adopted 2002
# System Expansion Policy

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Conventional BART</th>
<th>DMU/EMU</th>
<th>Express Bus/BRT</th>
<th>Enhanced Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transit Supportive Land Use and Access</strong></td>
<td></td>
<td></td>
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<tr>
<td>Existing Land Use: Residential and/or Employment</td>
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<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
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<tr>
<td>Existing Intermodal Connections</td>
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<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Yellow" /></td>
<td><img src="#" alt="Yellow" /></td>
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<tr>
<td>Land Use Plans and Policies</td>
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<td><img src="#" alt="Green" /></td>
<td><img src="#" alt="Yellow" /></td>
<td><img src="#" alt="Yellow" /></td>
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<tr>
<td><strong>Ridership Development Plan</strong></td>
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<tr>
<td>Ridership Threshold</td>
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<td><img src="#" alt="Yellow" /></td>
<td>N/A</td>
<td>N/A</td>
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<td>Station Context</td>
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<td>N/A</td>
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<tr>
<td><strong>Cost Effectiveness</strong></td>
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<tr>
<td>Cost per New Rider – Base Case</td>
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<td><img src="#" alt="Green" /></td>
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<tr>
<td>Cost per New Rider – with TOD</td>
<td><img src="#" alt="Green" /></td>
<td><img src="#" alt="Green" /></td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- **Low**
- **Low-Medium**
- **Medium**
- **High-Medium**
- **High**
# System Expansion Policy

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Conventional BART</th>
<th>DMU/EMU</th>
<th>Express Bus/BRT</th>
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<tbody>
<tr>
<td><strong>Regional Network Connectivity</strong></td>
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<tr>
<td>Regional Transportation Gap Closure</td>
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<tr>
<td><strong>System and Financial Capacity</strong></td>
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<td>Core System Improvements</td>
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<td>Capital Finance Plan</td>
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<td><strong>Partnerships</strong></td>
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<td>Community and Stakeholder Support</td>
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<td><strong>RECOMMENDATION</strong></td>
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</tbody>
</table>

- 🔴 Low
- 🟠 Low-Medium
- 🟠 Medium
- 🟢 High-Medium
- 🟢 High

(info only)
BART to Livermore Project Goals

1A) Provide a cost-effective link

1B) Provide an intermodal link between BART, inter-regional rail, and PDAs

2) Support integrating transit and land use policies to create transit-oriented development (TOD) opportunities

3) Provide alternative to I-580 congestion

4) Improve air quality, reduce greenhouse gases (GHG)
# Meeting Project Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Conventional BART</th>
<th>DMU/EMU</th>
<th>Express Bus/BRT</th>
<th>Enhanced Bus</th>
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</thead>
<tbody>
<tr>
<td>1A. Provide a cost-effective link</td>
<td>![Medium]</td>
<td>![Medium-High]</td>
<td>![High]</td>
<td>![High]</td>
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<tr>
<td>1B. Provide link between BART, inter-regional rail, and PDAs</td>
<td>![Medium]</td>
<td>![Medium-High]</td>
<td>![High]</td>
<td>![High]</td>
</tr>
<tr>
<td>2. Support policies to create TOD opportunities</td>
<td>![Medium-High]</td>
<td>![Medium-High]</td>
<td>![High]</td>
<td>![High]</td>
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<tr>
<td>3. Provide alternative to I-580 congestion</td>
<td>![Medium-High]</td>
<td>![Medium-High]</td>
<td>![High]</td>
<td>![High]</td>
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<tr>
<td>4. Improve air quality, reduce GHG</td>
<td>![Medium-High]</td>
<td>![Medium-High]</td>
<td>![High]</td>
<td>![High]</td>
</tr>
</tbody>
</table>

- ![Low] Low
- ![Low-Medium] Low-Medium
- ![Medium] Medium
- ![Medium-High] Medium-High
- ![High] High
MTC Project Performance Assessment

• Projects seeking regional discretionary funding need a High Performer rating

• MTC assessed 69 projects for Plan Bay Area 2017
  • 11 received regional discretionary funding

• MTC assessed 90 projects for Plan Bay Area 2013
  • 13 received regional discretionary funding
MTC Resolution 3434 TOD Policy
Conventional BART Alternative with INP

BART to Livermore not subject to MTC Resolution 3434 TOD Policy

<table>
<thead>
<tr>
<th>Station</th>
<th>Type</th>
<th>Residential Units Within ½ Mile of Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isabel</td>
<td>Current (2015)</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>Future (2040)</td>
<td>4,831</td>
</tr>
<tr>
<td>Dublin/Pleasanton</td>
<td>Current (2015)</td>
<td>924</td>
</tr>
<tr>
<td></td>
<td>Future (2040)</td>
<td>5,003</td>
</tr>
<tr>
<td>Average for Two Stations (2040)</td>
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<td>4,917</td>
</tr>
<tr>
<td>MTC Threshold</td>
<td></td>
<td>3,850</td>
</tr>
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</table>
Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRA)

• Created by AB758

• Purpose: Deliver transit connectivity between BART and ACE in the Tri-Valley
  • Feasibility study by July 1, 2019

• 15 member Board

• Authorized to plan, acquire, develop, own, control, use, design, procure, and build the connection
Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRA)

• LAVTA to provide administrative support for 18-months

• Can not infringe on BART's process to plan, develop, and deliver a BART extension to Isabel

• Restriction expires July 1, 2018 if the BART does not adopt a BART extension to Isabel by June 30, 2018
TVSJVRRA Project Concept

- EMU/DMU
- 30-min headway
- San Joaquin Valley to BART Tri-Valley terminus