VTA’s BART Silicon Valley Phase II Extension Project

VTA Board Workshop

September 20, 2019

Agenda

• Configuration Development

• FTA’s Expedited Project Delivery Pilot Program

• Transit Oriented Communities and Partnership Opportunities

• Community Engagement
Phase II Background

**September 2017 – March 2018**
VTA and BART workshops on tunnel configuration

**April 2018**
VTA and BART Boards of Directors approve SEIR/SEIS with single-bore

**June 2018**
FTA issues Record of Decision

Stacked Platforms at stations

Side-by-side between stations

Single-Bore Configuration Approved in ROD
45-foot diameter tunnel
## Phase II Background

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>July 2018 - Jan 2019</td>
<td>Side-by-side track variations explored</td>
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<tr>
<td>March 2019</td>
<td>BART proposes larger bore with center platform</td>
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<tr>
<td>March - April 2019</td>
<td>BART and VTA workshops derive cost savings measures for larger diameter bore</td>
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<tr>
<td>May - June 2019</td>
<td>Preliminary findings for center platform presented to VTA/BART Working Committee and to VTA Board</td>
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<td>June 2019</td>
<td>General Engineering Consultant (GEC) mobilized</td>
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<tr>
<td>July 2019</td>
<td>VTA directs engineering to proceed with design</td>
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### Single-Bore: Center Platform Configuration

**Center Platform at Stations**

**Side-by-Side tracks in Tunnel**

- Inner Tunnel Diameter: 50’-2”
- Outer Tunnel Diameter: 54’-2”
- Tunnel Boring Machine Diameter: 55’-10”
Single-Bore: Center Platform Configuration

Concourse & Platform in Tunnel

Station Entrance Building

Station Configuration Concept - Diridon

TOD above Station

Station Entrance

Concourse and Platform within Tunnel
System & Ventilation Facilities

Opportunities to locate certain system and ventilation facilities in tunnel

Station Ventilation Facilities

Larger diameter tunnel provides opportunities to locate ventilation components in tunnel
Single-Bore: Center Platform Configuration

**Elements Summary:**

- Approximately 55 ft. diameter tunnel with side-by-side tracks
- 24 ft. center platform with concourse above inside tunnel
- Minimum of one station building with a minimum of two entrances/exits
- Provisions at Diridon for future underground connections to the north side of Santa Clara Street/SAP and the intermodal facility, based on available funding
- Reconsider need for mid-tunnel ventilation facilities
- Station ventilation and traction power facilities located in tunnel
- Newhall Maintenance Facility & Santa Clara Station contained within VTA-owned property
- Multi-track stub station at Santa Clara Station

**Comparable Stations**

- **Washington University Station**
  - Sound Transit
  - Depth: 95 feet

- **North Berkeley Station**
  - BART
  - Depth: 30 feet

- **Chinatown Station**
  - SFMTA
  - Depth: 92 feet
Access Planning

- VTA collaborated with Cities to identify Station Area Access Needs
  - Pedestrian and ADA improvements within ½ mile of station entrance
  - Bicycle and transit corridor improvements within 1½ miles of station entrance
  - Streetscaping improvements to activate street life around stations
  - Recommendations to be incorporated into ongoing and future City plans
- VTA drafting Station Circulation and Access Principles
  - Identify key access elements to be incorporated into station design
  - Coordination with BART and Cities

Alum Rock/28th Street Station Concept

Station overview:
- One station with a minimum of two entrances/exits
- Ticketing and fare gates at street level
- Parking garage on site
- Emergency egress and ventilation exhaust shaft facilities located near platform ends
- Final location of systems facilities: TBD

Ongoing/future efforts:
- Station area access planning
- Design Development Framework
Downtown San José Station Concept

Station overview:
- Up to two station buildings (at least three entrances/exits)
- Ticketing and fare gates at street level
- Emergency egress and ventilation exhaust shaft facilities generally accommodated within station building footprints
- Final location of systems facilities: TBD

Ongoing/future efforts:
- Station area access planning
- VTA Block Design Development Framework

Diridon Station Concept

Station overview:
- One station with a minimum of two entrances/exits
- Provisions for future underground connections to north side of Santa Clara St./SAP and intermodal facility
- Ticketing and fare gates at street level
- Emergency egress and ventilation exhaust shaft facilities located near platform ends
- Final location of system facilities: TBD

Ongoing/future efforts:
- Coordination with Diridon Integrated Station Concept Plan and adjacent property owners
- Determination of access needs during construction
- Optimization of Construction Staging Area
Santa Clara Station Concept

Station overview:
- At-grade station platforms
- Access from Santa Clara Caltrain station and Brokaw Road
- Ticketing and fare gates below ground level and on first floor of parking garage
- TOD and parking garage integrated with the layout of Newhall Maintenance Facility

Ongoing/future efforts:
- Configuration of Newhall Maintenance Facility
- Station area access planning
- Coordination with adjacent developers
- VTA TOD planning

Preliminary Budget

Estimated Capital Costs: $5.6 Billion (Conceptual ROM\(^1\))

Funding Sources:
- 2000 Measure A Sales Tax $1.0 Billion
- 2016 Measure B Sales Tax $1.5 Billion
- Local Measures Revenues to fund financing and escalation costs\(^2\) $400 Million
- Regional Measure 3 $375 Million
- State Transit & Intercity Rail Capital Program $750 Million
- State Traffic Congestion Relief Program $161 Million
- FTA Expedited Project Delivery $1.4 Billion (25% of total Project cost)

Other Considerations:
- Financing and Contingency $TBD
- P3 Sources $TBD

1. ROM = Rough Order of Magnitude based on approximately 2% design (excludes financing and contingency)
2. Financing costs assumed to be available from 2000 Measure A and/or 2016 Measure B.
Schedule Progression

Environmental Schedule (2014 Projection)

Preliminary Schedule (as of September 2019)

FTA’s Expedited Project Delivery Pilot Program
FTA’s Expedited Project Delivery Pilot Program

FTA’s Expedited Project Delivery (EPD) Pilot Program aims to increase innovation, improve efficiency, and encourage new revenue streams.

EPD requires projects to:
- Use public-private partnerships (P3)
- Be planned, operated, and maintained by an existing public transit provider
- Have a Federal share not exceeding 25% of its costs

Sponsors (VTA) will have:
- Recently and successfully completed a fixed guideway project
- Achieved budget, cost, and ridership outcomes
- Staff expertise and other resources to implement new project
- To demonstrate project’s merits in application

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**EPD Progress**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>September 2018</td>
<td>FTA released Notice for Request for Expression of Interest</td>
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<tr>
<td>November 2018</td>
<td>VTA submitted Expression of Interest to FTA</td>
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<tr>
<td>June 2019</td>
<td>VTA selected to be first transit agency in the nation to participate in EPD</td>
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<td>August 2019</td>
<td>FTA announced allocation of $125 million for EPD toward VTA</td>
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# Next Steps

| Fall 2019 | Assess additional environmental review required  
Develop EPD Funding Request Submittal  
Continue developing P3 opportunities |
|----------|--------------------------------------------------|
| December 2019 | Complete 10% Design  
Early 2020 | Contractor Industry Forum Event  
Early 2020 | Submit EPD Funding Request to FTA  
TBD 2020 | Receive Full Funding Grant Agreement (FFGA) |
Transit Oriented Communities and Partnership Opportunities

Transit Oriented Communities create a future for BART

- Funded by the FTA's Pilot Program for Transit-Oriented Development to promote integration of transit and land use
- Our station areas can accommodate more development than is currently planned
- Transit oriented communities will lead to increased BART and other transit ridership
- Combines land use strategy and multimodal access planning to develop a holistic approach that maximizes the benefits of TOCs and recommends financing and implementation tools to make the vision a reality
- Supports value creation through increased development, and identifies strategies for value capture to fund station area improvements
Phase II Project Development Potential

The entire corridor has the potential for approximately 60 Million Square Feet of new development.

**SANTA CLARA STATION**
New Development: 12.7 Million sf.

**ALUM ROCK / 28TH ST STATION**
New Development: 8.5 Million sf.

**DOWNTOWN SAN JOSÉ STATION**
New Development: 23.8 Million sf.

**DIRIDON STATION**
New Development: 15 Million sf.

Value Creation from the project allows use of value capture tools for project costs.

- Establishing a community facilities district (CFD) to leverage contributions from new development.
- Implementing tax increment financing districts such as Enhanced Infrastructure Financing Districts (EIFDs).

**TOCs Provide a Framework for Value Creation**

<table>
<thead>
<tr>
<th>TOCs Annual Value Creation Revenues*</th>
<th>2020-2025</th>
<th>$4.5 M</th>
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<tbody>
<tr>
<td></td>
<td>2026-2030</td>
<td>$39.6 M</td>
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<tr>
<td></td>
<td>2030-2035</td>
<td>$96.1 M</td>
</tr>
<tr>
<td></td>
<td>2036-2040</td>
<td>$180.7 M</td>
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* Excludes Diridon Station

Funding strategies include set-asides for affordable housing and transit operations & maintenance.
Partnership Opportunities

- Potential for significant on-site TOD at VTA’s BART Phase II Stations

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<thead>
<tr>
<th></th>
<th>Size (acres)</th>
<th>Total Development Potential (sq. ft.)</th>
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<tbody>
<tr>
<td>Alum Rock/28th Street</td>
<td>13.7</td>
<td>1.3 million +</td>
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<tr>
<td>Downtown San José</td>
<td>4.0</td>
<td>1.5 million +</td>
</tr>
<tr>
<td>Diridon</td>
<td>1.5</td>
<td>600 thousand +</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>1.4</td>
<td>200 thousand +</td>
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- TOD Partnerships tailored for each station

- Potential to partner on non-TOD elements:
  - Space within the tunnel
  - Coordination with concurrent development interests
  - Other

TOD Partnership Models

- Case studies show a spectrum of development partnership models to inform VTA’s approach for TOD sites.

- Level of developer participation ranges from cash contributions to complete management of station and facility delivery

**Standard TOD**
Payment to transit agency through ground lease or land sale payments. Developer may contribute to above-ground station integration or public realm connectivity.

**Structural Integration**
Developer contributes to and/or manages the completion of structural components of station infrastructure that supports development and/or transit functions.

**Developer-led**
Developer takes on leading role to deliver and/or finance complete station infrastructure and integration with development.
Case Study: Capitol Hill (Sound Transit)

- Two private developers:
  - One signed a 99-year ground lease
  - One purchased parcel for 100% affordable housing
- Developers will not make any infrastructure contributions to Sound Transit
- 42% of fee simple land sale will be used to pay back FTA grants

Case Study: Denver Union Station (RTD)

- Master developer selected by partners agencies to deliver transit project and act as vertical developer for development sites
- Loans repaid by tax increment revenues generated by Tax Increment Finance (TIF) districts
- Both RTD’s and Denver Downtown Development Authority loans have been repaid or are on track to be repaid 10 years ahead of schedule
Case Study: Bethesda Red Line (WMATA)

- Developer selection focused primarily on revenue generation and ridership impacts for WMATA.
- WMATA built station with knock-out panel for future entrance.
- 50-year air and ground rights lease that can be renewed for an additional 49 years.
- Developer built and financed bus bay at station (estimated $1M cost savings to WMATA).

Case Study: Canary Wharf (Transport for London)

- Canary Wharf Station was designed and built by a private entity contracted to Transport for London.
- Value capture amounted to about ½ of overall £15.9 Billion cost of Crossrail project.
- Canary Wharf Group (CWG) responsible for financing, design, and construction of the Canary Wharf Station, and contributing roughly ½ of construction cost in addition to absorbing all price risk associated with the project.
Preparing for Partnership at Phase II Stations

- **Downtown San José Station:**
  - Design Development Framework for TOD opportunities integrated with the station and existing neighborhood
  - Fall 2019 through Summer 2020

- **Alum Rock/28th Street Station:**
  - Design Development Framework for TOD opportunities integrated with the station and existing neighborhood
  - Starting mid-2020

- **Santa Clara Station:**
  - Considering conceptual option of deck over north end of Newhall Yard, station location, parking, potential TOD
  - Station design work includes design development framework

- **Diridon:**
  - Collaborating with Diridon Integrated Station Concept Plan and adjacent property owners
Community Engagement

Construction Education & Outreach Plan

General Outreach – Raise visibility along the alignment and beyond

Stakeholder Engagement – Build relationships with those most touched by the project

Business Resources – Support during construction

Placemaking – Enhance access and awareness during construction

On the Radar – Coordinate with other projects in area on messaging and communications
Public and Stakeholder Engagement

• Since Environmental Approval, VTA has held:
  - 25+ community working group (CWG) meetings
  - ~50 stakeholder briefings
  - 20+ business interviews
  - 3 VTA-hosted community meetings
  - and many other informal meetings

Public and Stakeholder Engagement

• Spread the word about TOCs
  - 12+ public workshops on TOCs
  - Tabling at public events (Farmers Markets, National Night Out, etc.)
  - Prepared for and supported field investigations
    - 8+ presentations to neighborhood and business associations
    - Multiple notices to businesses and residents in advance of field work
Future Public and Stakeholder Engagement

- Continue to hold regular Community Working Groups
- Continue sending out regular newsletters
- VTA-hosted community meetings (traditional and webinars)
- Implementation of Transit Oriented Community Recommendations
  - Growing public awareness and receiving input
  - Presenting to City Councils
  - Stakeholder Engagement
  - Developer Feedback
- Small Business Resources Program

Business Resources Program

- Program to provide marketing and technical support to small and local businesses along Project corridor prior to and during construction
  - Support marketing campaigns
  - Provide wayfinding
  - Identify resources available to small businesses
  - Mentorship Program/consulting
- Start a Small Business Task Force, to develop strategies
  - Members to include small businesses, Chambers of Commerce, and other stakeholders

Early Engagement & Data Collection
Fall 2018 – Fall 2019

Small Business Resources Study
Fall 2019 – Spring 2020

Business Resources Plan Development
Spring 2020 – Spring 2021

Business Resources Implementation
Starting Summer 2020
Small Business Resources Study

Conducting six-month Small Business Resources Study

- Catalog Phase II potential construction effects
- Collect best practices and lessons learned from other transit and development projects
- Conduct quantitative and qualitative analysis to assess business vulnerability to construction impacts
- Analyze historic small business trends performance to gain an understanding of the small business environment
- Survey small businesses to collect business operations and needs

Business Resources Implementation

- Findings and feedback from Study will be used to develop a Small Business Resources Plan that will be implemented throughout construction in coordination with the Cities of San José and Santa Clara

- Small Business Task Force will continue after the study’s completion to receive construction updates and provide feedback

Advertise for local business during construction of Capitol Hill Light Rail Station – Sound Transit

“Eat, Shop, Play” marketing campaign during Crenshaw/LAX light rail construction in Los Angeles
Get Involved with the Phase II Project!

- Public Community Meetings
- Field Offices
- Name the Tunnel Boring Machine
- Artwork along Construction Sites
- Support Businesses near Construction
- Spread the Word!
- Visit us online and on social media

Sign up to receive updates at: http://www.vta.org/phase2info

Questions