**BART SILICON VALLEY PHASE II EXTENSION PROJECT**

**SANTA CLARA VALLEY TRANSPORTATION AUTHORITY**

**CITIES OF SAN JOSÉ AND SANTA CLARA, CA**

FTA Region IX

Status as of January 31, 2026

# PROJECT MONITORING REPORT

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## Executive Summary

## Project Description

Bay Area Rapid Transit (BART) Silicon Valley Phase II (BSVII) is an approximately 6.0-mile extension of the BART system, from the existing terminus of the BART ten-mile Phase I extension (BSVI), at the Berryessa / North San José BART Station through downtown San José to the proposed Santa Clara Terminal Station in the City of Santa Clara (Figure 1 in Appendix I).

BSVII includes four stations (three located in San José and one in Santa Clara) along with a train maintenance and storage facility at Newhall Yard. The project's easternmost station, 28th Street/Little Portugal, will be located underground near Santa Clara Street and U.S. 101. Two stations, also underground, are planned for downtown San José: Downtown San José Station at Santa Clara Street near Market Street; and Diridon Station at the Diridon Intermodal Transit Center. The westernmost station in the City of Santa Clara is planned to be at-grade adjacent to the Santa Clara Caltrain Station. The Newhall Yard and Maintenance Facility is planned to be located at the end of the alignment directly adjacent to the Santa Clara Station. Forty-eight vehicles have been procured with project funds and are included in the procurement through BART Federal Transit Administration (FTA) Core Capacity grant program for fleet upgrades.

VTA's BART Silicon Valley Phase II Extension Project includes the construction of a deep underground single mega tunnel approximately 53 feet in diameter, that will be approximately five miles long.

The project is being designed and constructed by consultants of the Santa Clara Valley Transportation Authority (VTA). It will be owned by VTA and operated and maintained by BART.

## Tunneling Construction

Construction of the subway tunnel is within the Tunnel and Trackwork contract (Contract Package 2). A large Tunnel Boring Machine (TBM) will excavate the tunnel. The TBM will be launched from the West Portal south of the Santa Clara Station within Newhall Yard which is now under construction. From there, the tunnel will run underneath I-880 and the Caltrain tracks and continue southeast and cross under the western side of the Caltrain tracks at Emory Street and then continue under Stockton Avenue and curve east before reaching Diridon Station. From Diridon Station, the tunnel will continue under Santa Clara Street for approximately one mile to the future Downtown San José Station. It will then curve northeast near 27th Street and Santa Clara Street to the future 28th Street/Little Portugal Station. From there, the tunnel will continue northeast under US 101 to McKee Road where it will run parallel to the highway until it surfaces at the East Portal, near Las Plumas Avenue and Marburg Way. The station platform, mezzanine, and related facilities will be built within the tunnel space and will be connected to the surface through an off-street station headhouse and entrance structure.

## Project Status

BSVII is in the New Starts Project Development phase.

VTA selected the locally preferred alternative (LPA) in November 2001. The project originally entered the Capital Investment Grants (CIG) program Project Development phase in March 2016. The locally preferred alternative (LPA) was adopted into the Metropolitan Transportation Commission's financially constrained Long-Range Plan on July 26, 2017.

VTA began pursuing FTA's Expedited Project Delivery (EPD) Pilot Program in early 2018. In April 2018, FTA agreed to extend CIG Project Development while VTA pursued funding through the EPD Pilot Program. Per the National Environmental Policy Act of 1969 (NEPA), BSVII received a Record of Decision (ROD) from FTA on June 18, 2018. In April 2021, VTA submitted an EPD Pilot Program application to FTA. In October 2021, FTA issued a Letter of Intent (LOI) indicating it would obligate funds under the EPD Pilot Program on the condition that VTA demonstrates local funding commitment and readiness to receive a grant within two years.

In October 2022, VTA submitted a letter to FTA requesting that the BSVII project be allowed to re-enter the New Starts Project Development phase of the CIG program and seek a Letter of No Prejudice (LONP). On December 1, 2022, FTA agreed to move the project from the EPD Pilot Program back into the Project Development phase as a New Starts project. FTA also approved a LONP covering expenses VTA incurred when it started in New Starts Project Development in March 2016, through the Project's migration to the EPD Pilot Program, thereby matching the pre-award authority VTA had been given while it was in the EPD Pilot Program for the 2022 New Starts Basis total project cost of $9.318 Billion.

On October 11, 2023, VTA transmitted to FTA/PMOC the BSVII revised cost and schedule baselines including an updated total project cost of $12.237B and Revenue Service Date (RSD) of October of 2036. FTA/PMOC held a Risk Workshop with VTA on January 16-18, 2024. Risk review results advised an increase in costs to $12.746 Billion, and a recommended RSD of February 2039 based on the use of 125% of the remaining critical path Stripped and Adjusted Base Schedule (SABS) duration.

VTA formally requested FTA's approval to enter the Engineering Phase in a letter dated March 29, 2024, with a total project cost of $12.746B in year-of-expenditure dollars and a RSD of February 2039. VTA requested $6.296B (49.4 percent) in CIG program funds. On August 1, 2024, FTA informed VTA of the approval of BSVII to enter the New Starts Engineering phase of the FTA CIG Program. Although VTA requested a 49.4 percent CIG share, FTA notified VTA that $5.1B (40 percent) represents the maximum amount of CIG funds that will be provided by FTA for the Project should a Full Funding Grant Agreement (FFGA) be approved. The FTA approval to enter engineering letter is attached in Attachment I.

Since the FTA approval to enter engineering, BSVII staff focused on a comprehensive project wide cost saving effort to align project costs within available funding. This effort culminated with a December 18, 2024, Value Engineering brainstorming workshop and an August 19-20, 2025, independent Peer Review, in coordination with FTA and the PMOC, to review and evaluate feasibility, constructability, contract packaging, and delivery approaches, related to

specific project scenarios (Scenario 1 and 1a) incorporating various cost saving ideas and tunneling approaches. These are described in the Peer Review Report attached in Appendix II.

On October 17, 2025, the VTA Board of Directors approved staff's recommendation to advance the Scenario 1 Project Configuration further through design development, contract packaging, project delivery, financial planning, and pursuit of funding strategies including the FTA's Full Funding Grant Agreement (FFGA).

BSVII staff established a roadmap for the BSVII project towards a FFGA as summarized below:

| ***Description*** | ***Timing*** |
|---|---|
| *Finalize ridership forecast* | *March 2026* |
| *Update / Finalize Land Use and Economic Development Reports* | *May 2026* |
| *Submit Preliminary Readiness Documents - Scope, Schedule and Cost Estimate for FTA / PMOC Review* | *July 2026* |
| *FFGA Risk Workshop* | *September 2026* |
| *Submit Updated Grant Request documents including updated Scope, Schedule, Cost Estimate, Financial Plan etc. to FTA* | *December 2026* |
| *FTA, VTA Execute FFGA* | *July 2027* |

Major construction activities at the West Portal/tunnel boring machine (TBM) launch site continue to advance. Additionally, BSVII staff continue to evaluate potential opportunities to advance specific early work packages to support critical path tunnel construction with considerations for cost, schedule, and risk.

The project implementation plan had previously been that BSVII would be delivered through four major design-build construction contract packages: Systems Construction Package 1 (CP1); Tunnel and Trackwork Construction Package 2 (CP2); Newhall Yard and Maintenance Facility and Santa Clara Station Construction Package 3 (CP3); and Underground Stations Construction Package 4 (CP4).

On June 27, 2025, VTA staff presented to the VTA Board a preliminary contract re-packaging approach for delivering BSVII through six construction contract packages: Systems Construction Package 1 (CP1); Early Works Construction Package 2 (CP2); Newhall Yard and Maintenance Facility, Santa Clara Station and Mainline Trackwork Construction Package 3 (CP3); Downtown San Jose and Diridon Underground Stations Construction Package 4 (CP4); Tunneling Construction Package 5 (CP5); and 28$^{th}$ Street / Little Portugal Station and East Portal Construction Package 6 (CP6).

In June, the California Transportation Commission (CTC) approved the award of two grants - $25M from the Local Partnership Program (LPP) and $75M from the Solutions for Congested Corridors Program (SCCP) - to VTA for the BSVII Project.

The BSVII Program Core Accountability is summarized in (Figure 2 in Appendix 1).

## Major PMOC Issues and/or Observations

Below are PMOC's issues and observations:

- VTA has not updated the BSVII PMP and Sub-Plans since the Entry to Engineering in 2024. This raises concerns that
    1. Due to key personnel turnover, important project changes are not being transferred to new personnel and not being captured in the PMP and sub-Plans, and
    2. PMP and sub-Plans may not get updated in time for FFGA Readiness submittal in July 2026.
- There has been no update to the Preliminary Repackaging Approach for few months. Concern about finalizing the repackaging in time for the FFGA readiness review in July 2026.
- $17.9 M SCC 80 Professional Services Costs incurred in December
- VTA has not shared with PMOC revisions to the Project Schedule due to re-packaging. This raises concerns with construction interfaces, project milestones, critical path, and project completion
- VTA has not shared with PMOC revisions to the cost estimates. Concerns that these cost estimates could be higher than VTA's rough-order-of magnitude projections
- Concern that VTA has not identified enough non-federal funding options to provide financial capacity to finance potential project cost increases

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## 1.0 PMOC Observations and Findings

## 1.1 Summary of Monitoring Activities

- Monitoring Activities Undertaken During the Reporting Period
    - Fire Life Safety and Security meeting held on January 28, 2026 (virtual)
    - *Management Capacity and Capability Review interviews held on January 29, 2026 for the following VTA staff:*
        - *Special Senior Advisor*
        - *Deputy Chief*
        - *Engineering Manager*
        - *Construction Management Services Safety Manager*
        - *Construction Management Services Construction Director*
    - *PMOC Action Item 203: FTA/VTA/PMOC met on February 3, 2026, to establish objectives of the design issues focus meeting (virtual).*
    - *Review of 2025 Monthly Progress Report received from VTA on February 2, 2026, that includes the following:*
        - *Monthly Report*
        - *Third Party Agreement Tracker*
    - *PMOC attended the VTA Board Regular Monthly Meeting held on February 5, 2026. (virtual)*
    - *PMOC attended the VTA Board Oversight Committee Meeting held on February 12, 2026. (virtual)*
    - *PMOC Oversight Call was conducted on February 12, 2026. (virtual)*
    - Calls, emails, discussions, and meetings were held this month between VTA staff and PMOC.
    - Media articles and public comments
- The project is currently in the New Starts Engineering phase of the FTA CIG Program.
- Ongoing Activities to Advance to the Next Phase
    - VTA established a BSVII Contracting Task Force to evaluate various approaches to CP2 contract delivery including partial and full off-ramp, re-packaging of construction contracts to expedite the schedule and reduce delays, and industry outreach.
    - VTA will be completing the necessary steps to implement the contractual off-ramp with KST for CP2. This will require VTA Board approval, which has been obtained.
    - VTA is working on a preliminary contract re-packaging approach for delivering BSVII through six construction contract packages: Systems Construction Package 1 (CP1); Early Works Construction Package 2 (CP2); Newhall Yard and Maintenance Facility, Santa Clara Station and Mainline Trackwork Construction Package 3 (CP3); Downtown San Jose and Diridon Underground Stations Construction Package 4 (CP4); Tunneling Construction Package 5 (CP5); and 28$^{th}$ Street / Little Portugal Station and East Portal Construction Package 6 (CP6).

- VTA is currently evaluating various levels of cost savings to bring the project within budget. VTA is tentatively looking to advance to the next phase of the project and submit the Full Funding Grant Agreement (FFGA) Readiness Documents for the FTA/PMOC Risk Refresh by 3rd Quarter of 2026, with an FFGA execution by 2nd Quarter of 2027.

## 1.2 Project Management Plan (PMP) and Sub-Plans

The PMOC reviewed ten PMP and sub-plan documents shown in Figure 3 of Appendix 1, for BSVII program EPD readiness.

On December 1, 2022, FTA agreed to allow the BSVII program to re-enter the New Starts Project Development phase of the Capital Investment Grants (CIG) program. Around the same time as the change in federal funding sources and the update of the project budget, VTA also re-evaluated the project delivery scheme. Looking ahead to the New Starts Entry to Engineering request, VTA submitted 39 documents on May 26, 2023, including the updates shown in Figure 4 of Appendix 1 to the PMP and sub-plans to FTA to be reviewed by the PMOC.

PMOC recommendations and comments from the EPD readiness review as related to OP20, OP22, OP23, and OP24 were provided to VTA informally to help VTA prepare for the submissions needed for Entry to Engineering readiness. PMOC reviewed the new submissions in support of the Entry to Engineering risk assessment and readiness review and provided preliminary summary comments about inconsistencies and incomplete elements to VTA on June 27, 2023.

VTA submitted 37 documents in November 2023 and 11 additional documents in December 2023. Updates to the PMP sub-Plans are shown in Figure 5**.**

PMOC reviewed the submissions from November 2023 and December 2023 and provided input to PMOC's risk assessment and Oversight Procedure (OP) 51 Readiness to Enter Engineering review. PMOC's OP51 report will be one input to FTA's determination regarding Santa Clara Valley Transportation Authority's (VTA's) Capital Investment Grants (CIG) Program application. On March 29, 2024, along with the application to enter the New Starts Engineering Phase, VTA submitted revised PMPs and sub-plans. The PMOC current assessment of the PMP and sub-plans is based on the PMP and sub-plans submissions from November 2023 and December 2023 and only includes significant changes from the revised PMPs and sub-plans that were submitted on March 29, 2024.

On July 2, 2024, FTA transmitted to VTA the final PMP and sub-plan PMOC review reports. Over-the-shoulder review sessions with VTA, PMOC, and FTA were held in July to clarify and review VTA's responses to FTA/PMOC comments on the PMP and sub-plans. VTA submitted responses to FTA/PMOC comments on the PMP and sub-plans on July 31, 2024.

*At the Monthly meeting on February 12, 2026, VTA did not provide an update to the PMP and sub-plan status. The last update was provided at the September 12, 2024, monthly meeting:*

- The PMP and sub-plans have been updated to reflect Q3 2024.
- All previous FTA/PMOC comments on the PMP and sub-plans have been addressed; and
- Additional updates to the PMP and sub-plans will be made prior to FFGA Readiness submittal.

## 1.3 Management Capacity and Capability (MCC)

VTA has several professional services contracts awarded by which consultants have been supporting VTA in the project development phase. VTA consultants are managed under the HNTB/WSP joint venture Project Management Team (PMT), the Mott MacDonald / PGH Wong Engineering JV (MMW) joint venture General Engineering Consultant (GEC) and the Bechtel Infrastructure Corporation Construction Management Services (CMS). The PMT, the GEC, and the CMS include professional resources providing program management and multiple specialized engineering and construction management services.

*In consultation with FTA Staff, the PMOC assessed BSVII Management Capacity and Capability by conducting interviews with key BSVII staff on January 29, 2026. The PMOC reviewed resumes of key BSVII staff; including the Special Senior Advisor, Deputy Chief, Engineering Manager, Construction Management Services Safety Manager, and Construction Management Services Construction Director, and prepared interview questionnaires that were tailored specifically for the BSVII project needs and requirements. The experience requirement was divided into three categories: sufficient experience (5-7 years), considerable experience (7-12 years), and significant experience (12-20+ years).*

*At the Monthly meeting on February 12, 2026, VTA presented an updated organization chart as shown in Figure 6 of Appendix 1 with the following change from the organization chart presented on January 22, 2026:*

- *Southwest Strategies is now performing in the role of Planning/Public Outreach responsible for Stakeholder Engagement and Community Relations.*
- *The BART BSVII Deputy Director is no longer with BART. This position has not been filled as of the February 12, 2026, meeting.*
- *April Harvey (Interwest) was introduced as the Real Estate Manager.*
- *VTA is continuing to work to backfill vacant positions of Program Director, Deputy Director of Project Controls and Director of Engineering.*

*At the Monthly meeting on February 12, 2026, VTA provided the following update to the active Request for Proposal (RFP) for Program Management.*

  - *The RFP was issued on 9/24/2024.*
  - *The current Program Management contract was extended until June 30, 2026.*
  - *Proposals were received by February 19, 2025.*
  - *VTA issued Addenda 1 thru 5to the RFP.*

## 1.4 National Environmental Policy Act (NEPA) Process and Environmental Mitigation

Since FTA issued the ROD in 2018, VTA has closely coordinated with FTA to determine when and if additional analysis was needed to maintain compliance with NEPA. FTA determined that a NEPA re-evaluation was required for project changes at the EPD stage and again for project changes introduced by the Progressive Design Builder Innovations and Value Engineering initiatives adopted for the Entry to Engineering design. Both re-evaluations confirmed that the

conclusions in the 2018 ROD are still valid. FTA approved the re-evaluation associated with the Entry to Engineering preliminary design baseline in March of 2024. BSVII project staff converted the Mitigation Monitoring and Reporting Program (MMRP) from the ROD into a new format for tracking called the Environmental Commitments Record (ECR). Applicable environmental mitigation requirements were integrated into each of the contract packages via the ECR and the Design Requirements and Best Management Practices matrix. *At the monthly meeting on February 12, 2026, VTA stated that they are continuing to reevaluate based on Scenario 1 as it relates to NEPA / Environmental Mitigation Status. This is scheduled to be completed by end of August.*

## 1.5 Project Delivery Method and Procurement

VTA's plan for project delivery has evolved over recent years. VTA developed a Project Delivery and Procurement Plan (Revision 0.F dated April 16, 2021) which referenced the Project Implementation Plan. Those documents reflected the BSVII project baseline contracting plan which consisted of four distinct Design-Build contract packages for Systems (CP1), Tunnel and Trackwork (CP2), Newhall Yard and Santa Clara Station (CP3), and Underground Stations (CP4) as shown in Figure 7.

In November 2022, VTA held the Contract Packaging and Delivery Peer Review to receive feedback on the delivery approaches to be used for all contract packages other than CP2 (Tunnel and Trackwork). The RFPs for CP1 (Systems) and CP3 (Newhall Yard and Santa Clara Station) were cancelled pending re-evaluation of contract packaging and delivery methods.

On March 2, 2023, VTA transmitted to FTA and the PMOC the "Contract Packaging and Project Delivery Draft Report" dated February 28, 2023. Taking the Contract Packaging and Project Delivery Peer Review panel feedback into account, VTA concluded that Design Bid Build will be used to procure the Systems (CP1), Newhall Yard and Santa Clara Station (CP3), and Underground Stations (CP4) as shown in Figure 8 of Appendix 1.

Between fall 2020 and 2022, VTA initiated a three-step procurement process for the BSVII contract packages, including Requests for Industry Feedback (RFIF), Requests for Qualifications (RFQ), and Requests for Proposals (RFP). Historic data documenting dates for select procurement activities are reported in Figure 9 of Appendix 1 for the four contract packages included in the baseline contracting plan.

Requests For Qualifications were issued for all 4 packages. The RFQ of CP4 (Stations) was cancelled on March 1, 2022. The Statements of Qualifications (SOQs) for CP1 (Systems), CP2 (Tunnel and Trackwork), and CP3 (Newhall Yard and Santa Clara Station) were evaluated and resulted in the following:

- CP1 (Systems) – 2 Prime contractors shortlisted.
- CP2 (Tunnel and Trackwork) – 3 Prime contractors shortlisted.
- CP3 (Newhall Yard and Santa Clara Station) – 3 Prime contractors shortlisted.

The Final Tunnel and Trackwork (CP2) RFP was released on September 24, 2021, with the final addendum to this RFP released on November 24, 2021. BART Silicon Valley Phase II Tunnel Partners (B2TP) and KST Joint Venture submitted proposals on December 10, 2021. VTA

completed negotiations with the highest ranked team and issued a Notice of Recommended Award to KST. The Contract award was approved by the VTA Board of Directors on May 5, 2022. Limited Notice to Proceed (NTP) was issued June 9, 2022, NTP1 was issued for Programming Services on September 7, 2022, and subsequently increased the lump sum not to exceed with Letter #12, dated November 10, 2022, authorizing KST to proceed with Early Works Packages design and estimating. VTA issued KST NTP1A for Stage 1 Design Professional Services on February 21, 2023.

The Construction Management Services (CMS) RFP was released on September 25, 2023. The VTA Board authorized the award of the CMS contract to Bechtel Infrastructure Corporation on April 4, 2024. The CMS contract was executed on April 11, 2024. The scope of the CM Services contract is for the first ten years of the project.

VTA staff spent nearly a year negotiating and collaborating with the CP2 Contractor KST Joint Venture and were unable to come to an agreement with KST on the cost and schedule for Stage 2 construction. On June 27, 2025, the VTA Board of Directors authorized the General Manager/CEO to initiate the contractual off-ramp with KST for CP2 and to take such additional steps as necessary to implement the off-ramp in accordance with the terms of the CP2 Contract.

On June 12, 2025, VTA staff presented to the VTA BSVII Oversight Committee a preliminary contract re-packaging approach for delivering BSVII through six construction contract packages: Systems Construction Package 1 (CP1); Early Works Construction Package 2 (CP2); Newhall Yard and Maintenance Facility, Santa Clara Station and Mainline Trackwork Construction Package 3 (CP3); Downtown San Jose and Diridon Underground Stations Construction Package 4 (CP4); Tunneling Construction Package 5 (CP5); and 28th Street / Little Portugal Station and East Portal Construction Package 6 (CP6) as shown in Figure 10 in Appendix 1.

*At the monthly meeting on February 12, 2026, no update was provided on the Railcar Procurement.*

*VTA identified that they are in negotiation to start critical elements of Early Works Packages, including EWP 2A – Precast final Lining, Material and Plant Procurement, EWP 3D – PCTL storage foundations, EWP 9A – TMB Tunnel Long Lead Support Equipment and EWP 11C – Installation of Plant power and Equipment already procured.*

## 1.6 Design

### CP2 Tunnel and Trackwork

*At the monthly meeting on February 12, 2026, VTA reported the following Advance Partial Design Units (APDU) status:*

- APDU 1 – TBM Procurement (Face Pressure, TBM and Backfill Grout Specifications) – Face Pressure is pending submittal. TBM and Backfill Grout Specifications are progressing 100% design.
- APDU 2 Pre-Cast tunnel liner – Approved for Construction (AFC) submitted – Partial acceptance of the confinement wall scope. Resubmittal required for PCLT Design.
- APDU 3C - West Portal U-Wall Support of Excavation (SOE) Rev. 2 – AFC complete – Approved by VTA Board 12/5/2024.

- APDU 3D – West Portal Caterpillar SOE Final Design Rev. 2–AFC complete – Approved by VTA Board 12/5/2024.
- APDU 3E – West Portal Ground Improvement Design Rev. 2 - AFC complete – Approved by VTA Board 12/5/2024.
- APDU 5A – Downtown San Jose Station (DTSJ) Enabling Work (Civil & Maintenance of Traffic (MOT)) – AFC complete – Building demo by on call VTA contractors.
- APDU 8B – East Portal Enabling Works -100% design completed.
- APDU 11B – West Portal Temporary Power High Voltage Substation - *100% design completed*
- APDU 12A – Diridon Station Enabling Works and Utilities – APDU 12A 100% Rev. 1 pending. Paused.
- APDU 14 – 28th Street Station Enabling Works – APDU 14 100% Rev. 1 pending. Paused.
- APDU 20 – Track and Tunnel Alignment– Comment resolution on 100% complete - Paused.

VTA reported that they are resolving Caltrans comments on APDU 2 – 100% package – using VTA's established escalation ladder with Caltrans.

*VTA reported that UPRR comments closed on D10 85% package*

*VTA reported that KST Design is planning a restart to incorporate approved optimizations and station reconfiguration*

*At the monthly meeting on February 12, 2026, VTA reported the following KST Design status:*

- D05 – Program-wide Specifications – 85% review complete. Advancing D10 specifications, not paused.
- D10 – Bored Tunnel Design – 100% design Over the Shoulder (OTS) ongoing. *Submittal expected in February.*
- D15 – Tunnel Internal Structures – 85% design review complete; *workshop for reconfiguration planned.*
- D20 – Track and Tunnel – 85% design review complete; paused.
- D25 – Diridon Station Design –85% design paused, *planning restart for updated station configuration*
- D30 – Downtown San José Station –85% design paused, *planning restart for updated station configuration*
- D35 – 28th Street / Little Portugal Station – 85% design paused, *planning restart for updated station configuration*
- D40 – East Portal Design - 85% design review complete; paused.
- D45 – West Portal Design –85% design paused.

**Program-wide, Facilities and Systems Engineering**

*At the monthly meeting on February 12, 2026, VTA provided the following Program-wide design status:*

- *Over the shoulder meeting with BART is moving forward.*

- *GEC activated –interim design documents have been received*
- *Verbal agreement on Codes/Standards and Safety Charters (FLSSC, SSRC) has been reached, should be finalized in early March.*

## 1.7 Value Engineering and Constructability Reviews

VTA conducted a facilitated Value Engineering (VE) workshop in 2021 based upon the 10% design (submitted December 2019) which consisted of a revised design of a 53-foot diameter single bore tunnel with center platform stations with the addition of station mezzanines for platform access. The workshop was "a shortened version of a formal Value Engineering Study" required by FTA for Capital Investment Grants (CIG) projects. However, several of the recommended VE elements were applicable and incorporated into the EPD configuration. Stage 1 initial innovations vetting, as well as iterative design and cost estimating exercises, accomplished further value engineering under the CP2 PDB procurement.

The DRAFT Constructability Review Report was written in August 2020, addressing the biddability and buildability of the EPD configuration.

A three-day facilitated Value Engineering (VE) workshop was held the week of June 19, 2023, and the Value Engineering Workshop Report was submitted to FTA/PMOC, documenting VE efforts from June 2023 through September 2023.

Constructability reviews were held on July 20 and 21, 2023. and the Draft Constructability Review Report was submitted to FTA/PMOC in December 2023.

To address the BSVII program funding gap and to allow adequate cost and schedule contingencies, VTA evaluated cost savings candidates. On December 18, 2024, the FTA/PMOC and the VTA held an all-day informal Value Engineering workshop to review cost saving ideas along with a discussion on environmental, technical, and stakeholder considerations. The participants conducted brainstorming sessions and discussed several cost savings ideas.

On August 19-20, 2025, VTA conducted a two-day Peer Review workshop, in coordination with FTA and PMOC, to review and evaluate feasibility, constructability, contract packaging, and delivery approaches and presented two specific project scenarios (1 and 1a). The panel consisted of project delivery executives from peer public agencies LA Metro and Sound Transit.

On September 24, 2025, the peer review panel discussed the draft peer review report with VTA, FTA and PMOC. A final report summarizes the peer review evaluation of scenarios (1 and 1a) developed through the cost saving effort, provides independent perspective on VE ideas, provides recommendations for contract repackaging and delivery methods, and identifies outstanding risks for future evaluation as the project advances towards construction. This report is attached in Appendix 2.

*At the monthly meeting on February 12, 2026, no update was provided on value engineering and/or constructability.*

## 1.8 Real Estate Acquisition and Relocation

VTA revised and submitted to FTA/PMOC the Real Estate Acquisition Management Plan (RAMP), Rev. 0.C, and other PMP Subplans to support VTA's New Starts request to enter Engineering.

VTA's implementation of the acquisition program is in progress. VTA has identified 75 total parcels with acquisitions needed, including full and partial acquisitions, subsurface tunnel easements, temporary construction easements (construction staging areas), and permanent easements.

*During the monthly meeting on February 12, 2026, VTA reported Project Acquisition Status as of December 2025 shown in* Figure 12 *of Appendix 1.*

*No changes were identified for December 2025:*

- Legals/Plats Approved: 83%
- Appraisals completed: 80%
- Offers made: 80%
- Purchase Agreements Signed: 51%

## 1.9 Public Involvement/Outreach/Communications

*At the monthly meeting on February 12, 2026, VTA provided the following Public Involvement / Outreach / Communications updates:*

- ***Public and Stakeholder Meetings and Presentations***
  - Briefings and coordination with Caltrain, Cities of San José and Santa Clara
  - Stakeholder Meetings on station design
  - West Portal Construction Site Tours
  - *Community Working Group Meeting are schedule for March 10 – 12th*
  - *Construction Transportation Management Plan for Downtown/Diridon Re-engagement will be kicking off in Feb 2026*
- ***Communications and Public Relations***
  - *Monthly Construction eBlast –West Portal Updates*
  - *January Construction Notice – 28th Street/Little Portugal Soils Testing*
  - *Blogs, Social Media, Website, Hotline*

## 1.10 Third-Party Agreements and Utilities

The Third-Party agreement tracking matrix is updated and submitted to the FTA/PMOC monthly. The third-party agreement tracking matrix provides detailed information including a listing of all critical and non-critical agreements and permits, and their anticipated or actual execution dates. Per OP39, "critical third-party agreements are required before Construction, or Operations can begin, the absence of which may significantly change the cost, scope, and schedule."

*At the monthly meeting on February 12, 2026, VTA identified that the Caltrans Joint Use and Maintenance Agreement (JUMA) is in progress and monthly meetings with Caltrans staff are being held to advance this agreement.*

- The total number of Third-Party Agreements is now 43.
- *Critical Agreements prior to FFGA: 32*
  - *31 Executed, and 1 Open (Caltrans JUMA).*
- *Critical Agreements post FFGA (Construction): 4 (BART IL, UPRR C&M, and SJWC (2))*
- *Critical Agreements post FFGA (Operations): 5 (BART, JPB, CT, CSJ, CSC)*

*A summary of utility relocation design and construction progress is provided in Figure 13 of Appendix 1. At the monthly meeting on January 22, 2026, VTA reported the following utilities update:*

- *West Portal:*
  - *KST HVSS 100% Final Design: Approved by VTA and PG&E*
  - *Sprint Relocation: Internal review of draft final design was completed by VTA PMT, GEC, and CMS. Draft final design package transmitted to KST and UP for comments/approval.*
  - *Upcoming: HVSS Contractor selection & mobilization*
- *Diridon Station and West Vent Shaft:*
  - *AT&T/Comcast: Barack Obama Blvd & West Egress: Construction at West Egress to remobilize mid-March*
  - *Upcoming: PG&E Electric relocation Construction NTO - pending PG&E estimate letter (Q1 2026)*
- *Downtown Station:*
  - *AT&T & Level 3 construction to remobilize mid-February*
  - *Upcoming: Completion of PG&E Electric Relocation pending reimbursement agreements with Owner/Tenant. Expected remobilization mid-late March*
- 28th St Station
  - Utility relocation design coordination with GEC in -progress
  - Upcoming: Engage with Utility Owners to initiate relocation design development in Q2
- East Portal:
  - Verizon Cell Tower relocation: AT&T is revising design to accommodate extension of FO service to temp and permanent cell sites. Discussions between VTA and Verizon legal teams are on -going
  - Upcoming: Utility relocations in Q3 - pending easement acquisition

## 1.11 Construction

*At the monthly meeting on February 12, 2026, VTA reported the following early works procurement / negotiations/ construction activities and status of progress:*

- Early Works Projects – Procurement / Negotiations:
  - EWP 1A – TBM Procurement and Delivery, Factory Acceptance Testing Completed.
  - EWP 3A – West Portal Initial Sitework: Construction ongoing.
  - EWP 3B – West Portal Sitework (Phase 2): Construction ongoing.
  - EWP 3C.1 – Preparation for West Portal Enabling Works: Complete.
  - EWP 3C.2 – Launch Structure: Construction ongoing.
  - EWP 7A – West Portal Instrumentation & Monitoring: Ongoing monitoring.
  - EWP 11A – West Portal TBM and Plant Power: KST completed technical clarifications with vendors for electrical equipment; equipment delivery and coordination meetings ongoing.
  - EWP 11B – West Portal TBM and Plant Power Phase 2: KST completed technical clarifications with vendors for electrical equipment; equipment delivery and coordination meetings ongoing.
- *Change order under negotiation to begin critical activities from EWP 2A – Precast Final Lining, Material & Plant Procurement; EWP 3D – PCTL storage foundations, EWP 9A – TBM Tunnel Support Equipment, and EWP 11C – Installation of Plant Power & Equipment. No update on TBM activities and status of progress were reported by VTA at the monthly meeting on February 12, 2026.*
- *The following Construction – West Portal activities and status of progress were reported by VTA at the monthly meeting on February 12, 2026:*
  - *Cut and Cover Walls:*
    - *Continued level 1 bracing installation in the bump-out area.*
    - *Excavation in the C&C D-Wall area is ~7% complete*
    - *Bracing installation in the C&C D-Wall area is ~5% complete*
  - *U Wall/D-Walls:*
    - *Bracing installation in the U Wall/D-Wall area is ~67% complete*
    - *Excavation in the U-Wall Q-Wall area is ~68% complete*
  - *U-Wall Sheet Piles Area: Work commenced on September 8, 2025.*
    - *Excavation in the U-Wall sheet piles area is ~100% complete.*
    - *Bracing in the U-Wall sheet piles area is ~100% complete; and*
    - *Working slab in the U-Wall Sheet Pile area is ~76% complete*
  - *Caterpillar Shaft Area:*
    - *10 of 29 CAT Shaft D-Walls complete (34%) and 5 of 18 CAT Shaft Cross Walls complete (28%)*
    - *CAT Shaft Cell 3 completion pending 1 CAT Shaft D-Wall panel. Expected completion was February 19, 2026.*
- Construction – West Portal Upcoming Activities:
  - *February 2026:*
    - *Complete bottom slab construction in the U-Wall Sheet Pile area*
    - *Complete bracing installation on second level in U-Wall D-Wall area*
    - *Start bracing installation on third level in U-Wall D-Wall area*
  - *March 2026*

    - *Start bracing installation on second level in Cut and Cover area*
    - *Start CAP Beam construction in Caterpillar Shaft*
    - *Complete installation of Dewatering Wells in CAT Shaft*
- *Demolition and Site Preparation:*
    - *Gross & Holmes Building (Downtown San Jose – N 1st Street and Santa Clara Street: Gross & Homes building backfill, compaction, grading, and asphalt paving preparation completed in January. VTA parking lot restoration scheduled for after Super Bowl (February 8th). Work paused at City of San Jose request*
    - *2026 Demolition Schedule*
        - *Q2 - East Portal Greene Building (530 N Marburg Way)*
        - *Q3 - 28th Street Station Properties (195 N 30th Street)*

## 1.12 Vehicle Technology and Procurement

Expansion of BART's existing fleet to serve the BSVII service to Santa Clara is included in BART's Rail Fleet Management Plan (RFMP). Forty-eight vehicles have been identified in the BSVII budget. However, all vehicles will be procured under BART's vehicle procurement contracts not through separate VTA procurement.

On May 2, 2024, the VTA Board of Directors authorized the General Manager/CEO to enter into an agreement with BART for the purchase of 48 revenue vehicles for the BSVII Extension Project through BART's existing contract with Alstom (formerly Bombardier). The costs related to these revenue vehicles are estimated to total $172,600,000.

## 1.13 Project Cost

VTA transmitted to FTA/PMOC on October 11, 2023, their new baseline cost estimate included a total project budget of $12.237B. The new baseline cost, with a status date of June 30, 2023, was developed reflecting the CP2 Stage 1 baseline, and the updated design-bid-build (DBB) contract packaging strategy for CP1, CP3, and CP4.

This new baseline cost estimate was reviewed in accordance with FTA's OP33 Project Cost Review in coordination with the January 2024 Entry to Engineering risk assessment. The risk review resulted in P65 Forecast cost of $12.746B that was accepted and adopted by VTA. VTA formally requested FTA's approval to enter Engineering Phase in a letter dated March 29, 2024, with a total project cost of $12.746B and RSD of February 2039.

The BSVII project budget of $12.746B supporting VTA's March 29, 2024 request for FTA's approval to enter Engineering and the Cost and Expenditures Update through January 31, 2024 are summarized in

| VTA BART Silicon Valley Program, Phase II | | | | | Report Period |
|---|---|---|---|---|---|
| **Cost Report by Standard Cost Category** *($ in millions)* | | | | | Report Date |
| **Standard Cost Category Description** | | **Estimate [1] (A)** | **Forecast @ Completion (B)** | **Variance (C)=(B)-(A)** | **Incurred To Date [2] (D)** |
| 10 | Guideway and Track Elements | $2,899.80 | $3,041.50 | $141.70 | $361.50 |
| 20 | Stations, Stops, Terminals, Intermodal | $2,037.20 | $2,037.20 | $0.00 | $ - |
| 30 | Support Facilities, Yards, Shops, Admin. Bldgs. | $352.20 | $352.20 | $0.00 | $ - |
| 40 | Sitework and Special Conditions | $582.50 | $709.90 | $127.40 | $167.00 |
| 50 | Systems | $1,409.00 | $1,409.00 | $0.00 | $ - |
| 60 | ROW, Land and Existing Improvements | $240.50 | $240.50 | $0.00 | $129.90 |
| 70 | Vehicles [3] | $204.80 | $173.70 | ($31.10) | $82.50 |
| 80 | Professional Services | $2,972.50 | $3,043.70 | $71.20 | $1,106.90 |
| 90 | Unallocated Contingency | $1,657.10 | $1,316.80 | ($340.30) | $ - |
| 100 | Finance charges | $390.00 | $390.00 | $0.00 | $ - |
| **Total** | | **$12,745.60** | **$12,714.50** | **($31.10)** | **$1,847.80** |

Cost is rounded to hundredth thousands of millions

[1] Data excludes FTA ineligibles/revised cashflow projections

[2] Actuals this period reflects paid amounts from SAP during this reporting period and may include multiple invoices for an ent

[3] SCC 70 current estimate will be updated to reflect the revised commitments in the upcoming reporting periods

Figure 14 of Appendix 1.

*At the monthly meeting on February 12, 2026, VTA provided an update to the Project Funding Status as shown in Figure 15 of Appendix 1.*

*The VTA has reported expenditure through December 31, 2025, including accruals, which total $1,880.4M. Project costs have been expended in SCC 10, SCC 40, SCC 60, SCC 70, and SCC 80. Project commitments include SCC 10, SCC 40, SCC 60, SCC 70, and SCC 80 and total $22,330.6M through December 2025.*

*At the monthly meeting on February 12, 2026, VTA reported the following Budget/Cost updates for the December 2025 reporting period:*

- *During this period, there were no executed budget transfers during this period, nor drawn downs from unallocated contingency.*
- *A graph of the Cost Contingency Draw Down Curve can be found in Figure 16 of Appendix 1.*

*The Project Cost information and the tracking / reporting of costs continue to be against the Base Year 2024 estimate that was established for the New Starts Entry to Engineering.*

*There are significant additional costs to the BSVII Project that could result from off-ramping KST, advancing the design, and delaying the start of tunnel construction. These additional costs need to be accounted for in the BSVII Project Budget.*

## 1.14 Project Schedule

*VTA did not provide a schedule this month.*

*The BSVII team is currently working on developing a new baseline schedule to reflect the design, construction, and procurement activities pertaining to the revised contract packaging. During this interim period (until a new revised baseline is developed), staff will report on key working milestones, and key activities. The initial draft of new baseline schedule is targeted for Q1/Q2-2026. The summary schedule, schedule contingency drawdown sections will be restarted as soon as a new revised baseline schedule is adopted for use.*

*The Schedule Contingency Drawdown Curve is shown in 17 in Appendix 1.*

## 1.15 Project Risk

**Overall Status**

The PMOC reviewed various versions of the Risk and Contingency Management Plan (RCMP) leading up to VTA's EPD selection. On May 26, 2023, VTA submitted an updated RCMP (Rev. 0.D dated May 22, 2023) with the above-noted PMP Subplans to support VTA's New Starts request to enter Engineering. On October 11, 2023, VTA submitted another revision of the RCMP (Rev. B dated September 14, 2023) associated with the new baseline cost and schedule.

VTA reported having continued their risk review meetings with project and discipline teams, updating risk response plans and risk register.

VTA has indicated that, as per CP2 contract requirements, the KST team is expected to include a risk register after the review of the Configuration Design submittal. The BSVII team will review KST's identified risks with BSVII disciplines, revise the Program Risk Register as appropriate, and establish a joint VTA/KST CP2 Project Risk Register that will be reviewed with the KST team regularly. Since the risk workshop was held in January 2024, this register has not been provided to PMOC.

The project risk profile has changed since the EPD submission and is further impacted as the project has moved back into the New Starts program. The PMOC has completed a risk assessment given the new baseline cost and schedule by VTA that reflects their planned delivery and updated packaging strategy, along with awarded CP2 contractor (KST's) approved innovations. The Entry to Engineering risk workshop for the project was conducted in January 2024 with FTA, the project sponsor, and PMOC. The PMOC has proposed additional new risks related to geotechnical conditions, Buy America requirements, interface requirements associated with changing scope, Real Estate management plan, TBM productivity assumptions, agency capacity, timely decision with BART and external stakeholder impacts including potential delays from Board of Directors. VTA has incorporated the FTA/PMOC risk assessment results into their new baseline and request to Enter Engineering.

*Based on VTA's period ending December 31, 2025, monthly report, the following capture the key risk updates.*

***New Risks: None for the period***

***Increased Risk Score: None for the period***

***Reduced Risk Score: None for the period***

***Retired Risks: None for the period***

***Other Risk Updates:***

Please refer to Attachment E for the Top Identified Risks (Scenario 1 Watchlist) – Threats only according to VTA's BSVII Monthly Progress Report for the period ending November 2025. VTA has stated that risk mitigations, action plans and a detailed risk profile are being developed for these risks and other potential risks as part of the new baseline development. Reporting on the NSEE based risk profile will be put on hold and appropriate risks will be transferred to the new baseline risk profile.

*At the monthly meeting on February 12, 2026, VTA provided the following progress updates:*

- *No new risks were added to the Program Risk Register.*
- *VTA continues monthly review of key program and project risks.*
- *A Top Identified Risks (Scenario 1 Watchlist) – Threats only was developed for all scope, cost, and schedule scenarios. This is shown in Attachment E.*
- *VTA stated that risk register updates are paused until a proposed project scenario is determined; once determined internal risk review meetings with risk owners will be scheduled and the risk register updated.*

## 1.16 Quality Assurance/Quality Control

PMOC reviewed various versions of the Quality Management Plan (QMP) leading up to VTA's EPD selection. On May 26, 2023, VTA submitted an updated QMP (Rev. 2 dated May 1, 2023) with the above-noted PMP subplans to support VTA's New Starts request to enter Engineering. PMOC reviewed the revised QMP and provided preliminary summary comments to VTA on June 27, 2023. The QMP (Rev. 2 dated November 1, 2023) was submitted to the PMOC on November 22, 2023. On July 2, 2024, FTA transmitted to VTA the final QMP PMOC review report.

*At the monthly meeting on February 12, 2026, VTA reported the following:*

- ***Quality Assurance Activities for current month:***
  - *General Oversight and Verification*
    - *Continued update to BSVII QMP and Procedures. General oversight and verification. VTA anticipates routing for management review and sign off in February.*
- *Continued verification audit of KST's material receiving and inspection process – CP2*
- ***Planned Activities for Next Month:***
    - *Complete revision to BSVII Quality Management Plan*
    - *Complete quality verification audit of KST's material receiving and inspection process*

## 1.17 Safety and Security

VTA and BART previously indicated an intent to conduct joint Fire Life Safety and Security Committee (FLSSC) and Safety and Security Review Committee (SSRC) meetings for the early phase of the BSVII program.

On August 30, 2023, VTA issued the SSRC charter. The SSRC is chaired by VTA Deputy Director, Program Administrator and includes VTA (Security Specialist, Chief of System Safety & Security, System Safety & Security Lead, and project managers), BART (engineering, operations, system safety, and police), BSVII Program Management Team, Federal Transit Administration, and the Project Management Oversight Contractor.

On August 30, 2023, VTA issued the FLSSC charter. The FLSSC charter is co-chaired by VTA Chief Megaprojects Officer and BART Assistant General Manager of Operations. It includes committee members from the Cities of San José and Santa Clara fire and police departments, Santa Clara Sheriff, California Public Utilities Commission (CPUC), BART (engineering, system safety, and police), and VTA (System Safety & Security, and project managers). The CPUC is the State Safety Oversight Agency (SSOA) as certified by FTA. *Please refer to Attachment F for BSVII Safety and Security Checklist.*

*At the monthly meeting on February 12, 2026, VTA reported the following:*

- *The Safety and Security team is continuing the update of the Safety and Security Management Plan and Safety and Security Certification Plan with a goal of a new draft by March for discussion with BART and then to work through the approval process.*
- *In support of engineering, safety and/or security risk assessments are being provided for safety and security related issues. These assessments will be presented to BART and SSRC.*
- *System Safety and Security Risk Management / Certification activities:*
  - *The next SSRC Meeting is planned for late February 2026.*
- *Fire Life Safety and Security (FLSS) Activities*
  - *There were two FLSSWG meetings held in January where restart of FLSSC activities was discussed and the basis of codes and standards for the project was discussed.*
  - *FLSSC meeting is anticipated in February, depending on activities.*

## 1.18 Americans with Disabilities Act (ADA)

VTA produced an Accessibility Report to meet the EPD application requirements specified in the NOFO (Notice of Funding Opportunity).

## 1.19 Buy America

VTA has committed to meeting the Buy America requirements in their PMP documentation. Additional details regarding how they intend to meet the 70-percent content threshold, and their management of contractor requirements have yet to be made available to the PMOC for review.

VTA includes a notification in the RFQ to all prospective bidders that Buy America requirements will be part of each contract. VTA sets the expectation that each supplier and subcontractor must research and present findings for verification. Additional work is needed to coordinate the requirements and compliance at a program level. VTA indicated that their contract technical teams will provide input regarding program coordination.

*No update was provided at the monthly meeting on February 12, 2026.* PMOC recommends that VTA revisit their plan for Buy America implementation and management regarding Buy America Build America changes and the program's adjusted delivery plan.

## 1.20 Start-Up, Commissioning, Testing

VTA and their contractors will be responsible for Phase 1 and 2 system integration testing. Upon successful completion of Phase 2 system integration testing, the system will be turned over to BART to complete Phase 3 system integration and pre-revenue testing. As noted above, VTA has established a Rail Systems Organization (RSO) teaming with BART to manage systems and operations input to project development and address related issues. The RSO is developing the System Integration Testing Program Plan. The testing plan will define BART Phase 3 System Integration Testing (SIT) to be Operations Control Center (OCC) validation of tests previously performed. The intent of Phase 3 SIT is not to introduce new tests to be performed. However, if there are system validation failures during SIT Phase 3, BART will have the right to perform new tests until all testing discrepancies are cleared.

As previously noted, VTA has determined that Communication Based Train Control (CBTC) design will be progressed for implementation on the BSVII extension. To accommodate the technology, BART CBTC implementation from Warm Springs to Berryessa needs to be completed. VTA provided the following milestones related to this phase/segment of BART's project:

- Migration design from Q3 2025 to Q4 2029
- Procurement from Q4 2025 to Q3 2028
- Installation from Q1 2029 to Q4 2029
- Testing and Commissioning from Q3 2029 to Q4 2030
- Revenue service expected at the end of 2030

*No update was provided at the monthly meeting on February 12, 2026.*

*The action items table for this report can be found in Appendix 2.*

## Project Monitoring Report Attachments

Attachment A. List of Acronyms

Attachment B. Monthly Meeting Agenda

Attachment C. Monthly Meeting Attendees

Attachment D. List of Documents Received

Attachment E. VTA Top Identified Risks (Scenario 1 Watchlist) – Threats only

Attachment F. BSVII Safety and Security Checklist

Attachment G. Project Milestones/Key Events

Attachment H. Project Map

Attachment I. FTA Grant approval letter dated August 1, 2024

**Attachment A. List of Acronyms**

| | |
|---|---|
| ADA | Americans with Disabilities Act |
| BART | Bay Area Rapid Transit |
| BSVII | BART Silicon Valley Phase II |
| CBTC | Communications Based Train Control |
| CIG | Capital Investment Grants |
| CMS | Construction Management Services |
| CPUC | California Public Utilities Commission |
| CSC | City of Santa Clara |
| CSJ | City of San José |
| DCM | Design Criteria Manual |
| DTSJ | Downtown San Jose Station |
| EVS | Emergency Ventilation Structure |
| EPD | Expedited Project Delivery |
| FAT | Factory Acceptance Testing |
| FLSS | Fire, Life, Safety and Security |
| FTA | Federal Transit Administration |
| FOTF | Fleet of the Future |
| GEC | General Engineering Consultant |
| HK | Herrenknecht |
| KST | Kiewit Shea Traylor |
| LS | Lump Sum |
| MCCP | Management Capacity and Capability Plan |
| NDA | Non-disclosure Agreement |
| NEPA | National Environmental Policy Act |
| NOFO | Notice of Funding Opportunity |
| OP | Oversight Procedure |
| PDB | Progressive Design Build |
| PMOC | Project Management Oversight Contractor |
| PMP | Project Management Plan |
| PMT | Program Management Team |
| QMP | Quality Management Plan |
| RAMP | Real Estate Acquisition Plan |
| RCMP | Risk and Contingency Management Plan |
| RFIF | Request for Industry Feedback |
| RFMP | Rail Fleet Management Plan |
| RFP | Request for Proposal |
| RFQ | Request for Qualifications |
| ROW | Right of Way |
| RSO | Rail Systems Organization |
| RVTM | Requirements Verification Traceability Matrix |
| SCC | Standard Cost Categories |
| SOQ | Statement of Qualifications |
| SSMP | Safety and Security Management Plan |
| SSOA | State Safety Oversight Agency |
| SSRC | Safety and Security Review Committee |

| | |
|---|---|
| STOPS | Simplified Trips-On-Project Software |
| SVBX | Silicon Valley Berryessa Extension |
| SVTC | Silicon Valley Transit Consultants |
| TBM | Tunnel Boring Machine |
| TAP | Tunnel Advisory Panel |
| UPRR | Union Pacific Railroad |
| VE | Value Engineering |
| VTA | Santa Clara Valley Transportation Authority |

**Attachment B. Monthly Meeting Agenda**

**Monthly Coordination Meeting/Teleconference**
**VTA BART Silicon Valley Extension Phase II**
Thursday, February 12, 2026 – 9:30am (Pacific)
Conference Connection: MS Teams

1. Introduction/Roll Call
2. Key Agency-level updates (organization, financial, legal, safety, FFGA timeline, etc.)
3. Action Items from latest Monthly Call
4. Project Status
   a. Key Project Issues
      i. Peer Review – Next Steps
      ii. Funding Report
      iii. Contracts:
         - BSVII Off-Ramp
         - BSVII Contract Re-Packaging
         - BSVII Project Delivery
   b. FFGA Roadmap
   c. NEPA / CEQA - Environmental Mitigations
   d. Project Delivery Method and Procurement Status – Procurement Approach Update
      i. Tunnel
      ii. Systems
      iii. Facilities / Yard & Shops
      iv. Stations
      v. Railcar
      vi. Others / Owner-Procurement Items
   e. Design Status
      i. Systems
      ii. Tunnel
      iii. Facilities /Yard & Shops
      iv. Stations
   f. Real Estate Acquisition/Relocation Status
   g. Third-Party Agreements
   h. Public Involvement/Outreach
   i. Construction
      i. West Portal Construction
      ii. TBM Delivery Status
      iii. Demolition and other site-prep activities
      iv. Utilities
   j. Project Controls
      i. Schedule Updates
      ii. Cost and Expenditures Updates
      iii. Trend Updates
      iv. Change Order Status
      v. Contingency Status

vi. Quarterly Cost Estimate Reviews

k. Project Risk Management (Internal Monthly Risk Reviews)

l. Quality Assurance / Quality Control

m. System Safety and Security

5. New Action Items

6. Upcoming Coordination Meetings:

*a.* Quarterly Meeting - March 11, 2026, 12:15pm (Pacific)

*b.* Monthly Meeting -April 9, 2026, 9:30am (Pacific)

*c.* Monthly Meeting -May 14, 2026, 9:30am (Pacific)

## Attachment C. Monthly Meeting Attendees

| Organization | Name | E-mail |
|---|---|---|
| **FTA** | Melissa McGill | melissa.mcgill@dot.gov |
| **FTA** | Trina Reese | gertrina.reese@dot.gov |
| **FTA** | Wei Chu | chu.wei@dot.gov |
| **VTA** | Khair Mohammad Amini | khairmohammad.amini@vta.org |
| **VTA** | Krishna Davey | krishna.davey@vta.org |
| **VTA** | Kunjan Dayal | Kunjan.Dayal@vta.org |
| **VTA** | Jill Eck | jill.stallman@vta.org |
| **VTA** | Claudia Frias Baltazar | claudia.friasbaltazar@vta.org |
| **VTA** | Rosemarrie Gonzalez | rosemarrie.gonzalez@vta.org |
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| **VTA** | Zulfia Imtiaz | zimtiaz@vtabsv.com |
| **VTA** | Kevin Kurimoto | kevin.kurimoto@vta.org |
| **VTA** | Tom Maguire | tom.maguire@vta.org |
| **VTA** | Nellie Moussa | nmoussa@vtabsv.com |
| **VTA** | Ronak Naik | ronak.naik@vta.org |
| **VTA** | Erica Roecks | erica.roecks@vta.org |
| **VTA** | Sarah Wilson | swilson@vtabsv.com |
| **BART** | Scott Smith | ssmith2@bart.gov |
| **CPUC** | Daniel Kwok | daniel.kwok@cpuc.ca.gov |
| **CPUC** | Rupa Shitole | rupa.shitole@cpuc.ca.gov |
| **PMT** | Craig Constant | cconstant@vtabsv.com |
| **CMS** | Brian Curran | bcurran@vtabsv.com |
| **PMT** | Sarah Hersom | shersom@hntb.com |
| **PMT** | Chris Metzger | cmetzger@epcconsultants.com |
| **PMT** | Chuck Morganson | cmorganson@hntb.com |
| **PMT** | Chris Ralston | cralston@vtabsv.com |
| **PMT** | Kieran Spillane | kieran.spillane@wsp.com |
| **CMS** | Blair Titcomb | btitcomb@vtabsv.com |
| **PMT** | Peter Zuk | pzuk@hntb.com |
| **PMOC** | Alex Brown | Alex.Brown@atkinsrealis.com |
| **PMOC** | Heather Browning | heather.browning@atkinsrealis.com |
| **PMOC** | Jessica Fulton | jessica.fulton@atkinsrealis.com |
| **PMOC** | Emile Jilwan | emile.jilwan@atkinsrealis.com |
| **PMOC** | Beth Sprague | beth.sprague@atkinsrealis.com |
| **PMOC** | Nadeem Tahir | nadeem.tahir@atkinsrealis.com |
| **FTA** | Melissa McGill | melissa.mcgill@dot.gov |
| **FTA** | Trina Reese | gertrina.reese@dot.gov |

## Attachment D. List of Documents Received

| Document | Received |
|---|---|
| BSVII_Monthly_Progress_Report_December_2025_final.pdf | 02/02/2026 |
| third party agreement tracking 01.31.26.xlsx | 02/02/2026 |
| BSVII FTA-VTA PMJOC Monthly Meeting_2026-02-12_Draft.pdf | 02/06/2026 |
| FTA Stlmt Concur_B3003_CSJ_11.10.20.pdf | 02/10/2026 |
| FTA Condemn Concur_B4042_DTSJT_02.08.22.pdf | 02/10/2026 |
| FTA Stlmt Concur_B3105_Bittel_09.18.24.pdf | 02/10/2026 |
| FTA_SVBX ROW Status 7-29-2025.xlsx | 01/29/2026 |

**Attachment E. VTA Top Identified Risks (Scenario 1 Watchlist) – Threats only**

**Top Identified Risks (Scenario 1 Watchlist) – Threats only**

| Risk Title |
|---|
| Increased liability due to VTA's ownership of TBM due to off ramp |
| TBM advance rate assumptions not being met |
| CP2 off-ramp requiring re-procurement resulting in potential lack of competitive bidders |
| Truck traffic volume for disposal of muck from the tunnel due to TBM advance rate assumptions |
| External policies such as Tariffs, Buy America requirements, impact on cost |
| Revised cost estimates higher than Scenario 1 |
| Revised schedule assessment results in current Revenue Service Date not being met |
| Undefined design interfaces between contract packages |
| Undefined construction interfaces, handover milestones due to revised contract packaging |
| FFGA execution delays |
| VTA financial capacity / funding plan to finance potential future project cost increases |
| Unanticipated damage to historic buildings and other structures due to vibration and/or settlement |
| General construction labor shortage / higher labor premiums |

*Source: BSVII Monthly Progress Report December 2025 – No Update provided at 02/12/2026 meeting. The risk items reflected above are not yet reflected in the latest Risk Register*

| Attachment F: Safety and Security Checklist | | | |
|---|---|---|---|
| **Project Overview** | | | |
| Project Mode (Rail, Bus, BRT, Multimode) | | ☒ | Rail |
| Project Phase (Project Development, Engineering, Construction, Start-Up | | ☒ | Engineering |
| Project Delivery Method (Design/Build, DBOM, CMGC, etc.) | | ☒ | TBD |
| **Project Plans** | **Version** | **Review by FTA** | **Status** |
| Safety and Security Management Plan (SSMP) | Rev 1 | ☒ | Pending update based on revised configuration |
| Safety and Security Certification Plan (SSCP) | Rev 1 | ☒ | Pending update based on revised configuration |
| Public Transportation Agency Safety Plan (PTASP) | Rev 2 | ☒ | BART – reviewed by CPUC |
| System Security Plan or Security and Emergency Preparedness Plan (SEPP) | | ☐ | BART |
| Construction Safety and Security Plan (CCSP) | | ☐ | KST plans complete |
| **Safety and Security Authority** | | | |
| **Area of Focus** | **Y/N** | **Notes/Status** | |
| Is the project sponsor subject to 49 CFR Part 674 state safety oversight requirements? | Y | | |
| Has the state designated an oversight agency as per 49 CFR section 674.13? | Y | CPUC | |

| | | |
|---|---|---|
| Has the oversight agency reviewed and approved the project sponsor's security plan or Public Transportation Agency Safety Plan as per 49 CFR section 674.25(b)? | Y | Review of BART's PTASP |
| Did the oversight agency participate in the last Quarterly Review Meeting? | Y | CPUC attends all PMOC meetings, SSRC and FLSSC meetings. |
| Has the project sponsor submitted their safety certification plan to the oversight agency? | Y | Comments received but held until revised configuration approved and SSCP updated |
| Has the project sponsor implemented security directives issued by the Department of Homeland Security and/or Transportation Security Administration? | Y | VTA in collaboration with BART implemented directives as appropriate |

| **Safety and Security Checklist** | | |
|---|---|---|
| **SSMP Monitoring** | | |
| **Area of Focus** | **Y/N** | **Notes/Status** |
| Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this? | Y | SSMP will be updated to addressed revised configuration. |
| Does the project sponsor review the SSMP and related project plans to determine if updates are necessary? | Y | Reviewed annually or as project changes. |
| Does the project sponsor implement a process through which the Designated Function (DF) for safety and DF for security are integrated into overall project management team? Please specify. | Y | Both designated functions are integrated and report up to VTA's CEO. Designated functions are combined into a singular role. |
| Does the project sponsor maintain a regularly scheduled report on the status of safety and security activities? | Y | Monthly Safety & Security Certification Review Committee meetings are held (on hold during cost saving). Also report out at monthly FTA/PMOC meetings. |
| Has the project sponsor maintained a regularly scheduled report on the status of safety and security activities? | Y | Safety/security activities are included in the monthly PMOC reports and reports to VTA. |

| | | |
|---|---|---|
| Has the project sponsor established staffing requirements, procedures, and authorities for safety and security activities throughout all project phases? | Y | Through the PMT and CMT system safety/security and construction safety/security are required. Each contractor is also required to have a system safety/security coordinator and construction safety/security as appropriate for scope. |
| Does the project sponsor update the safety and security responsibility matrix/organization chart as necessary? | Y | Roles and responsibilities, captured in Table 3.1 are reviewed with each SSMP update. |
| Has the project sponsor allocated sufficient resources to oversee or carry out safety and security activities? | Y | Responsibilities are allocated across the PMT, CMT and contractors. |
| Has the project sponsor developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases? | Y | The PHA and TVA have been completed but will require updates to capture revised configuration. |
| Does the project sponsor implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities? | Y | These are part of the meetings with contractors and discussed at the SSRC. |
| Does the project sponsor monitor throughout all project phases? Please describe briefly. | Y | The Safety and Security Review Committee (SSRC) track hazards/vulnerabilities and mitigations throughout all phases and to confirm certification is appropriately taking place at each project phase for each contract. . |
| Does the project sponsor ensure the conduct of preliminary hazard and vulnerability analyses? Please specify the analyses conducted. | Y | To date PHAs for each contract have been developed and a TVA that includes the entire project has been completed. Both will require updates to address the revised configuration. |

| **Safety and Security Checklist** | | |
|---|---|---|
| **SSMP Monitoring** | | |
| **Area of Focus** | **Y/N** | **Notes/Status** |

| | | |
|---|---|---|
| Has the project sponsor ensured the development of safety design criteria? | Y | Design criteria – a combination of accepted BART safety/security design criteria and mitigations have been developed |
| Has the project sponsor ensured the development of security design criteria? | Y | Design criteria – a combination of accepted BART safety/security design criteria and mitigations have been developed but will require revision based on the revised configuration |
| Has the project sponsor ensured conformance with safety and security requirements in design? | Y | Safety/security design criteria conformance is tracked through the certification program. Changes to criteria that is safety or security related are approved through both a "Request for Variation" which is approved by BART and through a "Record of Decision" reviewed/approved by the SSRC. |
| Has the project sponsor verified construction specifications conformance? | N | Pending: Specification revisions will be in process once revised configuration is approved by VTA Board. |
| Has the project sponsor identified safety and security critical tests to be performed prior to passenger operations? | N | Pending: Test plans will be developed at a later phase (construction). |
| Has the project sponsor verified conformance with safety and security requirements during testing, inspection, and start-up phases? | N | Pending: This is a requirement but will be achieved in a later phase. |
| Has the project sponsor evaluated changed orders, design waivers, or test variances for potential hazards and/or vulnerabilities? | Y | The "Request for Variance (RFV)" process requires a safety/security review for impacts (hazards/vulnerabilities), safety/security signoff and any change to safety/security criteria must be approved by the SSRC. |
| Has the project sponsor ensured the performance of safety and security analyses for proposed workarounds? | N | Pending: This is a later phase, but safety/security analysis is required for any significant changes. |
| Has the project sponsor demonstrated, through meeting or other methods, the integration of safety and security in the following?<br><br>• Activation Plan and Procedures<br>• Integrated Test Plan and Procedures | N | Pending: These are later phase activities but are addressed in the SSMP and SSCP and will be tracked to confirm appropriate plans/processes have been developed, reviewed and approved. |

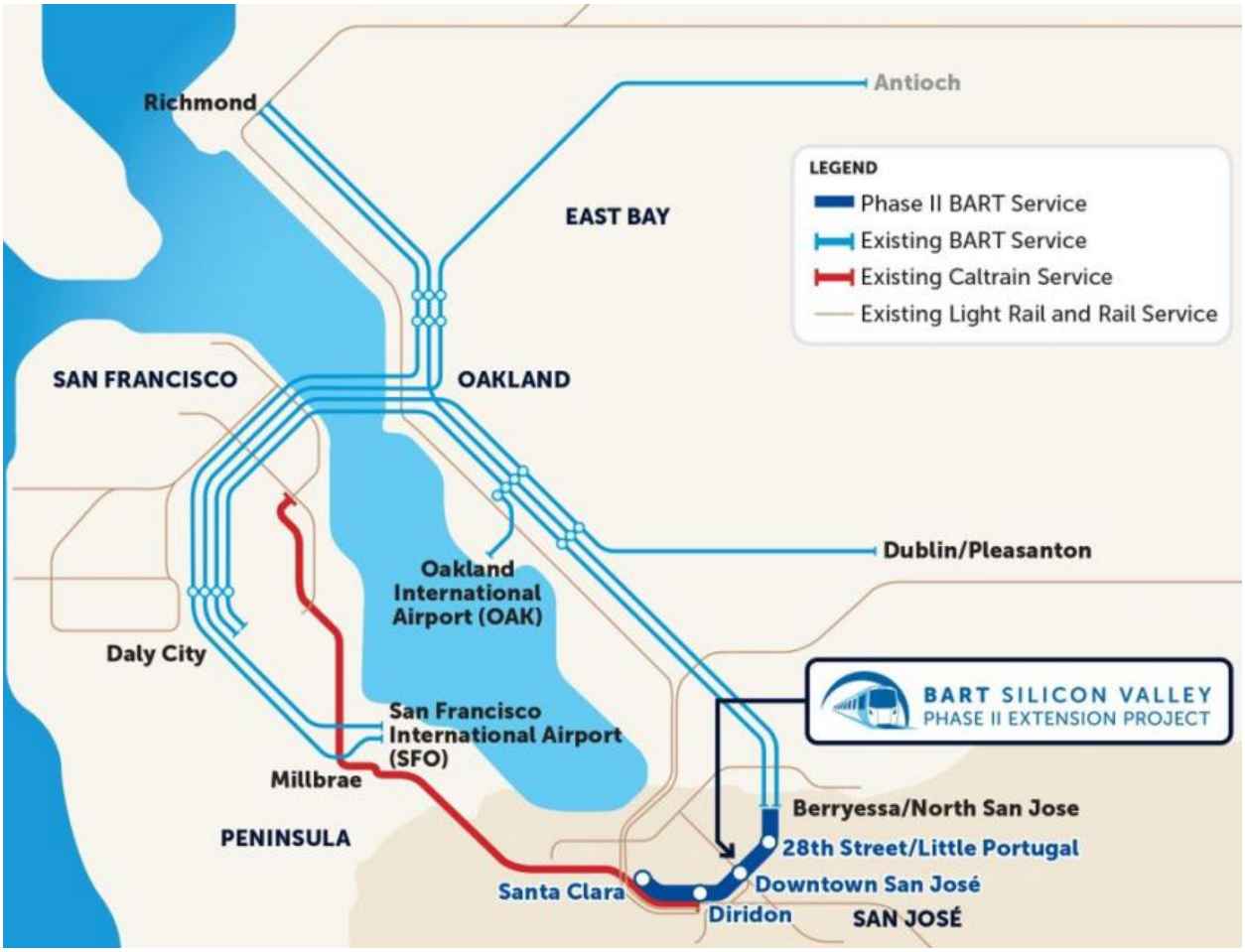
| | | |
|---|---|---|
| • Operations and Maintenance Plan<br>• Emergency Operations Plan | | |
| Has the project sponsor issued a final safety and security certification? | N | Pending: Later phase once all other phases are complete. Addressed in the SSMP and SSCP and will be tracked to confirm development and submittal. |
| Has the project sponsor issued the final safety and security verification report? | N | Pending: Later phase once all other phases are complete. Addressed in the SSMP and SSCP and will be tracked to confirm development and submittal. |

## Attachment G. Project Milestones/Key Events

| Milestone | Planned Date |
|---|---|
| General Key Milestones | |
| Contract Package 1_Systems Design Bid Ready & Review | 9-Mar-28 |
| Contract Package 3_Newhall Yard and Santa Clara Station Design Bid Ready & Review | 22-Jan-27 |
| Contract Package 4_Stations and Support Facilities Design Bid Ready & Review | 5-Oct-27 |
| VTA Target Start of Revenue Service | 12-May-37 |
| FTA Target Start of Revenue Service | 28-Feb-39 |
| Construction Contracts Key Milestones | |
| Contract Package 1_Systems | |
| Contract Package 1 NTP Systems | 18-Apr-29 |
| Track Testing Completion | 16-Oct-34 |
| Systems Testing Completion Turn Over to BART | 9-Nov-35 |
| Contract Package 2_Tunnel and Trackwork | |
| Order TBM | **31-Oct-23** |
| Contract Package 2 NTP2 Tunnel & Trackwork | 6-Jan-25 |
| Deliver TBM | 21-May-26 |
| Start of Tunneling | 6-Nov-26 |
| Start of Trackwork | 1-Nov-29 |
| Contract Package 3_Newhall Yard and Santa Clara Station | |
| Contract Package 3 NTP Newhall Yard and Santa Clara Station and Parking Garage | 3-Feb-28 |
| Santa Clara Station Fit-Out Completion | 4-Feb-32 |
| Santa Clara Station Parking Garage Construction Completion | 18-Dec-31 |
| Newhall Yard Trackwork Completion | 22-Jul-33 |
| Contract Package 4_Stations | |
| Contract Package 4 NTP Stations and Support Facilities | 18-Dec-28 |
| Diridon Station Fit-Out Completion | 12-Dec-33 |
| DTSJ Station Fit-Out Completion | 19-Aug-33 |
| 28th Street Station Fit-Out Completion | 26-Aug-33 |
| 28th Street Station Parking Garage Construction Completion | 5-Dec-33 |

*Source: VTA's BART Silicon Valley Phase II Extension Project Basis of Schedule, New Starts Entry to Engineering Revision 0, March 25, 2024*

## Attachment H. Project Map



## Attachment I. FTA Enter the New Starts Engineering Phase Approval – August 1, 2024

U.S. Department of Transportation
Federal Transit Administration

Region IX
Arizona, California,
Hawaii, Nevada, Guam
American Samoa,
Northern Mariana Islands

90 7th Street
Suite 15-300
San Francisco, CA 94103-6701
415-734-9490

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

Ms. Carolyn Gonot
General Manager and Chief Executive Officer
3331 North First Street
San Jose, CA 94134

Dear Ms. Gonot:

The Federal Transit Administration (FTA) is pleased to inform you that the Santa Clara Valley Transportation Authority's (VTA) request for the Bay Area Rapid Transit (BART) Silicon Valley Phase II Extension Project (the Project) to enter the New Starts Engineering phase of the FTA Capital Investment Grants (CIG) Program is approved. This approval to initiate Engineering is a requirement of Federal transit law [49 U.S.C. 5309(g)] governing the Program.

The FTA is required by law to evaluate proposed projects against a number of criteria and ensure that prospective grant recipients demonstrate the technical, legal, and financial capability to implement the project. As a result of FTA's evaluation of the Project, an overall project rating of Medium-High was assigned.

Please note that the VTA undertakes Engineering work at its own risk, and that the Project must still progress through further steps in the CIG program to be eligible for consideration to receive CIG funding.

FTA approved a Letter of No Prejudice covering expenses VTA incurred when it started in New Starts Project Development in March 2016, through the Project's migration to the Expedited Project Development (EPD) Pilot Program, as well as for all remaining work on the project, thereby matching the pre-award authority VTA had been given while it was in the EPD Pilot Program for the estimated total project cost of $9.318 billion.

With this Engineering approval, the VTA can continue automatic pre-award authority to incur costs for engineering activities, utility relocation, real estate acquisition, construction and other non-construction activities such as the procurement of rails, ties, commodities, and other specialized equipment. The VTA should consult with the FTA Region IX office for a determination of whether any other non-construction activity falls within the automatic pre-award authority granted with the Engineering approval of the Project.

Under this extended pre-awarded authority, FTA reminds VTA that the procurement of vehicles must comply with all Federal requirements including, but not limited to, competitive procurement practices, the Americans with Disabilities Act, and the Buy America Act

requirements. The FTA encourages the VTA to discuss the procurement of vehicles with FTA prior to exercising the pre-award authority.

This pre-award authority does not constitute any FTA commitment that future Federal funds will be approved for the Project or for any element of the Project. As with all pre-award authority, all Federal requirements must be met prior to incurring costs in order to retain eligibility for future FTA grant assistance. Additional guidance regarding pre-award authority for the CIG Program is provided in the FTA Fiscal Year 2024 Apportionments, Allocations, and Program Information Notice, that was published in the Federal Register Notice on May 31, 2024.

**Local Financial Commitment**

The capital cost of the Project is estimated to be $12,745,606,428 in year-of-expenditure dollars. The VTA is seeking $6,296,329,575 (49.4 percent) in CIG program funds. The FTA determined that approximately 84 percent of the non-CIG capital funds are committed or budgeted.

Please be advised that the amount of CIG funding for the Project is fixed at the time of entry into Engineering. The FTA considers multiple factors when deciding on the CIG funding level that can be provided to an individual project. These factors include the size of the project and the CIG dollar amount being requested, the demand for CIG funding from other projects in the program, and the availability of funds from Congress. Although the VTA requested a 49.4 percent CIG share, FTA is notifying VTA that $5,098,242,571 (40 percent) represents the maximum amount of CIG funds that will be provided by FTA for the Project should a Full Funding Grant Agreement (FFGA) be approved. The FTA will work with VTA during Engineering to identify appropriate annual CIG funding amounts to assume.

Prior to the Project's consideration for an FFGA, VTA must submit a revised financial plan. VTA is required by statute to secure and document all commitments of the non-CIG funding for the Project to be able to receive an FFGA. VTA must secure explicit board approval to commit 2000 Measure A and 2016 Measure B in sales tax funds to the Project beyond the timeline of the current biennial budget. In addition, without an extension in the Measure A and Measure B sales taxes, the Project runs the risk of a system-wide deficit in cash reserves shortly after the revenue service date in February 2039, therefore VTA must account for this possibility in its financial plan. Additionally, the Metropolitan Transportation Commission (MTC) needs an administrative action to release $375 million in state TIRCP funding to VTA. The VTA and MTC must also execute an agreement regarding use of the State Transportation funds. FTA wants to bring to your attention the opportunity for Federal loans. The Build America Bureau offers several customizable credit instruments that can reduce project costs and increase flexibility.

**Scope, Schedule, Cost, and Technical Capacity**

The FTA and its Project Management Oversight Contractor (PMOC) conducted a readiness review of the Project's scope, schedule, cost, and project risks as well as VTA's technical capacity and capability to manage the project. The PMOC provided a final Readiness to Enter Engineering Review Report in May 2024. The report indicated the current cost estimate and project schedule are acceptable for a project at this phase of development. The risk and contingency review indicated the current contingency is within the acceptable range at this phase of the Project. Therefore, FTA and the PMOC found that the current cost estimate is reasonable and acceptable for a project at this phase of development.

The VTA's Project Schedule reflects a Revenue Service Date (RSD) of February 28, 2039. The FTA and PMOC's schedule review found the project schedule is sufficient for entry into Engineering. The FTA has determined that the VTA has the management capacity and capability to effectively manage the Engineering phase of the Project. However, during Engineering, the VTA must address all recommendations noted in the FTA's Readiness to Enter Engineering Review Report, which represent risks to the project cost and schedule, including the key items listed below:

- Update the Project Management Plan to reflect project advancement.
- Update the Risk and Contingency Management Plan, the Management Capacity and Capability Plan, the Real Estate Acquisition and Management Plan, the Quality Assurance/Quality Control Plan, the Operations and Maintenance Plan, the Fleet Management Plan, the Safety and Security Management Plan, and Scope documents to address PMOC comments/ recommendations.
- Execute all critical third-party agreements.

**Civil Rights**

Pursuant to the Civil Rights Act of 1964 and its implementing regulations, as well as FTA Circular 4702.1 (Title VI Program Guidelines for FTA Recipients, Part II, Section 114), VTA submitted an updated Title VI program on November 15, 2022. The current program remains effective through January 31, 2026.

VTA's Equal Employment Opportunity Plan was submitted on February 24, 2022. The current program remains effective through April 30, 2026.

VTA's Disadvantaged Business Enterprise program was submitted on March 18, 2021, and was approved by FTA on May 3, 2021. VTA's Project goal was submitted on August 1, 2022, and was approved by FTA on October 18, 2022.

The VTA is required to ensure that the vehicles, stations, and facilities are designed and engineered to ensure compliance with current standards for accessibility under U.S. Department of Transportation regulations implementing the transportation provisions of the

Americans with Disabilities Act of 1990 (ADA). VTA is advised to independently verify manufacturers' claims of ADA compliance, and to consult with FTA's Office of Civil Rights concerning ADA requirements as project construction and implementation progresses.

**Information Collection and Analysis Plan**

Within four months of entry into Engineering, VTA should complete the milestone activities required for the Information Collection and Analysis Plan of the Project, namely the documentation, analysis, and archiving of the predicted physical scope, capital cost, transit service levels, operating and maintenance costs, and ridership. The VTA should coordinate this work, as it is underway, with the FTA Office of Planning and Environment.

The FTA looks forward to working with VTA on the BART Silicon Valley Phase II Extension Project. For any questions, please contact Ms. Jean Mazur, Transportation Program Specialist, at jean.mazur@dot.gov or by phone at (415) 734-9456.

Sincerely,

7/31/2024

X 

Ray Tellis

Signed by: RAYMOND SELVIN TELLIS

Regional Administrator

## Appendix 1. Visual Data: Related Pictures, Graphs and Charts

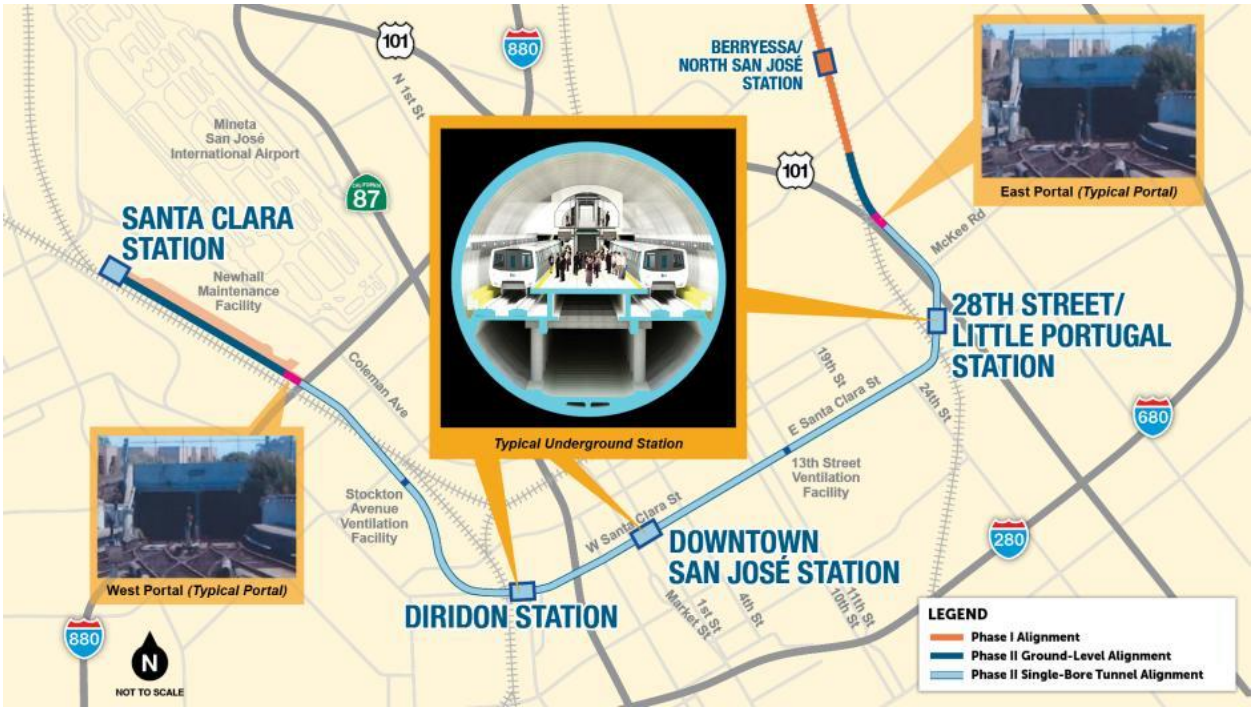



**Figure 1. Proposed Alignment of the BSVII Extension**

| | | FTA P65 Forecast (EPD Letter of Intent) (Oct 2021) | VTA New Starts Basis (Sept 2022) | New Baseline New Starts – Entry to Engineering (Oct 2023) | FTA P65 Forecast - Entry to Engineering (Mar 2024) |
|---|---|---|---|---|---|
| **Cost** | Capital Cost Estimate | $9.148B | $9.318B | $12.237B | $12.746B |
| **Contingency** | Allocated and Unallocated Contingency | $2.653B | $1.729B | $2.878B | $3.119B[1] |
| **Schedule** | Revenue Service Date | June 21, 2034 | March 1, 2033 | October 22, 2036 | February 28, 2039[2] |

| **Project Progress** | | **Amount ($M)** | **Percent of Total** |
|---|---|---|---|
| **Total Expenditures** | Actual cost of all eligible expenditures completed to date[3] | *$1,880.4* | *14.75%* |
| **Planned Value to Date** | Estimated value of work planned to date | N/A | N/A |
| **Actual Value to Date** | Actual value of work completed to date | N/A | N/A |
| **Contract Status** | | **Amount ($M)** | **Percent** |
| **Total Contracts Awarded** | Value of all contracts (design, support, construction, equipment) awarded: % of total value to be awarded | $2,330.6 | N/A |
| **Construction Contracts Awarded** | Value of construction contracts awarded: % of total construction value to be awarded | 0 | 0 |
| **Physical Construction Completed** | Value of physical construction (infrastructure) completed: % of total construction value completed | 0 | 0 |
| **Rolling Stock Vehicle Status** | **Date Awarded** | **No. Ordered** | **No. Delivered** |
| **Heavy Rail Vehicles** | May 2024 | 48 (planned) | 0 |

[1] *Includes $1.657B of Unallocated Contingency.*
[2] *Recommended Revenue Service Date of February 28, 2039, based on the use of 125% of the remaining critical path Stripped and Adjusted Base Schedule (SABS) duration.*
[3] *Includes standard cost categories (SCC) 10, 40, 60, 70 and 80 expenditures in Project Development, reported through December 31, 2025, based on accruals.*
[4] *The PMOC assessment of the current forecast will be deferred until VTA completes their cost savings activity and adopts a project configuration.*
[5] *The PMOC will provide a breakdown of unallocated, allocated and total contingency in future reports.*

**Figure 2. Core Accountability Items**

| Document Title | Revision | |
|---|---|---|
| | No. | Dated |
| Project Management Plan (PMP) | 0.C | April 9, 2021 |
| Management Capacity and Capability Plan (MCCP) | 0.E | April 16, 2021 |
| Risk and Contingency Management Plan (RCMP) | 0.C | April 16, 2021 |
| Quality Management Plan (QMP) | 0.D | April 19, 2021 |
| Real Estate Acquisition Management Plan (RAMP) | 0.B | September 30, 2020 |
| Safety and Security Management Plan (SSMP) | 0.B | April 20, 2021 |
| BART Rail Fleet Management Plan (RFMP) FY2020 to FY2036 | D | September 2019 |
| Third Party Agreement Management Plan | 0.C | April 18, 2021 |
| Project Delivery and Procurement Plan | 0.F | April 16, 2021 |
| Project Implementation Plan | C | September 30, 2020 |

**Figure 3. BSVII Project Management Plan and Sub-Plan Documents for program EPD readiness**

| Document Title | Revision | |
|---|---|---|
| | No. | Dated |
| Project Management Plan (PMP) | 1 | May 1, 2023 |
| Management Capacity and Capability Plan (MCCP) | 1.A | May 1, 2023 |
| Risk and Contingency Management Plan (RCMP) | 0.D | May 22, 2023 |
| Quality Management Plan (QMP) | 2 | May 1, 2023 |
| Real Estate Acquisition Management Plan (RAMP) | 0.C | May 1, 2023 |
| Safety and Security Management Plan (SSMP) | 0.C | May 1, 2023 |
| BART Rail Fleet Management Plan (RFMP) FY2020 to FY2034 | F | February 2023 |
| Third Party Agreement Management Plan | 1 | May 1, 2023 |
| Project Delivery and Procurement Plan | 0.G | May 1, 2023 |
| VTA Bus Fleet Management Plan | 1 | May 2023 |
| VTA LRT Fleet Management Plan | 1 | April 2023 |

**Figure 4. Updated PMP and Sub-Plans submitted to FTA**

| Document Title | Revision | |
|---|---|---|
| | No. | Dated |
| Project Management Plan (PMP) | 2 | December 15, 2023 |
| Management Capacity and Capability Plan (MCCP) | 2 | December 15, 2023 |
| Risk and Contingency Management Plan (RCMP) | B | September 14, 2023 |
| Safety and Security Management Plan (SSMP) | 0.D | December 8, 2023 |
| Real Estate Acquisition Management Plan (RAMP) | 0.C | December 8, 2023 |
| Quality Management Plan (QMP) | 2 | November 1, 2023 |
| VTA 2023 Bus Fleet Management Plan (BFMP) | 1.0 | November 2023 |
| VTA 2023 Light Rail Fleet Management Plan (LRFMP) | 1.0 | April 2023 |
| BART Rail Fleet Management Plan | F | February 2023 |
| Third-Party Agreement Management Plan | 1.0 | November 1, 2023 |
| Project Delivery and Procurement Plan | 0.G | November 1, 2023 |

**Figure 5. Updates to PMP and Sub-Plans submitted to FTA, November 2023**

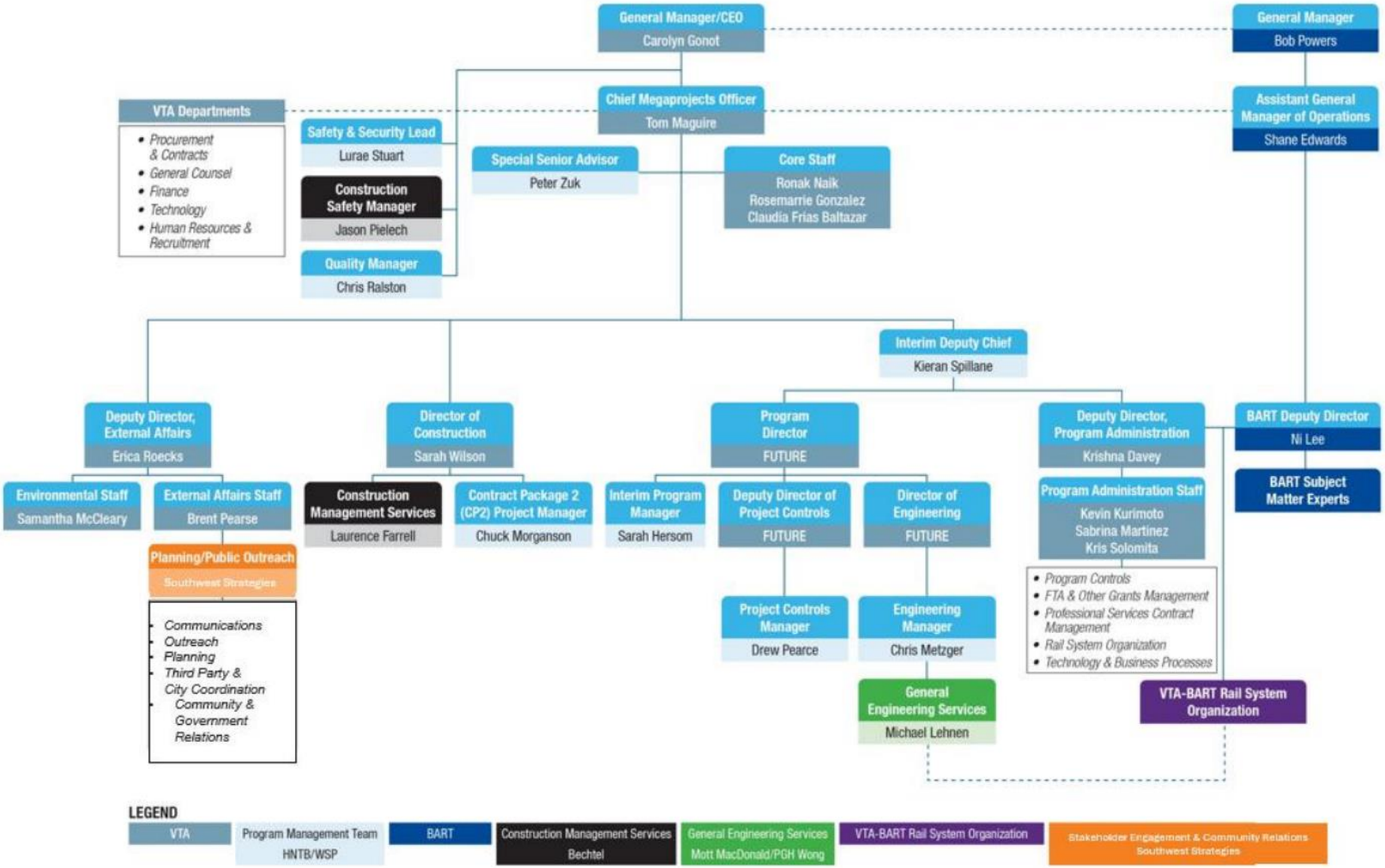



**Figure 6. BSVII Organizational Structure Chart**

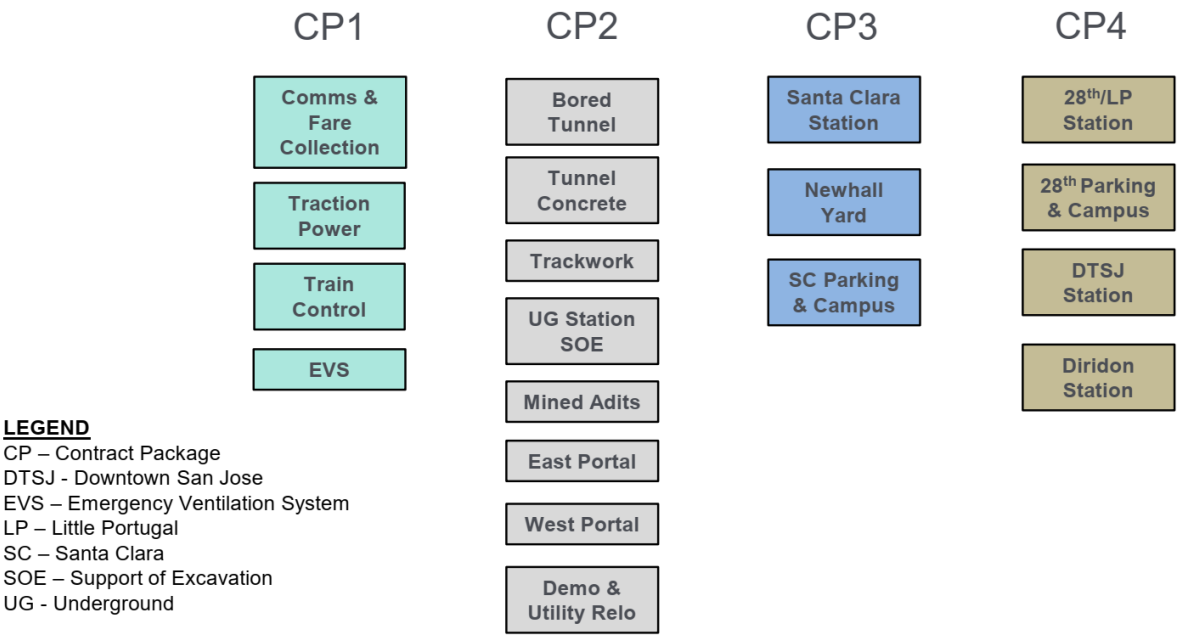



**Figure 7. BSVII Contract Packages**

| Package Number | Construction Contract Package Name | 2022 Delivery Method | 2023 Delivery Method |
|---|---|---|---|
| CP1 | Systems | Design Build | Design-Bid-Build |
| CP2 | Tunnel and Trackwork | Progressive Design Build | Progressive Design Build |
| CP3 | Newhall Yard, Santa Clara Station, and Parking Garage | Design Build | Design-Bid-Build |
| CP4 | Underground Stations | Design Build | Design-Bid-Build |

**Figure 8. Construction Contract Packaging and Delivery Methods**

| Milestones | | Contract Packages | | | |
|---|---|---|---|---|---|
| | | CP1 | CP2 | CP3 | CP4 |
| Request for Qualifications | RFQ Release | 2/26/2021 | 12/29/2020 | 9/13/2021 | 6/29/2021 |
| | SOQ Response | 5/18/2021 | 3/19/2021 | 11/30/2021 | 9/23/2021 |
| | Shortlist | 6/30/2021 | 5/11/2021 | 2/3/2022 | RFQ was cancelled 3/1/2022 |
| Request for Proposals | Pre-Final | 4/15/2022 | 7/19/2021 | 5/20/2022 | |
| | Final | RFP was cancelled 12/31/2022 | 9/24/2021 | RFP was cancelled 12/31/2022 | |
| | RFP Response | | 12/10/2021 | | |

**Figure 9. BSVII Procurement Activity Dates**

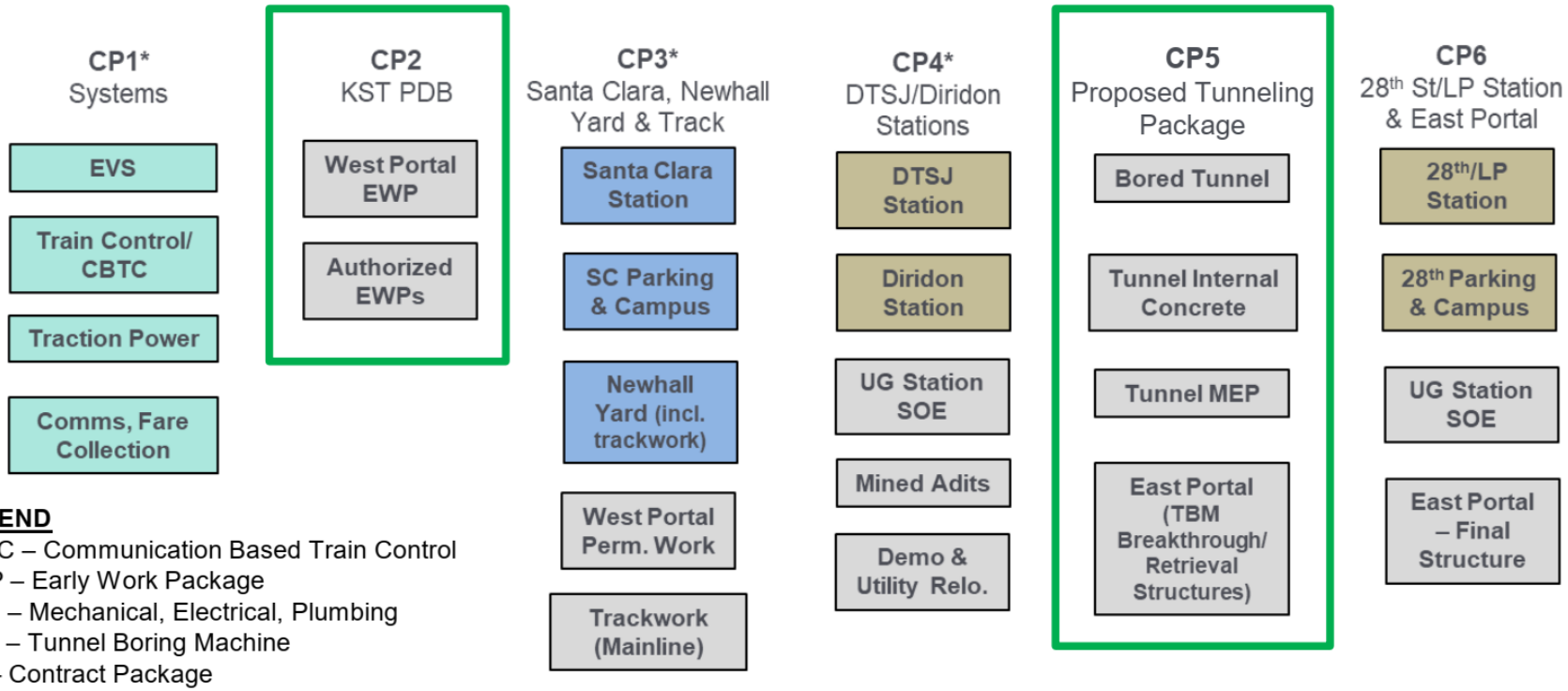



**Figure 10. Preliminary BSVII Re-Packaging Approach**

| | Scenario 1 | Scenario 1a |
|---|---|---|
| **Elements** | | |
| Level 1 Cost Savings | ✓ | ✓ |
| Level 2 Cost Savings | ✓ | ✓ |
| Level 3 Cost Savings | Large Single Bore Tunnel | Concurrent Tunneling |
| New Level 3 Cost Saving Candidates | | |
| Downtown San Jose & Diridon Stations Additional Refinement | ✓ | ✓ |
| Newhall Yard* | ✓ | ✓ |
| **Overall Program Cost** | **$12.1B** | **$12.7B - 13.4B** |
| **Overall Program Schedule** | **Q2 2037** | **Q2 2037** |

** Working on proposal to be presented to VTA and BART General Managers for approval in the near future*

**Figure 11. Costs Savings Scenarios presented at September 2025 meeting**

| PROJECT ACQUISITION STATUS | | | | | | | | | | Report Period: Dec 2025 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Status of "Parcels in Acquisition Process" | | | | | | Relocation **** | |
| Description | Total | Possession Obtained | In Acquisition Process | Eminent Domain Actions Filed *** | Board Adoption of RON | Offers Made | Appraisal Process Completed | Legals and Plats Approved | Pending Legals and Plats | Required | Completed |
| **SUMMARY OF REQUIRED TAKES** | | | | | | | | | | | |
| **Total Parcels:** * | *75* | *38* | *37* | *14* | *2* | *6* | *0* | *2* | *13* | *37* | *23* |
| **Type of Take: Quantity** | | | | | | | | | | | |
| BPE ** & Other Takes: | *4* | | *4* | *1* | | *2* | | | *1* | *3* | |
| Full Fee: | *9* | *8* | *1* | | | | | | *1* | *15* | *11* |
| Other Multiple Takes (Easement/Fee): | *3* | *1* | *2* | | | *1* | | | *1* | *15* | *12* |
| Tunnel Easement: | *45* | *25* | *20* | *13* | *1* | *1* | | *2* | *3* | | |
| Roadway Easement: | *3* | | *3* | | | | | | *3* | | |
| Utility Easement: | *4* | | *4* | | | | | | *4* | | |
| Temporary Construction Easement: | *7* | *4* | *3* | | *1* | *2* | | | | *4* | |

* Six Building Protective Easements were removed due to elimination of DTSJ Secondary HH; pending Property Protection Study report
** BPE: Building Protective Easements – Parcels have additional acquisitions, such as Tieback Easement
*** Total includes two parcels removed from the elimination of DTSJ Secondary HH
**** Represents total tenants not parcels

**Figure 12. Project Acquisition Status**

| UTILITIES RELOCATION STATUS | | Report Period: Dec - 2025 |
|---|---|---|
| Location | Relocations Design | Relocations In Construction |
| OWNER LED RELOCATIONS | | |
| West Portal / NHY / SCS | 7 | 4 |
| Diridon Station | 8 | 7 |
| Downtown San José Station | 4 | 4 |
| 28th Street / Little Portugal Station | 7 | 0 |
| East Portal | 5 | 0 |
| **Sub Total** | **31** | **15** |
| CONTRACTOR LED RELOCATIONS | | |
| West Portal / NHY / SCS | 3 | 0 |
| Diridon Station | 3 | 0 |
| Downtown San José Station | 0 | 0 |
| 28th Street / Little Portugal Station | 3 | 0 |
| East Portal | 2 | 0 |
| **Sub Total** | **11** | **0** |
| **Total** | **42** | **15** |

**Figure 13. Summary of Utility Relocation Design and Construction Progress**

| VTA BART Silicon Valley Program, Phase II | | | | | Report Period | Dec-25 |
|---|---|---|---|---|---|---|
| **Cost Report by Standard Cost Category** *($ in millions)* | | | | | Report Date | 30-Jan-26 |
| | | | | | | |
| **Standard Cost Category Description** | | **Estimate [1] (A)** | **Forecast @ Completion (B)** | **Variance (C)=(B)-(A)** | **Incurred To Date [2] (D)** | **Incurred This Period [3] (E)** |
| | | | | | | |
| 10 | Guideway and Track Elements | $2,899.80 | $3,041.50 | $141.70 | $361.50 | $29.00 |
| 20 | Stations, Stops, Terminals, Intermodal | $2,037.20 | $2,037.20 | $0.00 | $ - | $ - |
| 30 | Support Facilities, Yards, Shops, Admin. Bldgs. | $352.20 | $352.20 | $0.00 | $ - | $ - |
| 40 | Sitework and Special Conditions | $582.50 | $709.90 | $127.40 | $167.00 | $4.60 |
| 50 | Systems | $1,409.00 | $1,409.00 | $0.00 | $ - | $ - |
| 60 | ROW, Land and Existing Improvements | $240.50 | $240.50 | $0.00 | $129.90 | $0.30 |
| 70 | Vehicles [3] | $204.80 | $173.70 | ($31.10) | $82.50 | $17.50 |
| 80 | Professional Services | $2,972.50 | $3,043.70 | $71.20 | $1,106.90 | $17.50 |
| 90 | Unallocated Contingency | $1,657.10 | $1,316.80 | ($340.30) | $ - | $ - |
| 100 | Finance charges | $390.00 | $390.00 | $0.00 | $ - | $ - |
| **Total** | | **$12,745.60** | **$12,714.50** | **($31.10)** | **$1,847.80** | **$68.90** |

Cost is rounded to hundredth thousands of millions

[1] Data excludes FTA ineligibles/revised cashflow projections

[2] Actuals this period reflects paid amounts from SAP during this reporting period and may include multiple invoices for an entity

[3] SCC 70 current estimate will be updated to reflect the revised commitments in the upcoming reporting periods

**Figure 14. Cost and Expenditures**

| VTA's BART Silicon Valley Program, Phase II | | | | Report Period | Jan-2026 |
|---|---|---|---|---|---|
| **Funding Status Report** ($ in millions) | | | | Report Date | 2/4/2026 |
| **Funding Program Description** | **Amount** | **Status** | **Notes** | | |
| **Federal Grant** | | | | | |
| FTA Capital Investment Grant | $ 5,098.0 | In progress | Maximum of $5.1B or 40% of the estimate developed in concert with FTA/PMOC's pre-FFGA risk assessment. | | |
| **State / Regional Grant** * | | | | | |
| Transit and Intercity Rail Capital Program (Cycle 2, 3) | $ 750.0 | Completed | Program Supplement Agreement to the TIRCP Master Agreement executed in June 2025 with CTC for $258.36 M. Drawdown complete in July 2025. | | |
| Transit and Intercity Rail Capital Program (Cycle 6) | $ 375.0 | Completed | State budget surplus. | | |
| CA Senate Bill 125 (TIRCP, State Budget Surplus) | $ 375.0 | Completed | State budget surplus SB 125; BSVII on approved project list (Aug 30, 2024). MTC committed these funds to the project through adoption of Resolutions 4537, the Major Project Advancement Policy, and Resolution 4130, which includes TIRCP Endorsement Framework. | | |
| Regional Measure 3 | $ 375.0 | Completed | VTA has initiated discussions with MTC for drawdown of RM3 funds. Formal documents for the drawdown are expected to be submitted in 2Q2026 | | |
| Solutions for Congested Corridor Program | $ 75.0 | Completed | CTC action anticipated in March 2026 to authorize VTA to begin spending the funds. | | |
| Local Partnership Program | $ 25.0 | Completed | CTC action anticipated in March 2026 to authorize VTA to begin spending the funds. | | |
| Others | TBD | In progress | VTA continues to explore other state / regional funding sources | | |
| **Local Measures** ** | | | | | |
| 2000 Measure A | $ 2,465.0 | Completed | The estimate is subject to change; VTA Board action approved in Jun 2024, limits the use of 2000 Measure A funding to specific projects, committing the remaining funding to BSVII. | | |
| 2016 Measure B | $ 2,462.0 | Completed | The estimate is subject to change; VTA Board action is pending upon finalization of value engineering & updated cost estimation, as well as identfication of new funding committed to BSVII. Per the ballot language, funding allocated to BSVII is estimated at $1.5 Billion of Program Tax Revenues in 2017 dollars, capped at a maximum of 25% of all Program Tax Revenues. The YOE value shown here assumes a 23.8% share of 2016 Measure B Program Tax Revenues for BSVII. | | |
| **Total*** | **$ 12,000.0** | | | | |

Additional Notes:

The table shows contributions to the capital improvement program for the project. Operating assistance is not reported here.

* While the funding is committed to the Project, formal agreement between VTA and State or Regional funding partners is dependent on approval or receipt of FFGA; all of these funding sources are contingent upon the FFGA except for the pre-approved $258M in TIRCP (Cycle 2, 3), SCCP/LPP Grants, RM3, 2000 Measure A, and 2016 Measure B

**Reflects amount identified to date. Includes amount ($6.902 B)committed to date where the status is "Completed".

**Figure 15. Project Funding Status**

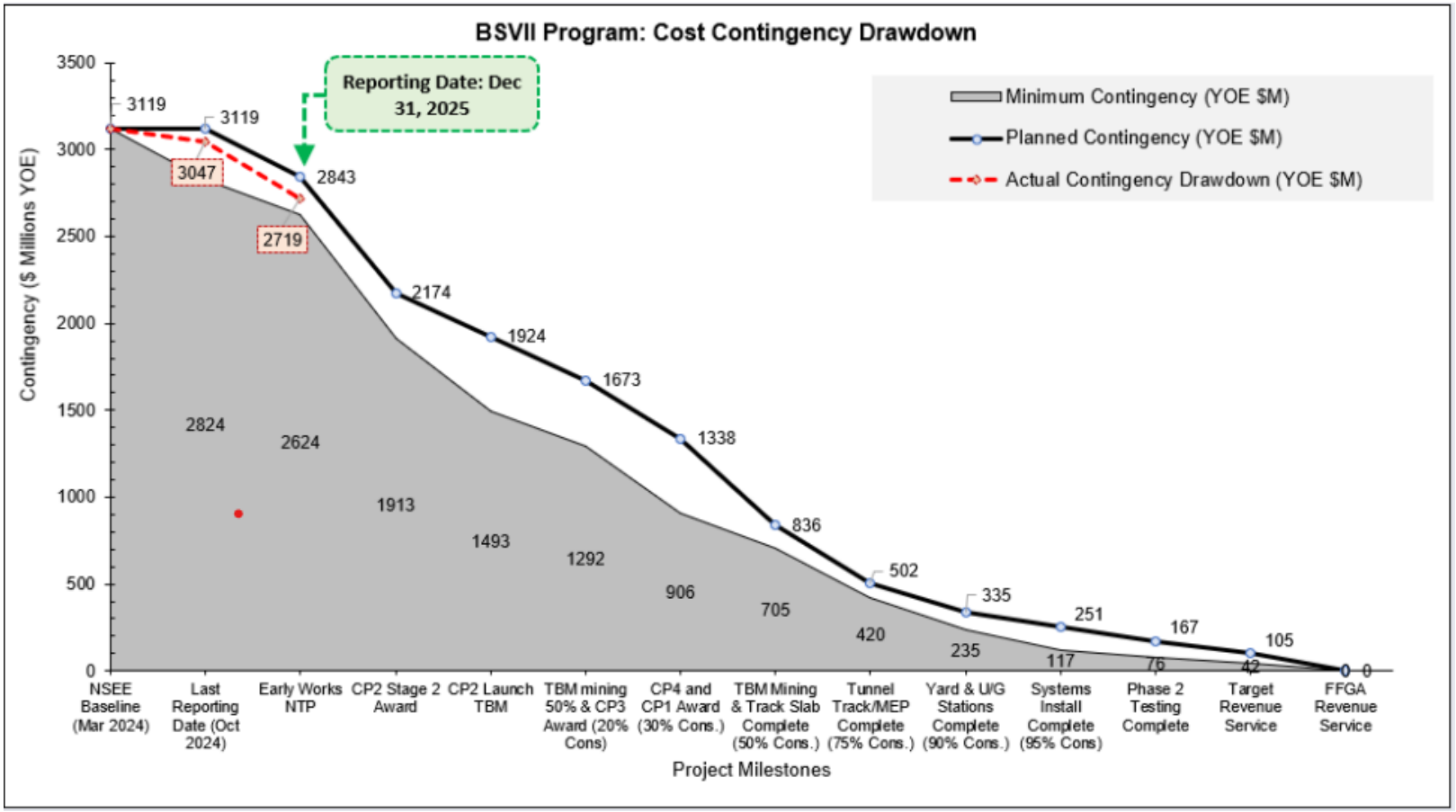



**Figure 16. Cost Contingency Drawdown Curve**

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## Appendix 2. Action Items for this reporting period

| Item | | Responsible Party | Date | | | Status / Action Required |
|---|---|---|---|---|---|---|
| No. | Description | | Identified | Due | Complete | |
| 155 | Notify PMOC when EWPs are executed | VTA | 2/8/2024 | *2/12/2026* | | ***In-Progress*** *1/22/2026 – VTA updated PMOC about latest status of EWPs* |
| *175* | *Provide a list of Request for Variances pertaining to system safety and security* | *VTA* | *10/10/2024* | *2/12/2026* | | ***In-Progress*** *VTA to provide as the RFVs are approved* |
| *192* | *Set up a meeting with PMOC to discuss Program Management Procurement.* | *VTA* | *6/12/2025* | *2/12/2026* | | ***Open*** |
| *193* | *Provide detailed organization charts for BSVII.* | *VTA* | *6/12/2025* | *2/12/2026* | | ***Open*** |
| *200* | *Provide Addendum to the Program Management Proposal* | *VTA* | *12/11/2025* | *2/12/2026* | | ***Open*** |
| *203* | *Set up a meeting to review current design issues* | *VTA* | *1/22/2026* | *2/12/2026* | | ***Open*** |
| *204* | *Provide TBM Operations and Maintenance documents when available* | *VTA* | *1/22/2026* | *TBD* | | ***Open*** |
| *205* | *Set up a focus meeting on risk assessment of pre-tunneling activities* | *VTA* | *2/12/2026* | | | ***Open*** |

## Appendix 3. VTA BSVII Peer Review Final Report

Santa Clara Valley Transportation Authority

**MEMORANDUM**

**FROM:** Chief Capital Megaprojects Delivery Officer, Tom Maguire

**DATE:** October 6, 2025

**SUBJECT:** BART Silicon Valley Phase II Peer Review – Final Report

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**BACKGROUND:**

The Federal Transit Administration (FTA) accepted VTA's BART Silicon Valley Phase II Extension (BSVII) into New Starts Engineering (NSE) in August 2024 and indicated a maximum contribution from FTA's Capital Investment Grant Program of approximately $5.1 billion (40 percent of the $12.745 NSE Estimate). Since that time, VTA has focused on a comprehensive project wide cost saving effort to align project costs within available funding, including the development of cost saving concepts, pursuit of additional non-local funding sources, and review of the project contracting and procurement approach.

VTA invited industry expert peers recommended by FTA, and FTA's Project Management Oversight Consultant (PMOC), to an August 20, 2025 Peer Review to review and evaluate feasibility, constructability, contract packaging, and delivery approaches, related to specific project scenarios. These scenarios incorporate the multiple cost saving ideas developed over the last year and reflect updates to contract packaging approaches, including work related to tunnel construction. The panel consisted of project delivery executives from peer public agencies, including LA Metro and Sound Transit who provided their input and feedback based on their respective experiences delivering transportation infrastructure projects. Key findings from the Peer Review will be presented at the October VTA Board BSVII Oversight Committee.

The peer review panel provided the attached report (Attachment A), which summarizes their evaluation of Scenarios 1 and 1a developed through the cost saving effort, provides independent perspective on Value Engineering (VE) ideas, provides recommendations for contract re-packaging and delivery methods, and also identifies outstanding risks for future evaluation as the project advances towards construction.

Staff is available to further discuss or respond to any follow-up questions as necessary.

**BART Silicon Valley Phase II Extension**
**Independent Peer Review**

**Final Report**

**September 25, 2025**

Peer Review Panel
Rick Clarke, LA Metro (Retired)
Joseph Gildner, Sound Transit
Anthony Pooley, Sound Transit
Mat Antonelli, LA Metro
Kimberly Ong, LA Metro

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## EXECUTIVE SUMMARY

The Valley Transportation Authority (VTA) conducted a peer review to review and assess the BART Silicon Valley Phase II Extension (BSVII) Project (the Project). The Project is a six-mile extension (mostly underground) with an estimated overall cost of approximately $12 billion. This Project will extend BART service into downtown San Jose and Santa Clara. In conjunction with Caltrain, the Project will allow high-level rail transit service to "ring the bay" highlighting the regional significance of the Project.

VTA, with the support of Federal Transit Administration (FTA) and their project management oversight consultant are contributing to this peer review. FTA will give due consideration to the peer panel recommendations in this report.

These sponsors are seeking independent perspectives on VTA's current Value Engineering efforts to bring the Project's scope and budget into alignment. VTA and FTA are inviting experienced staff from other transit agencies to provide feedback on the feasibility, constructability, contract packaging and delivery of the Project configuration. The focus is on the VTA's cost savings work that started in 2024 and aligning it with the Project's available funding including VTA's ongoing work with the FTA towards receipt of a Full Funding Grant Agreement (FFGA).

The peer review was conducted on August 19 with a project tour and August 20, 2025, with an all-day presentation of project information, questions and input from VTA and FTA. The peer review team continued interactions with VTA and FTA after these meetings. The VTA team was thorough and transparent in providing information.

The members of the peer review team are:

- Joe Gildner, Sound Transit
- Anthony Pooley, Sound Transit
- Mat Antonelli, LA Metro
- Kimberly Ong, LA Metro
- Rick Clarke, LA Metro (retired)

The peer review's scope and efforts assumed consistency with the basic Project configuration including alignment, station locations and fundamental decisions made in the past such as using a large, single bore tunnel. Re-opening any project configuration elements risks major Project delays for elements that have previously been studied in separate efforts.

The peer review panel reviewed a number of key areas including:

- Scenario 1 vs. Scenario 1A
- Independent perspective on VE efforts to bring the scope and budget into alignment
- Contract Packaging
- Risk

The Project is at a crossroads as VTA is rethinking its longstanding plan to deliver the extension. VTA and its progressive design-builder (Kiewit Shea Traylor – KST) for baseline Contract Package 2 – Tunnel and Trackwork (CP2) were unable to come to terms for construction of this package. VTA has elected to take an off-ramp and re-package the bulk of the scope of work of CP2 into different contract packages for this extension.

One of the early, completed tasks by KST was the procurement of a large diameter tunnel boring machine (TBM). The off-ramp with KST will likely now assign the risk of TBM performance and warranty to VTA. The peer review believes that this is the most significant project risk as TBM performance is critical to the project schedule including potential delays to follow-on contractors. The TBM supplier – Herrenknecht – has an excellent reputation for producing quality equipment, however, given the large diameter bore and difficult ground conditions, production problems that affect the schedule are possible, potentially resulting in VTA needing to bear the cost and schedule impacts of performance challenges.

In addition to procuring a quality TBM, the most effective mitigation for this risk is to select a contractor with deep experience in the operation of a large diameter TBM. Such specialized experience is not widespread in the construction industry and availability of qualified contractors could be an issue. As VTA goes through the formal off-ramp process, it may be worthwhile to engage with the KST team or major components of that team (to the extent contractually allowable) who specialize in tunneling to ascertain their interest in taking on the revised tunneling contract scope at a reasonable price. The re-packaging being considered by VTA does include a tunnel-specific contract (CP5) that may be appropriate for the contractors with focused skills related to tunneling.

The Project has recently commenced a significant amount of construction developing the west portal area using a CP2 early works contract with the progressive design-builder. This construction provides the Project with very positive momentum that must be sustained. However, it is a long, complicated Project with many risks along the way.

Given the Project's large size and complexity, there is no "silver" bullet that will quickly and easily bring and maintain the Project into budget and schedule alignment. However, there are several actions and considerations that the peer review panel can offer VTA based on their individual and collective experience. The project management approaches offered by

the peer review panel or those implemented by VTA are not necessarily right or wrong. More importantly is that effective management and best practices are applied to each facet of the Project to assure success.

**Scenario 1 vs. Scenario 1A**

General comments on Scenario 1

The broad aim of Scenario 1 is to complete the Project with a configuration generally consistent with the current Baseline. Scenario 1 makes adjustments to the Baseline to address the off ramping of KST from the CP2 contract, affordability gaps and the risk of delay caused by the CP2 off-ramp.

Scenario 1 has the advantage of requiring relatively little redesign and reconfiguration. Any alternative scenario (including Scenario 1A) would require considerably more new design work, thereby increasing the risk of overall project delay. Attempting to mitigate potential delays in an alternative scenario by using a Progressive Design Build procurement would run the risk of repeating the experience of CP2 and is not recommended.

Comments on Specific Aspects of Scenario 1

1. *Cost Saving Measures*: the proposed Level 1 and Level 2 cost savings measures and station refinements appear reasonable, offering measurable cost reductions while preserving the overall scope, intent and configuration of the Project.
2. *Newhall Yard Scope Refinements*: the proposed Yard refinements also offer cost savings but have yet to be accepted by BART (several press articles on BART's apparent rejection of the Yard refinements were published on August 26th, 2025). Achieving concurrence between BART and VTA on this subject needs to be a priority for the project to proceed successfully. It is recommended that VTA and BART continue to collaborate and study the optimal storage and maintenance needs at Newhall.
3. *Increased TBM Advance Rate*: Scenario 1 increases the assumed daily TBM advance rate by 21% from the baseline 29 ft/day to 35 ft/day. Additionally, the TBM is assumed to mine 6 days/week rather than the baseline 5 days/week. The combined effects of the two changes result in a 44% increase in the planned weekly production.

   The assumed increases are not unreasonable, and VTA has provided data from comparable projects to demonstrate this. Nevertheless, increasing the planned TBM advance rate at this early stage with no contractor buy-in optimizes the

schedule, increasing the overall schedule risk.

Factors to consider:

- TBM operations in the USA typically run 2 x 10-hour shifts, 5 days per week. Internationally 3 x 8-hour shifts, 7 days per week is not uncommon, with parts of at least one shift daily being dedicated to routine maintenance and resupply.
- Increasing to 7-day, 3-shift working would offset the schedule risk introduced by increasing the weekly production rate.
- The peer review team recommends that VTA staff discuss with responsible Herrenknecht representatives this option of extended weekly TBM operations in conjunction with their comprehensive machine maintenance recommendations. This crosswalk should result in an optimal schedule for TBM production combined with required maintenance intervals.
- Running a 53ft diameter TBM continuously is economically prudent, because it is an unusually expensive piece of equipment, making standing time a significant expense.
- Availability of labor is already identified as a "Top 10" project risk (BSV-036). Increasing the proposed TBM working hours increases this risk. Nevertheless, it would be easier to increase labor on one TBM than to try and set up an entire second TBM operation, as proposed in Scenario 1A.
- The challenging ground conditions and low overburden (1.5 diameters) will make it more difficult to achieve an optimized planned TBM advance rate. It is recommended that this aspect of TBM operations be studied and considered further. Furthermore, VTA should consider conferring with key personnel that worked on SR 99, Alaska Way Viaduct in Washington state – SR 99 Bored Tunnel Design-Build Project to identify key lessons learned to incorporate into the contract documents optimize large diameter TBM performance and minimize potential risks associated with excessive surface and near surface ground settlement.

4. *CP 5 Contract Procurement*: the proposed CP5 package focuses on tunneling, removing the station excavation elements. The result is a smaller, less risky contract, likely to be more appealing to tunnel contractors than the previous CP2 contract. The proposed procurement timeline is reasonable (approximately 18 months).

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Factors to consider:

- VTA is proposing to procure CP5 as a CM/GC contract with a fixed price on the tunneling element. Given the circumstances in which the contract is being procured combined with the fact that the tunneling element is the largest cost component, VTA may find it difficult to obtain a fixed price commitment from a contractor. Industry outreach should be carried out to assess the viability of this approach versus proceeding with a design-bid-build delivery (it may already have been done). The use of targeted, shared risk pools may also help in this regard (see below).
- If any contractor other than Kiewit, Shea or Traylor (or some combination of these firms) operates the TBM procured by KST, VTA is likely to carry an owner-implied warranty for the TBM's performance. This is potentially a very significant risk. VTA should consider carefully how it would structure and manage such a contract to mitigate the risk. VTA should be prepared that the contractor selected will not take any responsibility for the TBM's performance.
- The risk presented by an owner-implied warranty on the TBM is increased by the combination of large TBM diameter, soft ground conditions and limited overburden. Potential events such as ground loss, mechanical failure or tunneling-induced settlement would likely be characterized by contractors as being the result of TBM design/performance issues.
- To avoid the potential risk of an owner-implied warranty, VTA should consider whether it has any means of negotiating a contract with one or more of the existing KST JV members before embarking on an open procurement.
- Given the reliance on the single TBM, VTA should consider having appropriate staff from Herrenknecht to serve on the construction management team throughout the time period of TBM operations. This staff can provide the necessary analysis/assessment of the machine and advise on proper maintenance during this timeframe.

5. *Risk/Cost Management in CP5 Contract*: one way of managing risk, reducing bid price and making the CP5 contract more appealing to potential bidders would be the targeted use of contingency sums (risk pools). Areas to consider for such an approach would be Differing Site Conditions and building damage due to tunneling. VTA might also consider the use of performance incentives.

General Comments on Scenario 1A

The broad aim of Scenario 1A is to provide an alternative configuration for the Project that would result in a more affordable outcome that could be completed within the existing schedule timeframes. Based on the information presented in the briefing document, it is not apparent that Scenario 1A would achieve these aims any more effectively than Scenario 1.

- *Cost*: Scenario 1A does not appear to offer cost savings compared with Scenario 1. In fact, the ROM costs provided to the peer review team show the opposite: Scenario 1A would be 7% more expensive than Scenario 1. The figures should not be regarded as authoritative, since they are based on ROM costs.
- *Schedule*: Scenario 1A does not appear to show any schedule benefit compared with Scenario 1. Both result in a 2039 opening date, and both show TBM tunneling as critical until 2033. Under Scenario 1A the critical path shifts to the smaller TBM once the larger one completes its drive.
- *New Risks*: Scenario 1A introduces new risks to the project and exacerbates others, as explained below. Taking these as a whole, Scenario 1A is a riskier configuration than Scenario 1, from a construction perspective.

For these reasons, Scenario 1A does not appear to offer a more viable chance of delivering a successful Project outcome than Scenario 1.

Disadvantages and Risks of Scenario 1A

Scenario 1A has several key disadvantages, introduces several new risks and exacerbates some existing risks already identified as "Top 10" risk items.

1. *Cut & Cover in Downtown Area*: the proposed meeting point of the two TBMs is a cut & cover box east of the Downtown Station. Such an excavation explicitly defeats a key intent of utilizing a large diameter single bore, namely avoiding cut & cover excavations in the Downtown area. Proposing this approach is likely to meet with 3rd party stakeholders and public resistance, increasing the risk of delay to the Project schedule.
2. *Procurement of a 2nd Large Diameter TBM*: procurement of a second large diameter TBM in a buoyant global tunneling market adds a new schedule risk to the project, because there is a reasonable chance that delivery of the 2nd TBM could be delayed,

resulting in an overall project delay (the latter stage of the smaller TBM drive is on the critical path). This risk could be mitigated by moving swiftly to procure the 2nd TBM (new or used). The Peer Review team recommends that the VTA staff and its consultants document their industry outreach efforts to review and assess the key risks associated with this scenario of utilizing a 2nd large diameter TBM.

3. *Availability of Specialist Skilled TBM Personnel*: availability of general labor is already identified as a "Top 10" project risk (risk register item BSV-036). Operation and management of TBM mining operations require specialized, skilled, experienced labor and engineers. The Project requires operation of a very large diameter TBM in difficult and variable hydro-geologic conditions with less than two diameters of overburden. Successful completion of such a drive will require the industry's most skilled and experienced TBM operators and tunnel frontline supervisors, with documented successful experience overseeing the operations of similar-sized machines. In the judgement of this peer review team the worldwide availability of these highly skilled personnel are very limited.

   The addition of a second large diameter TBM to the Project increases the existing risk that an insufficient number of skilled TBM personnel will be available for the Project. If the skill pool of the TBM operation is diluted in this way, the risk of operational errors also increases. This in turn leads to an increased risk of unanticipated tunneling-induced settlement on both drives, which is already a Top 10 risk (BSV-005).

4. *Availability of trucks for muck disposal*: the availability of sufficient trucks to support spoil disposal for the currently proposed large single bore is a "Top 10" risk (BSV-152). Addition of a second concurrent TBM drive would require an increase in the number of available trucks, sufficient to support both TBM drives plus simultaneous excavations at four station sites.

5. *Optimistic TBM Advance Rate*: the assumed daily advance rate for the smaller 40-ft diameter TBM has been assumed to be 37ft/day, greater than the 35ft/day assumed for the 53-ft diameter TBM. While this is not unreasonable, it is edging into optimistic territory. Without this assumption the Scenario 1A schedule would be longer than Scenario 1. This adds an element of risk to the Scenario 1A schedule.

Possible Advantages of Scenario 1A

1. The smaller diameter TBM would reduce the risk of ground settlement along the eastern portion of the alignment, because of the anticipated smaller volume loss and the greater depth of overburden to the tunnel crown.

2. In the event of one TBM breaking down, the other would still be mining, enabling some progress to be maintained. However, this is not a real advantage, since both TBMs have to complete their drives for the project to be completed. If the smaller TBM broke down, the larger could continue to mine eastward. The same is not true for the smaller TBM.

Follow-Up Actions for Scenario 1A

1. Review ROM cost data and assess its reliability.
2. If Scenario 1A is considered further, consider eliminating the cut & cover meet-up point for the two TBMs. Instead, complete the large drive (CP-5), dismantle the TBM within the tunnel, treat the tunnel face and drive the smaller TBM into the completed larger tunnel. This has the advantage of eliminating an open excavation in the Downtown area. However, it would have the disadvantage of making completion of the smaller drive dependent on prior successful completion of the larger, adding a critical risk to the overall schedule.

Further Considerations for Scenario 1A

1. If Scenario 1A is not viable, another, less expensive way of reducing schedule risk, saving time and ensuring the required 35 ft/day TBM advance rate is met would be to utilize a 24/7 TBM operating schedule. Such schedules are common outside the USA. While a 20-hrs, 5 days per week schedule may be appropriate for smaller TBMs, it seems wasteful to have a 53ft TBM operating for only 60% of the available hours per week. The peer review team recommends that VTA staff discuss with responsible Herrenknecht representatives this option of extended weekly TBM operations in conjunction with their comprehensive machine maintenance recommendations. This crosswalk should result in an optimal schedule for TBM production combined with required maintenance intervals.

**Independent perspective on Value Engineering (VE) efforts to bring the scope and budget into alignment**

The VTA staff and their consultants have identified and implemented a series of VE changes that have significantly reduced costs. Although it is not a direct comparison, the estimated cost for Scenario 1, which includes the VE savings, is $12.123 billion (Source: Table 7) compared to the baseline cost of $12.746 billion (Source: Table 2).

Some of the significant savings' categories include:

- Re-arrangement of various station access and egress shafts to optimize underground structures in stations.
- Minimize basement and underground support structures.
- Moving many Station Infrastructure Facilities (SIF) structures to surface.
- Converting two parking garages to surface parking.
- Reducing size of the Newhall storage yard and eliminating the maintenance facility
- Tunnel interior reconfiguration
- Various modifications to systems elements.

This report previously noted that BART has taken exception to proposed reductions in the Newhall maintenance facility and storage yard. It is important to resolve this issue quickly as it is a major scope and cost item. A joint review of the BART's operations and maintenance needs at Newhall is recommended.

Additional Potential Savings

As the VE elements listed above are implemented, it will become increasingly difficult to identify any additional savings without violating the basic project definition. The team should continue to search for these savings, however, but as the project advances, it will soon reach a point of diminishing returns.

Opportunities for cost savings are more likely to be in risk reduction during both the bidding stage and thereafter. The Project will soon be moving into a period of contractor bidding for several major contracts. These savings are difficult to quantify but offer the potential for significant cost savings if contractors reduce the amount of costs in their bids that they have set aside for risks.

Some of these opportunities are:

- Assure that any identified VE items are formally approved by BART prior to bidding. If bidders are not confident that BART supports the Project configuration, they will add contingency in their bid. A jointly signed correspondence between VTA and BART listing the agreed upon VE elements should address any concerns from bidders.
- A strong working relationship between VTA and BART appears to be a priority of both organizations. This is critical to the success of the project. The peer review

encourages VTA and BART to continue efforts to maintain this relationship given the challenges of such a long and complex project.

- Build bidders confidence that VTA is a strong organization that will work fairly with contractors and work proactively to resolve disputes in an equitable manner. VTA's inclusion of a Disputes Review Board on its tunnel contract and possibly other contracts is a strong signal to the industry of its desire to work to avoid disputes before they become claims.
- One-on-One meetings to hear contractor input and build trust. This includes continued discussions with heavy civil underground contractors and systems contractors and starting discussions with vertical contractors for station finishes, and rail works contractors.
- Consider the identification of "owner-controlled" float in the Project's baseline master schedule. This float should include a minimum of six months of owner-controlled float at the back end of the master schedule ahead of the planned Revenue Service Date. And, for all critical interface milestone dates between lead- and follow-on-contractors, instruct the lead contractor to include an appropriate amount of owner-controlled float (at least 30 calendar days) ahead of the date.
- Consider incentives – since the Project schedule is so dependent of the performance of the tunnel boring, an incentive tied to TBM performance can motivate a contractor to meet or exceed this milestone.
- Consider shared incentive pool or shared contingency as Caltrain successfully implemented on their electrification project. A shared contingency arrangement could persuade a contractor not to mark up or escalate their costs for additional profit for any changes with merit.
- Consider risk sharing for certain items such as inflation and adjustment clauses for specific commodities/material pricing. For example, if the contractor has all the inflation risk, they will add a significant premium in their bid and VTA will be paying for this regardless of whether it occurs or not. Another area that could be considered is a shared risk pool for unforeseen ground conditions – a frequent area for risk and disputes. There may be other opportunities for risk sharing. One-on-one meetings with contractors may identify these areas.
- Consider requiring certain contracts to include "cost of delay" in their price bid as LA Metro does. With so many contracts, the potential for delays on certain contracts is high. This would give VTA more certainty about the cost of a delay,

provide bidders with some level of confidence that their cost would be covered and would be a mitigation for potential future complex legal disputes regarding the legitimate cost of delays.

- The estimated professional services cost of approximately $3 billion seems high. This number may be correct, especially as professional services costs have been incurred as far back as 2016. Also, the pool of owner-controlled insurance reserves of approximately $250 million is included in this amount. However, given the high number, there may be opportunities for savings. Suggest VTA periodically reviews the bottoms up cost estimate and burn rate to see if any reductions are possible. VTA could use Phase 1 of the Berryessa extension project as a comparison baseline.
- The criteria for maximum one-half inch maximum settlement is very stringent. This criteria is used on other projects. However, these projects are using smaller diameter tunnel boring machines. VTA may consider performing an engineering analysis that evaluates a less stringent criterion.

**Proposed Re-Packaged Contract Packaging**

Systems – CP1-A Through CP1-E

The consideration to break out the Systems contract into separate packages appears to be driven by the lack of bidders when Contract CP1 was presented to the industry as a Design-Build contract and it appears in part due to the forecasted cost of CP1 exceeding $1billion. In response to this, the single large Systems contract is proposed to be split into five systems contracts, with Contract CP1A as the main systems contract and is now envisioned to be a Design Bid Build contract. It is understood that the CP1A Systems Installation and Testing contract also includes systems integration and would be required to coordinate the other four specialty Systems contracts, CP1B through CP1E, which includes Emergency Ventilation System, Train Control/CBTC, Traction Power, and Communications/Fare Collection.

Having the systems work separately from the major civil/structural contracts is a good approach. VTA and BART will overall be likely to receive better products and installation from a contractor experienced in this specialized work. However, experience has shown that having all systems work in one single contract package is especially beneficial for systems integration and interfaces. Since it appears that the industry was presented with and not receptive to a Design-Build (DB) contract approach, the industry may be receptive to other procurement methods with a single systems contract such CM/GC. Experience has shown that having the systems contractor early to help with specialist procurements,

such as with a CM/GC contract, can reduce integration risk. Should the approach to have the Contract CP1A proceed along with four separate specialty systems contracts, then contract requirements should be clear on the integration requirements and contract interfaces to reduce risk to VTA.

Recommendations:

- Since VTA is now approaching the Systems contract as DBB instead of DB, consider presenting the Systems contract as one DBB contract to the industry and receptiveness to potential bidders
- Consideration for one Systems CM/GC contract, which would reduce integration risk and difficulties administering all the required warranty provisions. If VTA pursues a CM/GC contract, then VTA should establish a preconstruction contract with a start date that overlaps with the CM/GC station finishes preconstruction contract. It is crucially important to have all CM/GC contractors collaborating with VTA staff and their consultants as the designs progress in conjunction with estimating/negotiating full contract pricing.
- Should VTA pursue separate systems contracts, then the following considerations:
    - Systems integration appears to be a risk with this approach, so having a well experienced integrator over all systems contracts will be essential. The Systems integrator be brought on early to help with specialist procurements.
    - VTA should consider bringing in a high-level Systems Manager early to provide overall management and coordination of the significant systems integration efforts that VTA will be responsible. This Systems Manager should be given the opportunity to adjust the final systems contract packaging approach.
    - Specialty systems contractors' availability early on to coordinate with the CP1A systems integrator.
    - Provide sufficient float in the project schedule when considering system contractor access dates.
    - Consideration that systems specialty contracts warranty requirements are clearly defined to the satisfaction of VTA and BART and align with all the specific requirements for the Project's Pre- Revenue phase and the Revenue Service Date.

Tunnels – Contract CP2 (West Portal) and CP5 (Tunnel and TIBO)

The Project is experiencing positive momentum with the significant amount of work being performed at the west portal. This work is being performed as part of an early works package as part of the KST early works. In order to keep up this momentum and advance critical path work in the Project schedule, it is important to continue advancing the procurement of the revised tunnel package (CP5) in an expeditious manner.

With VTA separating Contract CP5 from Contract CP2, VTA is now retaining the risk of performance for the owner-furnished Herrenknecht TBM. VTA has identified that the design engineer under the KST contract is being transferred to VTA. To reduce risk VTA may want to explore transferring tunneling contractors under the KST contract to be transferred to VTA.

It is inherent to the schedules of large diameter bored tunnel projects that the TBM drive is the critical schedule and performance risk for the project. It is particularly so in this case where the depth is relatively shallow and the ground conditions are poor. Obtaining a top-tier world class TBM operation & management team is absolutely critical to success of this project. VTA should focus on how to achieve that most effectively.

Since CP5 is now becoming more of a tunnel-only contract it is suggested that VTA have discussions with the tunnel-specialty contractors on the KST team to determine the feasibility, cost and willingness for them to engage in negotiations to perform this work including assuming the risk of tunneling.

Other considerations for the owner-furnished TBM include specifying ways of sharing risk between VTA and the tunneling contractor. Potential areas couldinclude bi-lateral agreement between VTA and the contractor on pre-agreed measures for potential risks with TBM mining, such as TBM blocked construction.

The schedule provided for tunneling is based on two ten-hour shifts/six days a week. Although many of the local tunneling projects have used two ten-hour shifts, international practice has used 24-hour/7 days a week for tunneling work. Since the Contract CP5 contract is dependent on one TBM, this makes the skills of the tunneling personnel very important for both the tunnel management team and the mining team.

Contract CP5 also includes tunnel internal concrete and tunnel MEP. If not already taken into consideration, design provisions in the tunnel internal concrete for installation of follow-on systems elements as appropriate.

Recommendations

- Consider a 24-hour operation to determine potential schedule savings.
- Consider ways for the CP5 contract to require qualified and experienced tunnel management team and the mining team.
- Any Systems component that is embedded in the tunnel internal concrete will need to be clearly defined in the CP5 and CP1 contracts.

Underground Stations – Contracts CP4A (Diridon Station Contract), CP4B (Downtown San Jose Station), CP6 (28th St Station)

The peer review understands that VTA is evaluating separating the CP4 package into smaller contract packages and also evaluating contract delivery methods. By separating the stations contract, this could encourage the vertical contractors to compete, and experience has shown that vertical contractors generally perform vertical works better. The recommendations below include considerations for CM/GC contract delivery should VTA pursue a CM/GC delivery method for the CP4A and 4B packages.

Recommendations:

- For CM/GC contract delivery, VTA needs to confirm that their integrated team of staff and consultants have the necessary prerequisite experience to appropriately manage and administer this delivery method.
- For CM/GC delivery, VTA must procure the services of the most qualified contractors on a timely basis allowing for the optimal duration of the preconstruction phase to jointly develop the optimal design aligning scope and budget along with high-quality Issue for Bid (IFB) documents.
- For the CM/GC contract delivery, VTA needs to work with the Contractor to identify the appropriate/necessary bid packages that clearly frame the work to be self-performed versus work to be packaged in IFB documents.
- VTA must score the most qualified contractor based on the staff being proposed (as defined by VTA) for both the pre-construction and construction phases and not strictly on the firms themselves.
- For the CM/GC contract delivery, VTA/BART must objectively consider CM/GC recommendations as part of the design development during pre-construction and assure that the design team implements accepted CM/GC recommendations. Communications and partnership between the parties is key – ignoring recommendations/suggestions during this stage will impact the partnership and minimize one of the major advantages of CM/GC – early input from

a contractor.

- For CM/GC contracts, VTA must provide the contractor with full access to the design documents during the pre-construction phase allowing the contractor the optimal opportunity to identify any errors and omissions and/or conflicts before achieving 90% completion of the contract documents.
- For CM/GC contract delivery, VTA needs to work with the contractor to identify the appropriate bid packages that clearly frame the work to be negotiated as self-performed versus work to be packaged in IFB documents.
- For CM/GC contracts, the VTA and its contractors must jointly embrace the open book configuration at the outset and establish/align estimates for negotiations that identify/frame all costs (e.g., direct, indirect, negotiated support services, and risk contingency).
- For negotiated accounts within the CM/GC contract, VTA must ensure there is alignment in advance on what is included and what is not in each category and that the parties are aligned in scope before costs are exchanged.
- For CM/GC contracts, VTA must decide how risk contingency will be allocated and administered in the contract and within the guaranteed maximum price.
- For CM/GC contracts, VTA must establish timely off-ramp options the Project schedule to allow sufficient time to repackage and bid out all, or portions of this Work, as necessary.
- During pre-construction, VTA must be clear about the level of detail the schedule needs to be reported to and be prepared for the CM/GC contractor to refine the schedule as subcontractors come on board and more information becomes available.
- VTA must review subcontract work package scopes carefully to ensure that the work is optimally allocated to firms best able to handle specific work.

<u>At-Grade Station and East Portal – Contract CP7A (Santa Clara Station and East Portal)</u>

No specific recommendations. Assure that there is sufficient float in the schedule to assure that the East Portal is complete prior to the arrival of the TBM. If VTA decides to use the CM/GC delivery method, then the peer review has the same recommendations as provided for the delivery method for Contract CP4A and 4B packages.

Trackwork – Contract CP7B (Trackwork)

The Preliminary Re-Packaging approach presented Trackwork as part of Contract CP7 (Santa Clara, Newhall Yard & Track). Trackwork is specialty work and can also be marked up when combined with a larger contract. There can be cost savings by separating Trackwork into its own contract package.

Recommendation:

- Consider separating Trackwork into its own contract package.
- The mainline track work in the underground infrastructure follows Acceptance of the Contract CP-5 Work. The provisions of both Contract CP-5 and Contract C-7B should include specific language requiring joint assessment and concurrence of the tunnel invert geometry (including all survey data) ahead of the installation of the final track.

Large Contract Package vs Smaller Contract Packages with Interfaces Between Contract Packages

The Preliminary Re-Packaging approach proposed for the SVBX Phase 2 project proposes to separate large contract packages into smaller contract packages. There are also potential cost savings in separating out specialty work that has distinct interfaces. Although increasing the number of contract interfaces in a project increases cost and schedule risk to a project, a modest number of contract interfaces where works are geographically distinct and the handover schedule logic is simple can be manageable and potentially result in cost savings due to reduced markups. For any contract interfaces, it is advisable for sufficient and well experienced management resources to be accounted for in the cost, and that these added management resources are brought on early in the project.

The benefit of a single large contract package assigns multi-disciplinary coordination with the contractor, and inter-disciplinary handover risks remain with the contractor. By splitting up a single large contract into smaller contracts, the risk of contract interfaces would be shifted to VTA. This can be mitigated by judicious definition of the contract handover interfaces and can build in some protection against knock-on effects from one contract to a follow-on contract. Nevertheless, risk of increasing the contract interfaces should still be taken into account for the cost and schedule risks.

**Outstanding Risks Identified for further evaluation prior to release of further construction contracts**

While VTA has done an extensive risk assessment at different phases of the life of the project, there are new risks associated with the recent off ramping of a contractor that must be evaluated to better understand the state of the project. With a better understanding of the current market conditions, the agency can mitigate risks and plan the construction packaging to not only get more competition, but to hopefully drive down overall cost. Based on the recent review the peer review has identified these additional risks for further discussion:

- Reliability/Validity of existing cost estimates
- Contractor Availability
- NFPA 130 Evacuation Requirements

Reliability/Validity of existing cost estimates

VTA performed standard bottoms up estimate prior to issuing the Kiewit Shea Traylor (KST) contract and updated the estimate during the phase 1 contract negotiations. Cost negotiations led to a reduction of scope and eventual off ramping due to the parties being too far apart on their respective estimates. It is imperative that VTA knows the expected project cost as contract packaging and delivery methods are being determined. While it appears that indirect cost and associated risks were the driving force in costdisagreements, it is not clear that lessons learned have been applied to the new construction estimates and project contract valuations.

It is recommended that VTA review the project estimates and apply theoretical lessons learned from the KST negotiations. If the project team decides to continue with the same estimates, they run the risk of continuing to be under the market value and running into the same negotiation hurdles as before. It is recommended that VTA document the areas of major cost differences with the KST estimate and perform a risk mitigation for each item to either document the mitigation to lower cost or change their estimate assumptions to better align with the contractor's expected negotiations strategy.

With such a substantial difference in cost, it is critical for VTA to understand the drivers and evaluate their estimate for weaknesses. Being able to provide documented cost mitigations or assumptions will provide better trust with FTA/PMOC and allow VTA to communicate expectations with the contracting community

Contractor Availability

Size of contracts, delivery methods, and contract packaging will influence the industry's interest in the program and availability of teams competing for contracts. It is obvious in today's market that contractors are more selective in choosing procurements and are more risk adverse when negotiating contracts. With the size of this program, contractors will need to assess their ability to bid each package as items like insurance bonding requirements, joint venture decisions all playing a role in their availability.

As VTA looks to break the program out in smaller contracts, it will be critical to meet with the industry and gauge interest by meetings, industry reviews, or project public meetings. As discussed during the peer review, bringing in new contractors like vertical building contractors for stations will bring in more competition and expertise to push construction and reduce costs.

NFPA 130 Evacuation Requirements

VTA provided the peer review with the station exiting calculations. These calculations were also approved by the Fire Life Safety Committee, which includes representatives from BART and the fire departments having jurisdiction. While we did not identify any specific omissions or inaccuracies, we suggest that given the importance of safety, that VTA verify the station calculations.