

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 October 31, 2025

PROJECT MONITORING REPORT

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AtkinsRéalis USA Holdings LLC

580 California Street, Suite 1248

San Francisco, CA 94105

Nadeem Tahir, P.E., Program Manager, 301.928.3288, Nadeem.Tahir@AtkinsRealis.com
(On project since April 2024)

Emile Jilwan, P.E., Task Order Manager II, 510.506.3697, Emile.Jilwan@AtkinsRealis.com
(On project since August 2021)

Jessica Fulton, P.E., Task Order Manager I, 404.353.5201, Jessica.Fulton@AtkinsRealis.com
(On project since July 2024)

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. Tunnel construction will begin south of the Santa Clara Station within Newhall Yard and run underneath I-880 and the Caltrain tracks. It will be launched from the West Portal which is now under construction. From there, the tunnel will 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 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). The tunnel will be built deep underground as a single, large-diameter tunnel, approximately 53 feet in diameter, commonly called single-bore mega tunnel, and will contain two independent track ways, one for each direction of travel. The tunnel will be excavated by a very large Tunnel Boring Machine (TBM). 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 and stated the Project would be allowed to return to CIG Project Development without penalty should the EPD Pilot Program be determined to no longer be a good fit. 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 seeking 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 includes the development of cost saving concepts, pursuit of additional non-local funding sources, reduction in professional service expenditures, and a review of the project's contracting and procurement approach.

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.

VTA have initiated a cost-saving effort to align the project with the funding available along with the pursuit of additional non-local funding sources. In late 2024, a BSVII Contracting Task Force was also established to evaluate various approaches to CP2 contract delivery including partial and full off ramping of the current contractor Kiewit Shea Traylor (KST), re-packaging of construction contracts to expedite schedule and reduce delays, and industry outreach.

On December 18, 2024, VTA conducted an extensive all-day Value Engineering brainstorming workshop in partnership with the FTA and the PMOC. Many alternatives and cost saving measures were discussed and examined to reduce costs and bring the project in line with the available funding.

On August 19-20, 2025, VTA conducted a two-day Peer Review workshop, in coordination with FTA and the PMOC, to review and evaluate feasibility, constructability, contract packaging, and delivery approaches and presented two specific project scenarios (1 and 1a). These are described in the Peer Review Report attached in Appendix II.

Through the BSVII Contracting Task Force discussions, along with key findings from the recent August 2025 independent Peer Review, BSVII staff established a roadmap for the BSVII project towards a FFGA as summarized below:

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

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 28th Street / Little Portugal Station and East Portal Construction Package 6 (CP6).

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:

- The CP2 off-ramping of the current contractor, KST, requires VTA to own the risk of performance and all potentially higher costs for the owner-furnished TBM that will be operated by a new future tunneling contractor.
- No information is provided to show that breaking CP2 into several smaller contracts will result in achieving cost savings.
- *Breaking the systems contract into several systems contracts could result in systems integration issues and increase in contract interfaces that could result in additional costs.*
- *VTA 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. The TBM advance rate of 35 ft / day is based on assumptions that the tunneling contractor will be operating the TBM 24-7 including accounting for downtime for repair/maintenance and with the assumption that there will be adequate skilled personnel and resources available to operate the TBM 24-7. More details should be provided to support the basis of this rate.*

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1.0 PMOC Observations and Findings

1.1 Summary of Monitoring Activities

- Monitoring Activities Undertaken During the Reporting Period
 - BSVII Scenario 1 ROM Worksheet Walkthrough meeting held on October 13, 2025. (virtual)
 - PMOC attended the VTA Board of Directors Workshop Meeting held on October 17, 2025. (virtual)
 - PMOC Action Item 190: West Portal Schedule Discussions meeting held on October 29, 2025. (virtual)
 - Review of September 2025 Monthly Progress Report received from VTA on November 4, 2025, that includes the following:
 - Monthly Report
 - BSVII Risk Register
 - Third Party Agreement Tracker
 - Master Project Schedule
 - PMOC attended the VTA Board Regular Monthly Meeting held on November 6, 2025. (virtual)
 - PMOC attended the VTA/BART Working Committee Meeting held on November 7, 2025. (virtual)
 - PMOC attended the VTA Board Oversight Committee Meeting held on November 13, 2025. (virtual)
 - PMOC Oversight Call was conducted on November 13, 2025. (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 28th 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 November 13, 2025, VTA did not provide an update to the following 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 9, 2024, August 27 and 29, 2024, and October 17, 2024. The PMOC reviewed resumes of key BSVII staff 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). It was suggested that to meet the MCC requirements, VTA consider introducing additional resources that would strengthen the capabilities for several positions where the requirements are not fully met.

At the Monthly meeting on November 13, 2025, VTA presented an updated organization chart as shown in Figure 6 of Appendix 1 with the following changes:

- *The BSVII Program Director (VTA employee) departed the BSVII project at the end of October. The BSVII Program Director position is vacant.*
- *Two new positions were added:*
 - *A Special Senior Advisor (PMT employee) reporting to the Chief Megaprojects Officer; and*
 - *An Interim Deputy Chief (PMT employee) reporting to the Chief Megaprojects Officer*

At the Monthly meeting on November 13, 2025, VTA did not provide any 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.*

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 November 13, 2025, VTA did not provide NEPA / Environmental Mitigations Status updates.

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 November 13, 2025, BART staff provided the following Railcar Procurement Update:

- Procurement of 48 vehicles for BSVII.
- This is in addition to the 60 vehicles for the Silicon Valley Berryessa Extension (SVBX).
- 1,060 Fleet of The Future (FOTF) railcars delivered to BART.
- Alstom will begin delivering 48 vehicles for BSVII soon.

1.6 Design

CP2 Tunnel and Trackwork

At the monthly meeting on November 13, 2025, VTA reported the following Advance Partial Design Units (APDU) status:

- APDU 1 – TBM Procurement (Face Pressure, TBM and Backfill Grout Specifications) - Progressing 100% design
- APDU 2 Pre-Cast tunnel liner – Approved for Construction (AFC) submitted – Partial acceptance planned by VTA, pending final Caltrans resolution.
- 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 - Progressing 100% design
- 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.

At the monthly meeting on November 13, 2025, 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. Received UPRR 85% comments, not paused.
- D15 – Tunnel Internal Structures – 85% design review complete; VTA is reviewing KST comment responses; paused.
- D20 – Track and Tunnel – 85% design review complete; VTA is reviewing KST comment responses; paused.
- D25 – Diridon Station Design –85% design paused.
- D30 – Downtown San José Station –85% design paused.
- D35 – 28th Street / Little Portugal Station – 85% design paused.
- D40 – East Portal Design - 85% design review complete; VTA is reviewing KST comment responses, paused.
- D45 – West Portal Design –85% design paused.

Program-wide, Facilities and Systems Engineering

At the monthly meeting on November 13, 2025, VTA provided the following Program-wide design status:

- *Producing architectural concepts for the revised DTSJ*
- *Supporting VTA with stakeholder engagement relating to station design revisions*
- *Supporting the demolition activities (i.e. pre and post construction assessments and monitoring)*
- *Producing materials to support environmental addendum documentation*
- *On going ground monitoring and producing reports*
- *Passenger station egress simulations*

1.7 Value Engineering and Constructability Reviews

VTA conducted a 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 VE workshop was facilitated by a third-party consultant, and the resulting report remains in draft status. 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, will accomplish 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 is evaluating 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 on September 24, 2025. 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 November 13, 2025, VTA did not provide an update to cost savings scenarios 1 and 1a previously presented as shown in Figure 11 of Appendix 1.

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 November 13, 2025, VTA reported Project Acquisition Status as of September 2025 shown in Figure 12 of Appendix 1.

The changes identified for September 2025 include:

- *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 November 13, 2025, VTA provided the following Public Involvement / Outreach / Communications updates:

- **Public and Stakeholder Meetings and Presentations**
 - *October Quarterly Community Working Group Meetings*
 - *10/7 City of Santa Clara Council Meeting – Annual Update & CTMP Update approval*
 - *Briefings and coordination with Caltrain, Cities of San José and Santa Clara*
 - *10/22 American Society of Civil Engineers Presentation*
 - *South Bay Historical Rail Society’s Fall Model Train Show Pop Up Event November & December West Portal Construction Site Tours*
 - *December 2 Combined Community Working Group Meeting and coordination with Caltrain, Cities of San José and Santa Clara*
- **Communications and Public Relations**
 - *Monthly Construction eBlast*
 - *Construction Notices for Downtown San Jose utility relocation lane closure*
 - *Blogs, Social Media, Website, Hotline*
 - *Engagement for demolition*

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 November 13, 2025, VTA did not provide any change to the following September 2025 Third-Party Agreement updates.

- *The total number of Third-Party Agreements is now 43.*
- *Critical Agreements prior to FFGA: 31*
 - *31 Executed, and 0 Open.*
- *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)*

At the monthly meeting on November 13, 2025, VTA reported the following utilities update:

- *A summary of utility relocation design and construction progress is provided in Figure 13 of Appendix I.*
- *West Portal:*

- *PG&E 115kV interconnection – PG&E remobilization pending 100% final design completion and contractor selection.*
- *100% Final Design – KST currently incorporating final review comments from VTA and PG&E*
- *Sprint design – Revisions required to eliminate deep bore due to constructability issues. Sprint easement language coordination is still in-progress.*
- *Diridon Station and West Vent Shaft:*
 - *AT&T/Comcast*
 - *Barack Obama Blvd: AT&T vetting alternate box locations*
 - *VTA Montgomery St Bus Stop: AT&T trenching and bus pad restoration is complete.*
 - *West Vent area: AT&T permit drawings pending City of San Jose approval.*
 - *Upcoming: PG&E Electric relocation Construction NTO - pending PG&E estimate letter (expected Q1 2026)*
- *Downtown Station:*
 - *Upcoming AT&T/Level 3 – Remaining work to resume 2026*
 - *PG&E Electric relocation (DSJS-E-32) – Postponed to 1st Quarter 2026 due to tenant coordination issues and holiday moratorium.*
- *East Portal:*
 - *Utility relocations pending easement acquisition.*
 - *Upcoming: Coordination with AT&T for relocation of Fiber Optics service to proposed Verizon cell tower site.*

1.11 Construction

At the monthly meeting on November 13, 2025, 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 2A – Precast Final Lining, Material & Plant Procurement: Negotiations/Procurement on hold.*
 - *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 9A – TBM Tunnel Support Equipment: Negotiations/Procurement on hold.*
 - *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.*

- *EWP 11C – Installation of Plant Power and Equipment: Scoping and cost estimating ongoing.*
- *The following TBM activities and status of progress were reported by VTA at the monthly meeting on November 13, 2025:*
 - *Factory Acceptance Test (FAT) completed.*
 - *Recommended spare parts list currently in review.*
 - *TBM documentation being developed by Herrenknecht.*
 - *TBM Storage + warranty extension: 18 months*
 - *VTA Executive site visit meeting in October 2025*
- *The following Construction – West Portal activities and status of progress were reported by VTA at the monthly meeting on November 13, 2025:*
 - *Cut and Cover Walls: Cut and Cover D-Walls commenced on June 23,2025, 37 panels of 50 completed (74%)*
 - *U Wall/D-Walls: U-Wall D-Walls commenced on July 7, 2025, 52 panels of 54 completed (96%)*
 - *U-Wall Sheet Piles Area: Work commenced on September 8, 2025.*
 - *Excavation in the sheet piles area is 85% complete;*
 - *Bracing in the sheet piles area is 90% complete;*
 - *2B working slab poured on October 28, 2025. 2 of 5 working slabs complete (40%); and*
 - *2C working slab rebar assembly in-progress.*
 - *Y-Panels: Work commenced on September 15, 2025.*
 - *6 of 8 Y-Panels are complete (75%)*
 - *Panel YP-2A is under excavation and scheduled to be completed in November.*
- *Construction – West Portal Upcoming Activities:*
 - *November 2025:*
 - *Complete construction of all D-Walls in U-Wall area*
 - *Start excavation and bracing installation in U-Wall Sheet Pile area*
 - *Complete construction of Y-Panels*
 - *Start construction of D-Walls in Caterpillar shaft area*
 - *December 2025:*
 - *Complete bracing installation and bottom slabs in U-Wall Sheet Pile area*
 - *Complete D-Wall guide wall construction in CAT Shaft area*
 - *Complete construction of all D-Walls in Cut & Cover area*

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 Figure 14 of *Appendix 1*.

At the monthly meeting on November 13, 2025, VTA provided an update to the Project Funding Status as shown in Figure 15 of Appendix 1.

The VTA has reported expenditure through September 30 2025, including accruals, which total \$1,746.9M. 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 \$2,304.6 through September 30, 2025.

At the monthly meeting on November 13, 2025, VTA reported the following Budget/Cost updates for the September 2025 reporting period:

- *During this reporting period, no budget transfers or contingency drawdowns were executed.*
- *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.

1.14 Project Schedule

VTA provided a September schedule update with a data date of October 1, 2025. A full analysis was completed on this schedule.

The new VTA baseline schedule has a target RSD of Q2-2037. The preliminary risk assessment by PMOC indicated a projected RSD of February 2039, inclusive of FTA-assessed schedule contingency. VTA is adopting the FTA-recommended schedule contingency that indicates a Q1-2039 RSD while managing to the target RSD of Q2-2037.

The activities for "VTA Target RSD" with a date of May 12, 2037 and "FFGA RSD" with a date of February 28, 2039, have remained the same as Systems Substantial Completion with a date of August 04, 2036.

At the monthly meeting on November 13, 2025, VTA noted that the critical path excluding contingency and reserve remains the same as the previous months and reported the following Project Schedule updates for the August 2025 reporting period:

1. West Portal Enabling work and Launch Structure (CP2)
2. TBM Procurement: Assembly and Testing (CP2)
3. Tunnel mining from West Portal to East Portal (CP2)
4. West Portal: Final concrete work and finishes (CP2)
5. West Portal: Train Control Building (CP2)
6. Newhall Yard: Systems installation (CP1)
7. Phase 2 testing by CP1 with BART oversight
8. BART OCC Validation / Testing

The Master Project Schedule (MPS) is comprised of a summary schedule plus the following twelve individual schedules

1. Program Management and Administration
2. Right-of-Way Acquisition
3. Design
4. Advertise, Bid, and Award
5. Utilities
6. Third Party
7. Vehicles & Parking
8. Testing and Commissioning
9. Systems
10. Contract Package 2
11. Yard/SC Station
12. Underground

As of previous reporting periods, a total of 8.5 months of schedule contingency was drawn down to accommodate delays in the award and NTP of West Portal launch early works scope to the CP2 contractor. No additional schedule contingency was drawn down during this reporting period. As the remaining contingency has fallen below the minimum contingency levels, VTA is working on the following to address this:

- ***Identify opportunities to accelerate EWP 3C construction activities:*** *Following the planned February 2025 NTP for the EWP 3C heavy construction, the project team will collaborate with the contractor to identify opportunities to accelerate construction activities and minimize the actual use of contingency wherever possible. VTA also included incentive clauses and liquidated damages clauses in Amendment #8.*
- ***Plan for a comprehensive risk assessment following the outcome of VTA Task Force:*** *To mitigate the contingency usage and delays occurred to date for future work, VTA has set up a task force to evaluate CP2 contract options including evaluating other potential contract packaging solutions to expedite schedule and reduce delays. A comprehensive risk*

assessment will be conducted after those options have been evaluated and a path forward determined.

The critical path on the overall schedule has total float at 0 starting with CP2 West Portal SOE & Caterpillar Structure. This then leads to a Contingency activity for CP2 West Portal SOE and Caterpillar Structure, CP2 West Portal Excavation of Caterpillar Structure and CP2 West Portal Base Slab before moving on to tunneling. This has remained the same as the previous month's update.

The longest path on the schedule has a total float anywhere from 0 to 451 working days. It is starting with FD.C1305, FD.C1335, FD.C1315 all within the Contract Wide Review Cycles 85% Design Review, which lost time this update period, Cons.772630: CP2 HK TBM Storage, ST.8710: CP2 West Portal SOE & Caterpillar Structure (CP2), and Cons.772680: CP2 Precast Tunnel Lining (PCTL) Molds Design Extension (CP2).

The critical path is starting with activity ST.8710: CP2 West Portal SOE & Caterpillar Structure in CP2. This activity has an actual start date of 03MAR25 and is indicating 54.38% complete with a finish date of 01APR26. This date has remained the same as the previous month.

There is only one task activity remaining in the Program Management and Administration schedule that has not started or finished and that is "FFGA Approvals (FTA/OST, OMB, Congress. This activity has a constraint start date of 18OCT25. There are 3 activities, on the critical/longest path, same as last month.

On the ROW schedule: One (1) Planned Activity was added to the schedule for a relocation for parcel B3236. Ten (10) Original Durations were adjusted in both increases and decreases. Five (5) activities indicated no/diminishing progress in this reporting period. There are no activities on the longest path.

In the Utility: There are 24 activities without finish relationships. Twenty-one activities with Start On constraint have been adjusted outwards by 18 to 336 days. There are no activities on the longest path this month.

In the CP2 Cost and Schedule section of the schedule two activities, CP2 Stage 2 - Tunnel Work Package - VTA Review & Validate Cost Proposal and CP2 Stage 2 - Tunnel Work Package - Negotiations Cost Proposal have lost 23 days however due to relationships the final activity in the section has not been adjusted. Due to Right of Way activities for NTP's and construction have been pushed out 63 to 71 days. The overall finished date for CP 2 has remained the same.

Four task activities have had their Original Durations increased. Two activities are showing no or diminishing progress this update period. One milestone activity, CP2 28th Street Station Enabling Works NTP is indicating a variance on its finish date. There are activities without finish relationships. There are thirty-seven (37) activities on the longest path, which is the same as last month.

The Design, Advertise, Bid & Award, Third Party, Vehicle and Parking, Testing and Commissioning, Systems, Yard/SC Station and Underground Stations schedules had no changes.

This month there was no updated TBM Launch Structure Schedule submitted. The Schedule Contingency Drawdown Curve is shown in Figure 17 in Appendix 1.

1.15 Figure 17 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 September 30, 2025 monthly report, the following capture the key risk updates:

New Risks: None for the period

Increased Risk Score:

BSV-230 Lack of competitive bidders for tunneling work: *As the CP2 contract off-ramp is being implemented, procurement of additional contract packages is required to support program in addition to existing CP1, CP3 and CP4. The risk associated with limited marketplace for tunnel contractors' availability resulting in lack of competitive bidders was elevated due to current market conditions, specialized nature of the single bore tunneling work and risk transfer mechanism associated with already procured TBM. To address this risk, VTA is re-initiating industry outreach for future procurements and developing contract packaging plans to support current market competition*

Reduced Risk Score:

BSV-233 - Unanticipated changes during EWP 3C Construction: *As the construction of West Portal is progressing, there is potential for unanticipated changes to occur during construction. BSVII project team continue to conduct focused meetings to enable early identification of potential cost drivers associated with EWP 3C and implement proactive response plans to reduce and/or avoid impacts to VTA. To date, no major impact has been realized and VTA team continues to monitor this risk.*

Retired Risks: *None for the period*

Other Risk Updates:

BSV-231 - Extended design pause has potential to delay schedule and add cost: *This risk originally captured the potential impact of extended design pause to address cost saving measures and optimizations on the BSVII Program's 2024 NSEE Baseline Budget. As the cost saving measures took longer than originally planned, it has increased potential to delay design completion. To mitigate this risk, various procurement packages are being considered as part of the re-baseline. Some of the procurement packages would shorten the redesign duration resulting in reduced risk exposure to the program timeline. In addition, the Baseline Scenario 1 configuration presented to BSVII Oversight Committee on Aug 14, 2025, incorporates revised timeline to reinitiate design development following approval of the Scenario 1 configuration by VTA Board. This risk would be revised following approval of the revised configuration. Refer to Attachment E for the top five risks (Threats) according to VTA's BSVII Monthly Progress Report for the period ending September 2025. Figure 18 in Appendix 1 shows the additional details regarding VTA's top ten risks (Threats). At the monthly meeting on November 13, 2025, VTA provided the following progress updates:*

- *Ongoing internal risk review meetings with Program, Project, and Discipline Leads*
- *Continue to work with risk champions to monitor progress of risk response plans*
- *No new risk added to the Program Risk Register*

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 November 13, 2025, VTA reported the following:

- *Quality Assurance Activities for current month:*
 - *General Oversight and Verification*
 - *Continued update to BSVII QMP and Procedures.*
 - *Received CMS proposed edits to (10) Quality Procedures on October 6, 2025. Review in progress.*
 - *CP2 Design and Construction Verification –KST*
 - *Completed monthly quality verification assessment of EWP 3C as-built records.*

- *CP1, CP3, CP4 Design Oversight – MMW*
 - *Continued GEC Design Quality Program Audit. Document review and evidence gathering in progress.*
- *Planned Activities for Next Month*
 - *Monthly quality verification assessment of EWP 3C as-built records.*
 - *Quality verification audit of KST's material receiving and inspection process*
 - *Complete review of CMS Proposed edits to (10) Quality Procedures*
 - *Complete review of revised Construction Administration Procedure*

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 November 13, 2025, VTA reported the following:

- *System Safety and Security Risk Management / Certification activities:*
 - *SSRC meeting was held October 29th to present and approve a ROD for changes to safety and security criteria resulting from 15 Requests for Variation approved by BART. The ROD was approved.*
 - *The next SSRC Meeting is planned for December 4, 2026*
- *Fire Life Safety and Security (FLSS) Activities*
 - *BSVII Chief Megaprojects Officer and other members of the BSVII team met with SJFD on October 1, 2025 to discuss the status of the project, details about the approved configuration and a commitment to continue discussions with SJFD. The SJFD was provided a copy of the FLSSC Status memo for comment. The memo will be sent to the full committee mid-November once SJFD provides their review.*
 - *A meeting of the full FLSSC is planned for the first week of December*

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 November 13, 2025. 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 November 13, 2025.

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 Five Project Risks

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, November 13, 2025 – 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 Monthly Coordination Meetings:
 - a. December 11, 2025, 9:30am (Pacific)
 - b. January 8, 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	Laurence Farrell	lfarrell@vtabsv.com
VTA	Claudia Frias Baltazar	claudia.friasbaltazar@vta.org
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	Drew Pearce	dpearce@vtabsv.com
VTA	Erica Roecks	erica.roecks@vta.org
VTA	Sarah Wilson	swilson@vtabsv.com
BART	Ni Lee	nlee@bart.gov
CPUC	Steven Espinal	steven.espinal@cpuc.ca.gov
PMT	Craig Constant	cconstant@vtabsv.com
PMT	John Engstrom	jvengstr@bechtel.com
PMT	Sarah Hersom	shersom@hntb.com
PMT	Chris Metzger	cmetzger@epccconsultants.com
PMT	Chuck Morganson	cmorganson@hntb.com
PMT	Tony Murphy	tony.murphy@wsp.com
PMT	Chris Ralston	cralston@vtabsv.com
PMT	Kieran Spillane	kieran.spillane@wsp.com
PMT	Lurae Stuart	lurae.stuart@wsp.com
CMS	Blair Titcomb	btitcomb@vtabsv.com
PMT	Peter Zuk	pzuk@hntb.com
PMOC	Heather Browning	heather.browning@atkinsrealis.com
PMOC	Laurel Espenlaub	laurel.espenlaub@atkinsrealis.com
PMOC	Jessica Fulton	jessica.fulton@atkinsrealis.com
PMOC	Emile Jilwan	emile.jilwan@atkinsrealis.com
PMOC	Kyle Knudson	kyle.knudson@atkinsrealis.com
PMOC	Beth Sprague	beth.sprague@atkinsrealis.com

Attachment D. List of Documents Received

Document	Received
Change Order 13\CCO 013 - Resolution of Design Build Management Fee (2) - Signed.pdf	10/2/2025
Change Order 13\Approval Documentation\PCRf 013 Docusign Summary.pdf	10/2/2025
Change Order 13\Approval Documentation\Procurement Contract Request Form (PCRf) 013 - Executed.pdf	10/2/2025
Change Order 13\Approval Documentation\CCO13 - Certificate of Completion.pdf	10/2/2025
Change Order 13\Independent Cost Estimate\Cost Verification.xlsx	10/2/2025
Change Order 13\Merit Determination\IAR RR-002 - Design Build Management Fee - Signed.pdf	10/2/2025
Change Order 13\RON\Attachment 3 to RON CP2 - Staff Labor Rates.pdf	10/2/2025
Change Order 13\RON\RON-CCO 013 - Signed.pdf	10/2/2025
Change Order 13\RON\Attachment 1 to RON May2025_Onward_KSTPlan_VTA250724_FINAL.pdf	10/2/2025
Change Order 13\RON\Attachment 1 to RON May2025_Onward_KSTPlan_VTA250724_FINAL.xlsx	10/2/2025
Change Order 13\RON\Attachment 2 to RON Cost Verification.pdf	10/2/2025
third party agreement tracking 09.30.25.xlsx	10/3/2025
VTA BSVII Detailed Schedule_August 2025 Update.pdf	10/3/2025
VTA BSVII MPS August 2025 Update 10 03 2025.xer	10/3/2025
BSVII-P0509-PC-RPT-BSVII_Monthly_Progress_Report_August_2025.pdf	10/3/2025
BSVII-ProjectRiskRegister AUG-2025-Clean-Draft 10-03-2025.xlsx	10/3/2025
BSVII FTA-VTA PMOC Monthly Meeting_2025-10-09_Draft Final.pdf	10/7/2025

Attachment E. VTA Top Five Project Risks

VTA Top 5 Project Risks (Threats)

VTA September, 2025 Risk Register (Threats) Top 5		
Risk ID	Risk Title	VTA Risk Score
BSV-231	Extended design pause has potential to delay schedule and add cost.	16
BSV-213	Additional CP2 redesign costs and CP2 design time to address optimizations and cost saving measures.	15
BSV-230	CP2 Off-ramp requiring reprocurement resulting in potential lack of competitive bidders	15
BSV-215	FFGA execution delays.	12
BSV-029	VTA financial capacity/funding plan to finance potential future project cost increases.	12

Threat	Opportunity
--------	-------------

Source: BSVII Monthly Progress Report September 2025

Attachment F: Safety and Security Checklist

Project Overview

Project Mode (Rail, Bus, BRT, Multimode)	<input checked="" type="checkbox"/>	Rail
Project Phase (Project Development, Engineering, Construction, Start-Up)	<input checked="" type="checkbox"/>	Engineering
Project Delivery Method (Design/Build, DBOM, CMGC, etc.)	<input checked="" type="checkbox"/>	TBD

Project Plans	Version	Review by FTA	Status
Safety and Security Management Plan (SSMP)	Rev 1	<input checked="" type="checkbox"/>	Pending update based on revised configuration
Safety and Security Certification Plan (SSCP)	Rev 1	<input checked="" type="checkbox"/>	Pending update based on revised configuration
Public Transportation Agency Safety Plan (PTASP)	Rev 2	<input checked="" type="checkbox"/>	BART – reviewed by CPUC
System Security Plan or Security and Emergency Preparedness Plan (SEPP)		<input type="checkbox"/>	BART
Construction Safety and Security Plan (CCSP)		<input type="checkbox"/>	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 address 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? <ul style="list-style-type: none"> • Activation Plan and Procedures • 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.

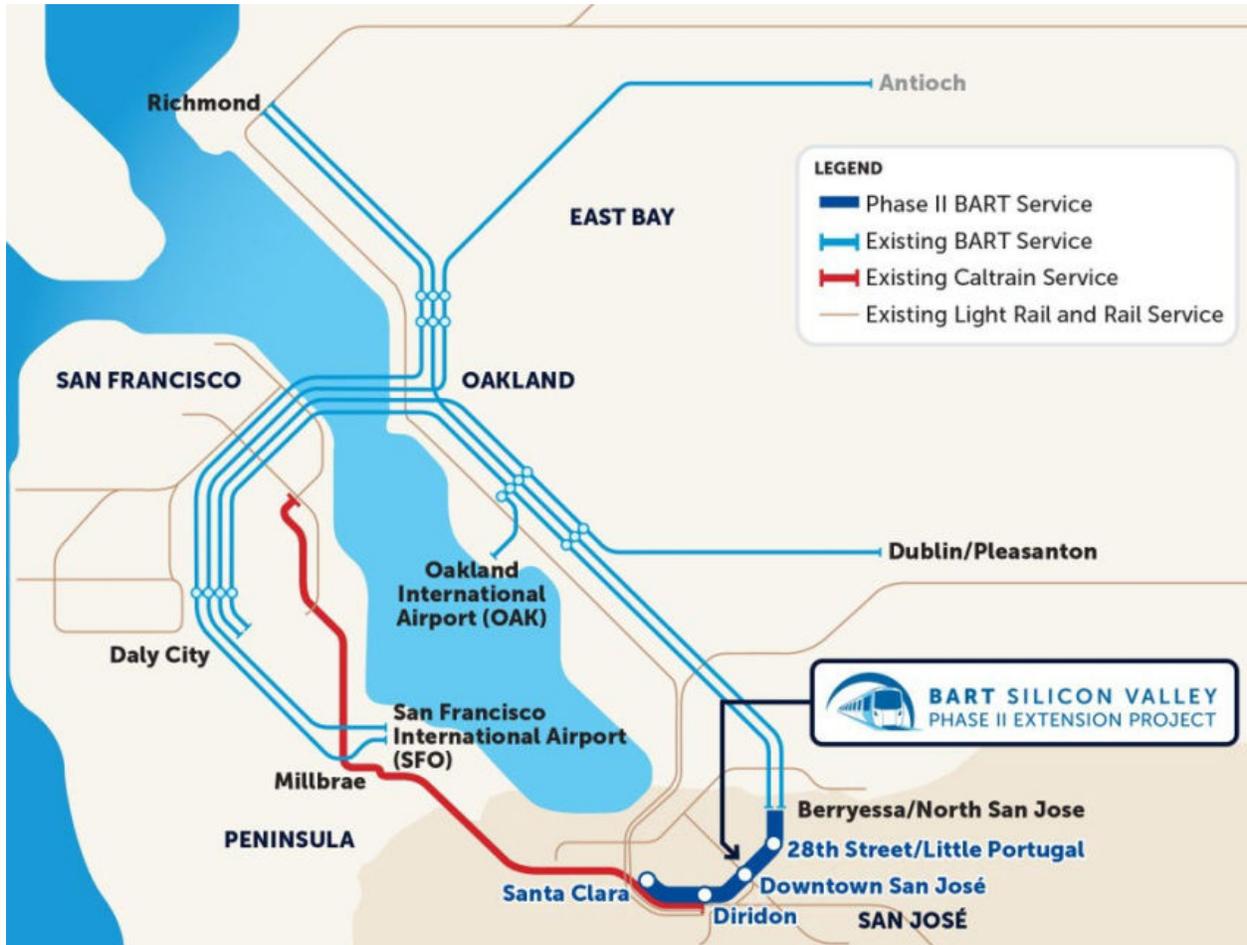
<ul style="list-style-type: none"> • Operations and Maintenance Plan • Emergency Operations Plan 		
<p>Has the project sponsor issued a final safety and security certification?</p>	<p>N</p>	<p>Pending: Later phase once all other phases are complete. Addressed in the SSMP and SSCP and will be tracked to confirm development and submittal.</p>
<p>Has the project sponsor issued the final safety and security verification report?</p>	<p>N</p>	<p>Pending: Later phase once all other phases are complete. Addressed in the SSMP and SSCP and will be tracked to confirm development and submittal.</p>

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

Ms. Carolyn Gonot
Page 4

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

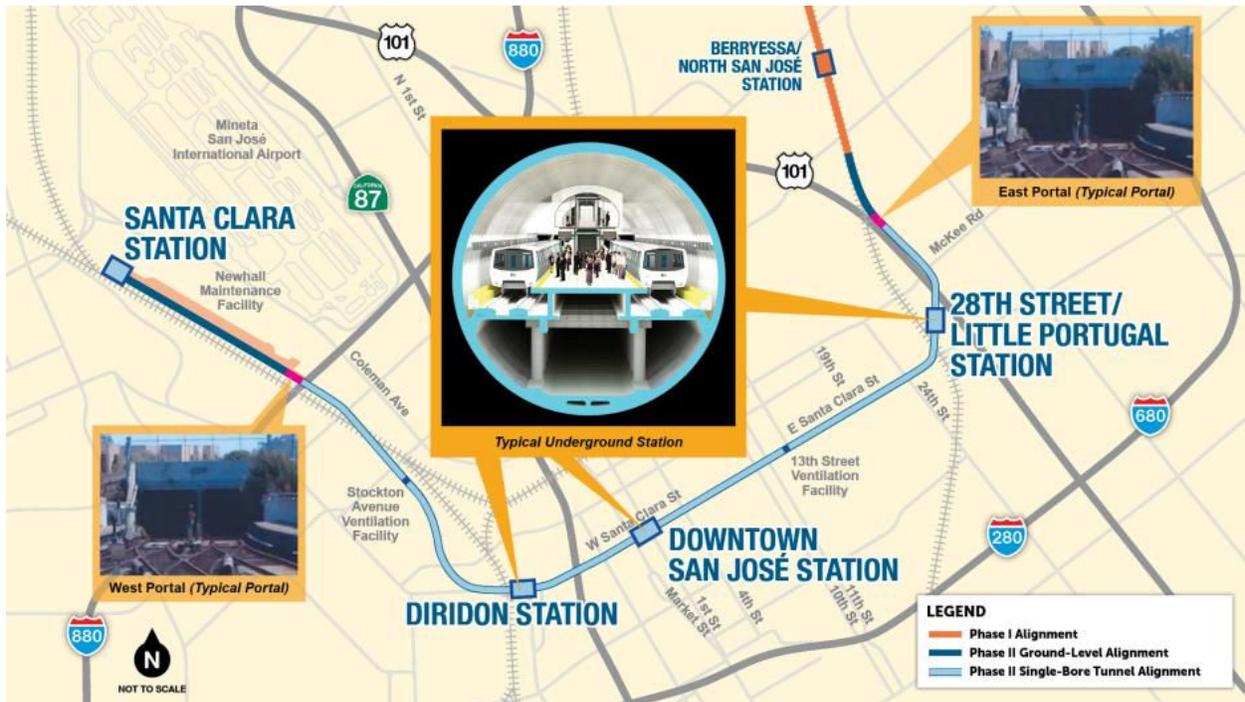


Figure 1. Proposed Alignment of the BSVII Extension

		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			\$1698.5	12.01%
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			\$2,304.6	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 September 30, 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, May 26, 2023

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

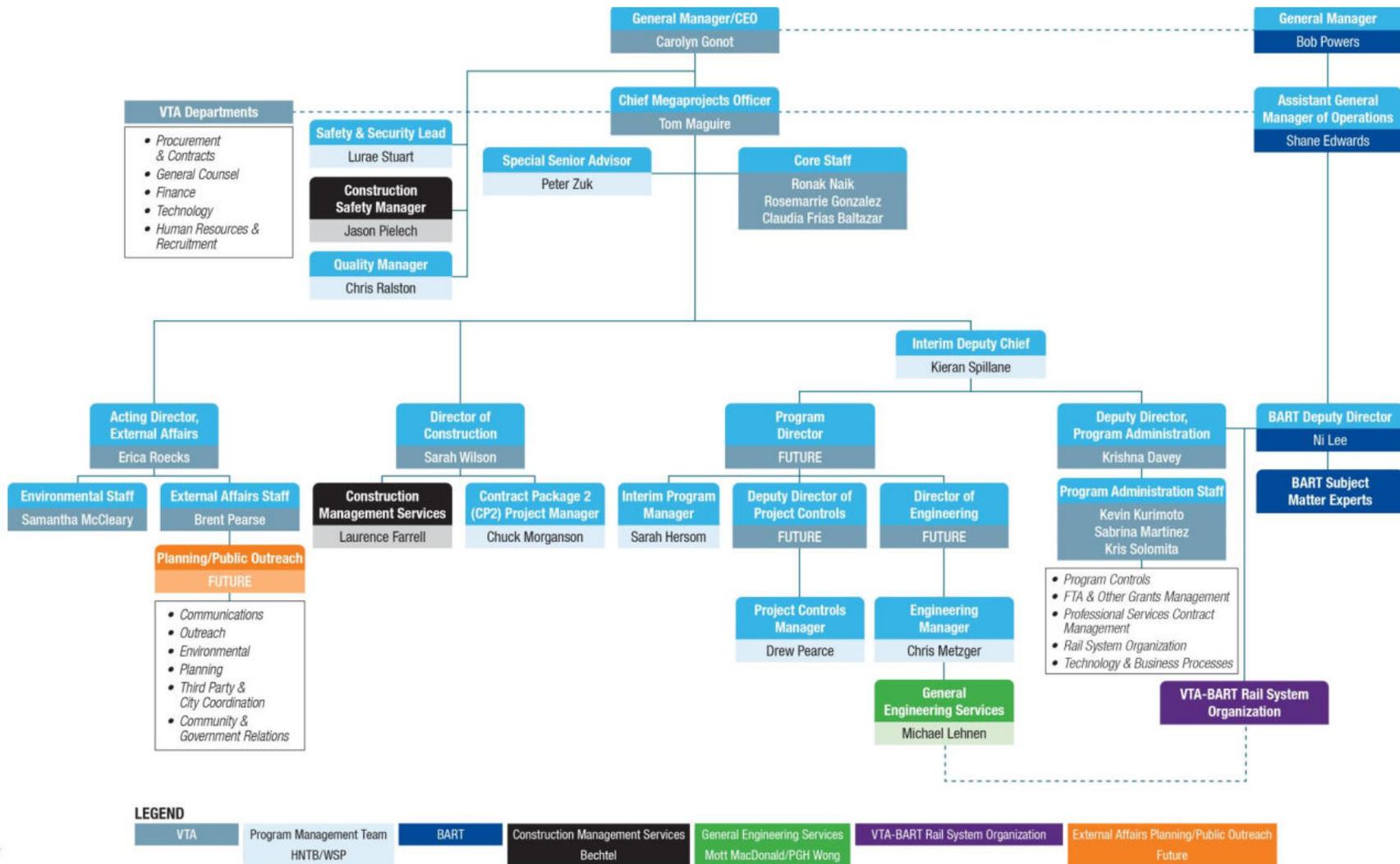


Figure 6. BSVII Organizational Structure Chart

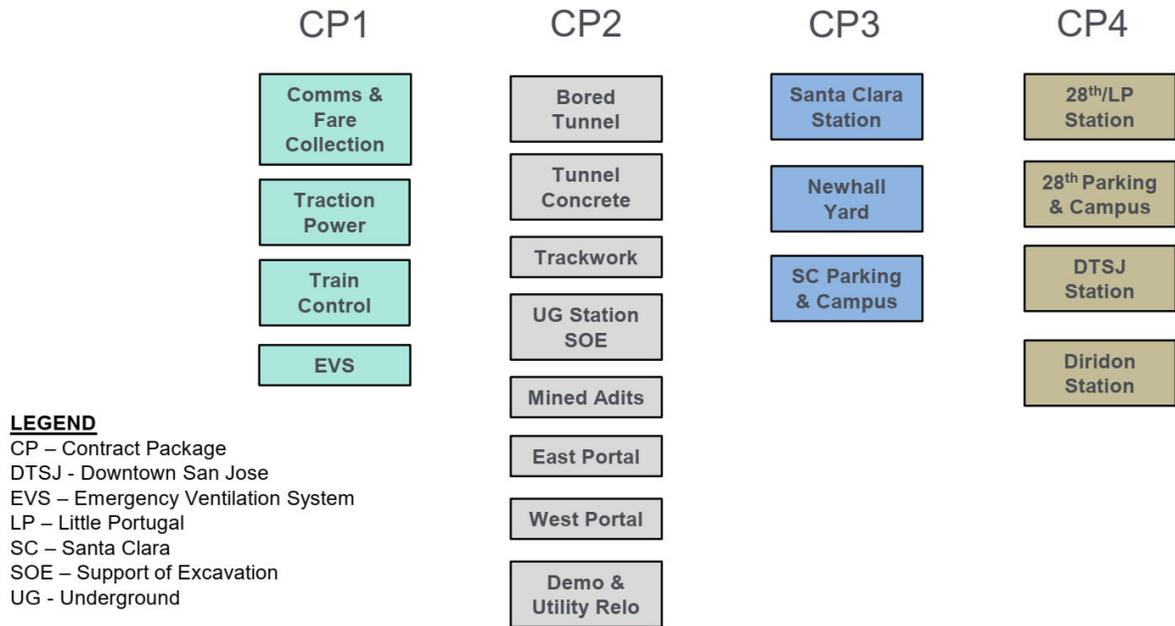


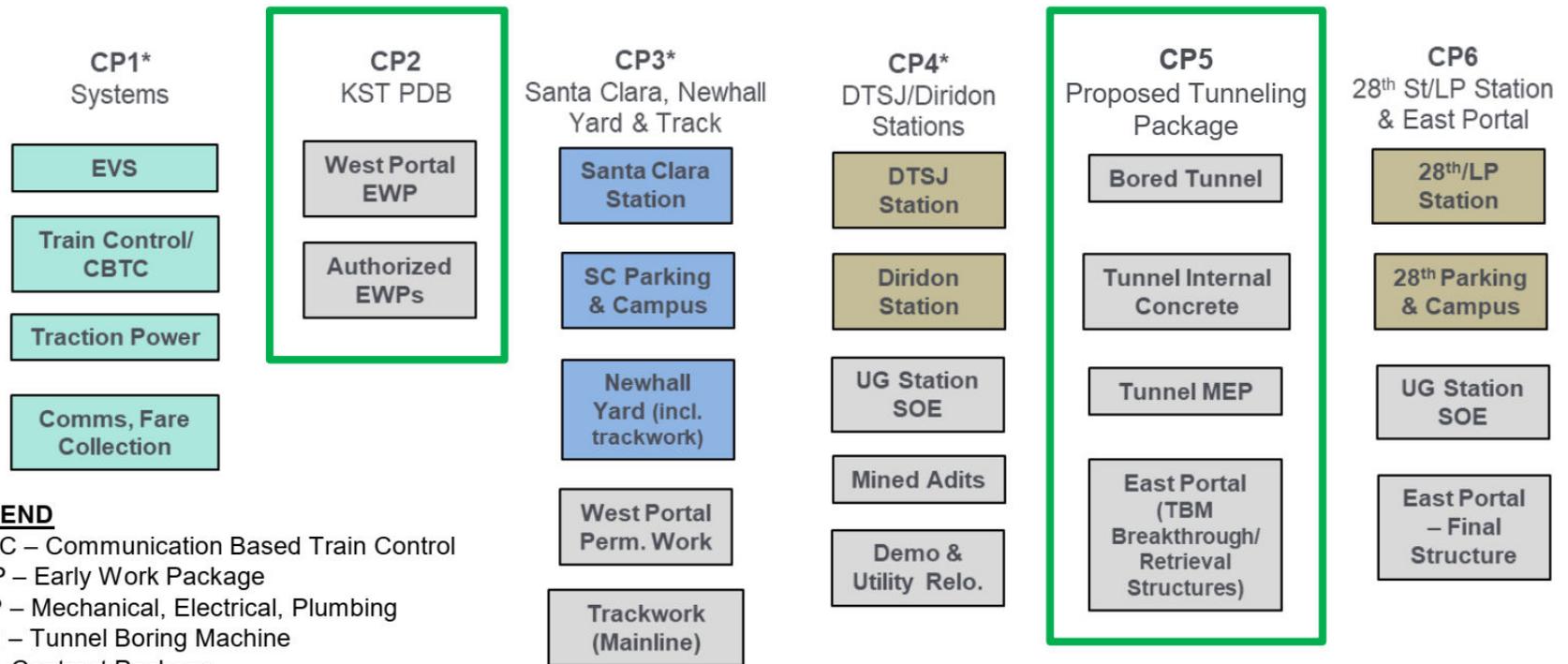
Figure 7. BSVII Contract Packages

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



LEGEND

CBTC – Communication Based Train Control
 EWP – Early Work Package
 MEP – Mechanical, Electrical, Plumbing
 TBM – Tunnel Boring Machine
 CP – Contract Package
 DTSJ - Downtown San Jose
 EVS – Emergency Ventilation System
 LP – Little Portugal
 SC – Santa Clara
 SOE – Support of Excavation
 UG - Underground

**May be further broken into sub-packages based on additional analysis*

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: Sep 2025
Description	Total	Possession Obtained	In Acquisition Process	Status of "Parcels in Acquisition Process"						Relocation ****	
				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: Sep - 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
28 th 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
28 th 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	Sept-2025
Cost Report by Standard Cost Category (\$ in millions)					Report Date	05-Nov 25
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	\$ 2,899.8	\$ 3,033.9	\$ 134.1	\$ 272.8	\$ 27.7
20	Stations, Stops, Terminals, Intermodal	\$ 2,037.2	\$ 2,037.2	\$ -	\$ -	\$ -
30	Support Facilities, Yards, Shops, Admin. Bldgs.	\$ 352.2	\$ 352.2	\$ -	\$ -	\$ -
40	Sitework and Special Conditions	\$ 582.5	\$ 711.9	\$ 129.4	\$ 153.5	\$ 4.2
50	Systems	\$ 1,409.0	\$ 1,409.0	\$ -	\$ -	\$ -
60	ROW, Land and Existing Improvements	\$ 240.5	\$ 240.5	\$ -	\$ 127.4	\$ 0.6
70	Vehicles	\$ 204.8	\$ 173.7	\$ (31.1)	\$ 65.0	\$ 31.3
80	Professional Services	\$ 2,972.5	\$ 3,000.1	\$ 27.6	\$ 1,079.8	\$ 7.6
90	Unallocated Contingency	\$ 1,657.1	\$ 1,366.1	\$ (291.0)	\$ -	\$ -
100	Finance charges	\$ 390.0	\$ 390.0	\$ -	\$ -	\$ -
Total		\$ 12,745.6	\$ 12,714.5	\$ (31.1)	\$ 1,698.5	\$ 71.5

Notes:

- 1 Baseline estimate established at entry into New Starts Engineering
- 2 Incurred total (D) and (E) may vary from VTA's accounting system due to rounding
- 3 Incurred this period excludes accruals (invoices under review or in process)

Figure 14. Cost and Expenditures

VTA's BART Silicon Valley Program, Phase II		Report Period	Aug-2025
Funding Status Report (\$ in millions)		Report Date	10/28/2025
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. Draw down 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	BSVII included in MTC's RM3 Expenditure Plan
Solutions for Congested Corridor Program	\$ 75.0	Completed	CTC approved the grant in June 2025
Local Partnership Program	\$ 25.0	Completed	CTC approved the grant in June 2025
Others	TBD	In progress	VTA continues to explore other state / regional funding sources
Local Measures **			
2000 Measure A	\$ 2,465.0	Completed	Current estimate 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	Current estimate subject to change; VTA Board action is pending upon finalization of value engineering & updated cost estimation, as well as identification 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 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, 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

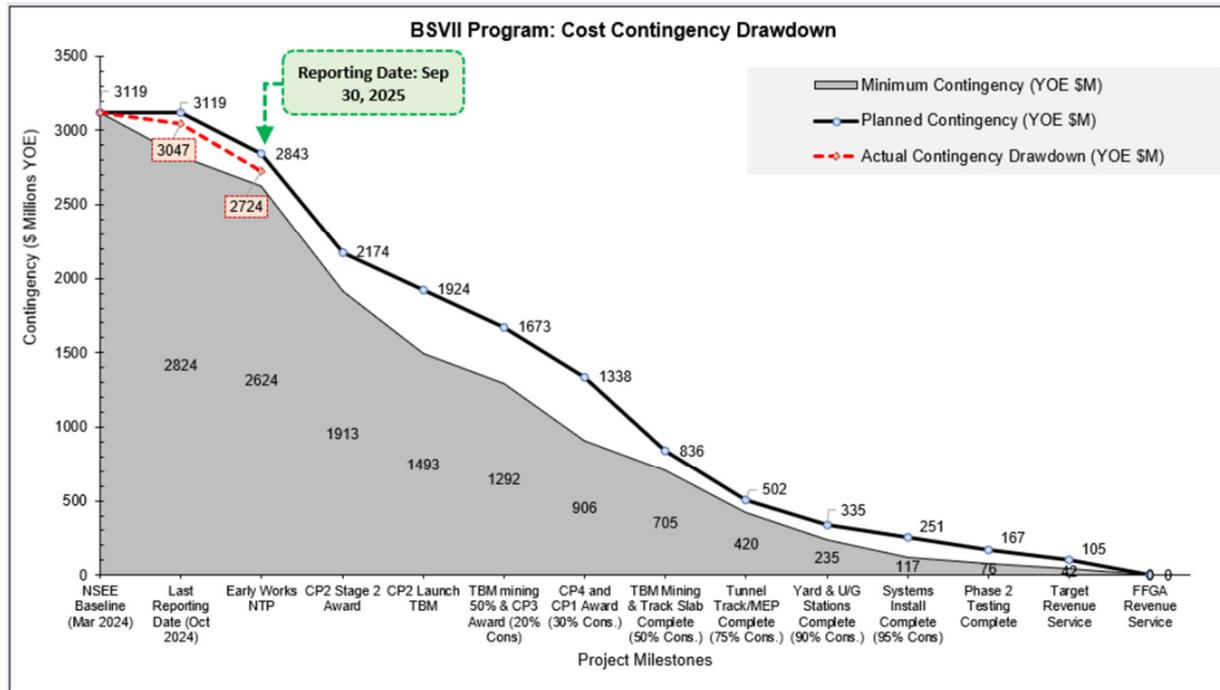


Figure 16. Cost Contingency Drawdown Curve

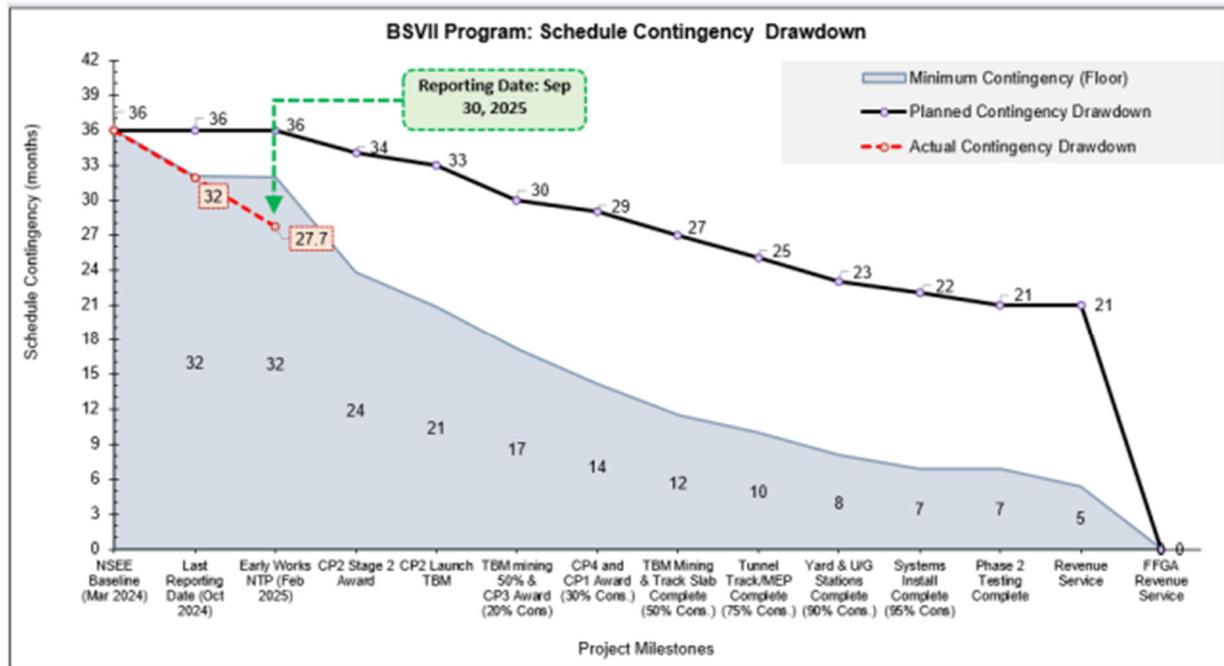


Figure 17. Schedule Contingency Drawdown Curve

Risk ID	Risk Title	Risk Description	Risk Score	Action Items Description
BSV-231	Extended design pause has potential to delay schedule and add cost	Cause: Various design elements are currently paused to address cost saving measures and optimizations Risk: Extended design pause phase Impact: Design delays and added cost due to escalation	16	1. Ongoing monitoring of design status in line with planned schedule and restart design to avoid/minimize critical path impact. 2. Identify interface critical design elements that may require additional design time and plan to restart design.
BSV-213	Additional tunnel package redesign costs and time to address cost saving measures	Cause: Various cost savings measures required need for optimizations. Risk: Implementing optimizations will be a redo of 85% design and, in some cases, potentially going back to 60% design. Impact: Additional design time and costs to address proposed optimizations.	15	1. Expedite DCM/TR/3rd Party clearance for contract compliance of the design proposed as part of optimizations and cost saving measures. 4. Work with KST on redesign cost estimate and schedule and negotiate as part of relief request or change orders for GO items.
BSV-230	Lack of competitive bidders for tunneling work	Cause: With the CP2 off-ramp, procurement of additional contract packages required to support program in addition to existing CP1, CP3 and CP4. Risk: Limited marketplace for tunnel contractors' availability, lack of competitive bidders. Impact: Insufficient competition or Contractors include a premium on bids submitted resulting in higher contract costs.	15	1. Re-initiate industry outreach (strategic marketing) for future procurements. 2. Develop contract packaging plan to support market competition.
BSV-215	FFGA execution delays	Cause: FTA's approval of BSVII's 2024 NSEE application resulted in significant funding shortfall Risk: Longer time to address funding gap and resulting FFGA execution delay Impact: Delay in execution of near-term critical path schedule milestones and associated increase in overall program cost.	12	1. Identify additional local funding sources to address funding shortfall. 3. Incorporate approved optimizations/cost savings measures in design and update program cost forecast. 4. Update financial plan to support FFGA execution by Fall 2025.
BSV-029	VTA financial capacity / funding plan to finance potential future project cost increases	Cause: Changes in cost may result from further design development and coordination with stakeholders. Risk: Future cost estimates may exceed current available funding and/or local funds may expire, necessitating the identification of additional funding sources and/or debt financing. Impact: a) delays in progressing the project, b) changes to scope in order to align with identified funding and project cost.	12	3. Identify secondary mitigation and review with BART if additional cost pressures arise as applicable. 4. VTA CFO continues to perform stress test of the financial plan to address potential cost increases.
BSV-036	General construction labor shortage / labor premiums resulting in delays or increased cost	With so many on-going concurrent projects in the state, and the potential for more projects ramping up due to Federal /State stimulus to create jobs, there may be a shortage of skilled labor to support aggressive project milestones. In addition, competition of resources for skilled labor (operators, electricians, tunnel moles, etc.) and equipment creating the need to pay a premium.	12	2. Continue to monitor economic trends. 3. Continue project public outreach efforts.

Risk ID	Risk Title	Risk Description	Risk Score	Action Items Description
BSV-152	Truck traffic volume for disposal of muck from the tunnel resulting in additional costs	<p>Cause: Muck disposal constrained by number of trucks per day (revised NSEE cost estimate already includes cost of muck disposal via traditional haul/disposal (i.e., at disposal sites with added cost) via trucks at market rate.)</p> <p>Risk: Muck disposal limited by number of trucks per day, impact to public traffic requiring additional work constraints or limitations.</p> <p>Impact: Eventual disposal taking longer than anticipated resulting in additional cost may be higher than currently estimated due to actual volume of trucks at West Portal.</p>	12	<p>4. Investigate market capacity of trucks and establish potential overflow location(s) on-site.</p> <p>5. Continue to progress Salt Ponds as alternative muck disposal option independent of BSVII program. Three options have been looked at to get the material to the ponds (Rail, Truck and Pipeline). All of these have cost impacts and require environmental clearance.</p> <p>6. Further explore Local Quarries option - at least 2 local quarries have been contacted and are interested in taking all of the material for use in reclamation projects. Both options could be handled with trucks. One of the sites has an abandoned rail spur that might be an option but would require additional environmental approval.</p> <p>7. Further explore Dirt Broker(s) option that focuses on finding a broker who could connect developers/ project site(s) that needs material.</p> <p>8. Continue to explore muck disposal via UPRR corridor from the project site to locations (near and far). This could eliminate the use of trucks but also requires additional environmental clearance.</p>
BSV-170	CP2 Stage 2 scope cost increases VTA CP2 budget as identified in NSEE application	<p>Cause: During the design development, potential challenges arise with scope growth, complicated means and methods, and current market conditions</p> <p>Risk: Uncertainty with Tunnel and Trackwork scope resulting in lump sum cost higher than VTA's preliminary baseline</p> <p>Impact: Cost increases, schedule delays</p>	12	<p>4. Compare Tunnel Package cost proposal with the ICE and update VTA ICE to reflect feedback from comparison.</p> <p>5. VTA Task Force to evaluate Stage 2 options (including off-ramp) for KST contract and update VTA Board on current status of CP2 Stage 2 scope and ongoing negotiations.</p> <p>6. Collaborate on potential optimizations to reduce price of CP2 Lump Sum.</p>
BSV-005	Unanticipated damage to historic buildings & other structures	<p>Cause: Vibration and/or settlement during construction</p> <p>Risk: Unanticipated or inadvertent damage to buildings (especially historic buildings) and structures</p> <p>Impact: Added cost to mitigate; along Santa Clara St, but extending to the area encompassed by settlement trough.</p>	12	<p>8. KST to develop instrumentation and monitoring program for the sensitive structures. VTA to support KST in obtaining access to install and monitor instrumentation as appropriate.</p> <p>9. Contractor to prepare mitigation design following findings of PPS.</p>
BSV-138	Design interfaces between GEC and KST leads to integration issues, errors, and disputes.	Interdependency of CP2 PDB design with VTA GEC design with complex analysis/design interfaces has the potential for misalignment of design expectations, confusion over roles/ responsibilities, errors and omissions, poor integration of the various designs at contract interface points, and resultant impacts to construction cost/schedule including increased risk of claims.	12	<p>2. Coordinate with GEC and KST design teams to work within one consolidated model and properly integrating/ managing design and contract interfaces.</p> <p>5. Conduct additional coordination with CP teams to address changed interfaces and minimize interface issues.</p>

Figure 18. VTA Top Ten Project Risks

Appendix 2. Action Items for this reporting period

No.	Item Description	Responsible Party	Date			Status / Action Required
			Identified	Due	Complete	
155	Notify PMOC when EWP's are executed	VTA	2/8/2024	10/9/2025		In-Progress 9/11/2025 – VTA updated PMOC about latest status of EWP's
175	Provide a list of Request for Variances pertaining to system safety and security	VTA	10/10/2024	10/9/2025		In-Progress VTA to provide as the RFV's are approved
180	Set up a meeting to revisit the risk register in light of the cost savings, contracts re-packaging, etc.	VTA	2/20/2025	10/9/2025		Open
184	Set up a meeting with FTA and PMOC to review and discuss the Rough Order of Magnitude (ROM) estimates for Levels 1 and 2 cost saving candidates.	VTA	4/10/2025	8/14/2025	07/24/2025	Closed Meeting held July 24, 2025
190	Set up a focus meeting to discuss and review the schedule for EWP 3B – West Portal Launch Structure and fabrication / delivery of TBM	VTA	6/12/2025	10/9/2025		Open
191	Set up a meeting with FTA and PMOC to review and discuss the Rough Order of Magnitude (ROM) estimates for Level 3 cost saving candidates.	VTA	6/12/2025	8/14/2025	07/24/2025	Closed Meeting held July 24, 2025
192	Set up a meeting with PMOC to discuss Program Management Procurement.	VTA	6/12/2025	10/9/2025		Open
193	Provide detailed organization charts for BSVII.	VTA	6/12/2025	10/9/2025		Open
196	Set up a focused meeting with FTA and PMOC to review and discuss the Rough Order of Magnitude (ROM) estimate for Scenario 1 Cost Savings;	VTA	9/11/2025	10/9/2025		Open
197	Set up a focused meeting with FTA and PMOC to review and discuss KST's proposed Contract Package #2 (CP2) "mine and line" cost and VTA's ICE; and	VTA	9/11/2025	10/9/2025	11/20/2025	Closed Meeting held November 20, 2025
198	Provide change orders 11 and 12 including the following documents for each change order: <ul style="list-style-type: none"> Determination of merit document. Independent cost estimate Record of negotiations Change order approval document.	VTA	9/11/2025	10/9/2025		Open
199	Provide Job Descriptions for all new BSVII positions	VTA	11/13/2025	12/11/2025		Open

Appendix 3. VTA BSVII Peer Review Final Report



MEMORANDUM

FROM: Chief Capital Megaprojects Delivery Officer, Tom Maguire
DATE: October 6, 2025
SUBJECT: BART Silicon Valley Phase II Peer Review – Final Report

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:

2

- 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).

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 \$1 billion. 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 could include 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.

At-Grade Station and East Portal – Contract CP7A (Santa Clara Station and East Portal)

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.