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 August 31, 2024

PROJECT MONITORING REPORT

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Final – October 2, 2024

PMOC Contract Number: 69319519D000021
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Project Number: 1
Project Type: New Starts
Project Phase: Project Delivery
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OP Nos. Referenced: 1, 25

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TABLE OF CONTENTS

1. Executive Summary

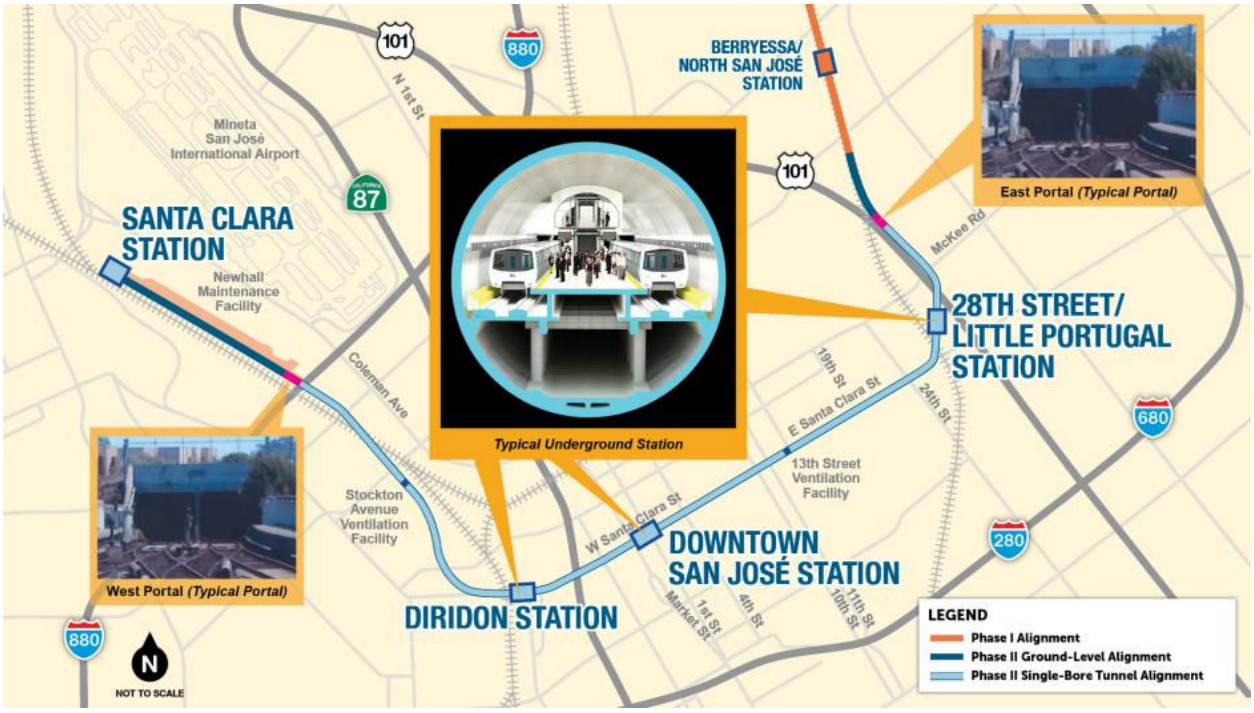
A. Project Description

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 at the Berryessa / North San José BART Station through downtown San José to the proposed Santa Clara Station in the City of Santa Clara.

BSVII includes four stations (three located in San José and one in Santa Clara) along with a maintenance 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 will be paid for with project funds but are included in the procurement for BART Federal Transit Administration (FTA) Core Capacity grant program fleet upgrades.

VTA's BART Silicon Valley Phase II Extension Project includes the construction of a tunnel 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. 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 Santa Clara Valley Transportation Authority (VTA), will be owned by VTA, and operated and maintained by BART. Service is planned to operate in the opening year from 4:00 AM to 1:00 AM on weekdays and from 6:00 AM to 1:00 AM on weekends, with trains every 7.5 minutes during the weekday peak period, every 7.5-15 minutes off-peak during the weekday, and every 20 minutes on evenings and weekends.



B. Tunneling Construction

Construction of the subway tunnel is within the Tunnel and Trackwork contract (Contract Package 2). The tunnel will be built as a single, large-diameter tunnel, commonly called Single-Bore, and will contain two independent track ways, one for each direction of travel. The tunnel will be excavated by a Tunnel Boring Machine (TBM). The TBM is an electrically powered machine that removes soil, rocks, and debris to create the underground tunnel. It features a cutter-head, which rotates to dig through soil and rock. Excavated material is removed through a conveyor system within the machine. At the stations, mining techniques will be used to excavate the underground connections between the tunnel and stations (which contain the boarding platforms).

C. 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 Final_Plan_Bay_Area_2040.pdf (planbayarea.org) 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 demonstrate local funding commitment and readiness to receive a grant within two years.

In October 2022, VTA submitted a letter to FTA requesting the BSVII project be allowed to re-enter the New Starts Project Development phase of the Capital Investment Grants (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, 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 2022 New Starts Basis total project cost of $9.318 Billion.

On October 11, 2023, VTA transmitted to FTA/PMOC the BSVII cost and schedule new baselines including a total project cost of $12.237B and Revenue Service Date in 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 $12.746B 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 Engineering Phase in a letter dated March 29, 2024, with a total project cost of $12.746B in year-of-expenditure dollars and a Revenue Service Date (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 $5,098B (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.

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).

CP2 has progressed based on its original procurement. The VTA Board of Directors approved the award of the CP2 Progressive Design Build contract on May 5, 2022. CP2 Limited Notice to Proceed (LNTP) for a 90-day innovations phase was issued on June 9, 2022; NTP1 was issued for Programming Services on September 7, 2022; and NTP1A was issued for Stage 1 Design Professional Services on February 21, 2023. Early Works Packages are progressing through design, pricing, and negotiations to support the launch of the Tunnel Boring Machine (TBM) that was ordered on October 31, 2023.

All major packages other than CP2 were re-evaluated and subject of a Peer Review in November 2022. Since then, VTA has selected Design-Bid-Build delivery for all work previously identified as CP1 – Systems, CP3 – Newhall Yard, Santa Clara Station, and Parking Garage, and CP4 – Underground Stations.

VTA is in the process of determining how this remaining construction work will be packaged for bids. Then it can be communicated to the PMOC and incorporated into the project management documents.

D. Major Issues and/or Concerns

PMOC is concerned that a key VTA BSVII position (Construction Director) is currently vacant. PMOC is aware that the VTA is currently recruiting for this position. PMOC is expecting that the qualifications and experience bar is quite high for this position considering that it will be managing one of the nation's most difficult and challenging underground deep single bore tunnel and stations transit construction project.

PMOC is concerned about the recent and unanticipated vacancy for the key (Quality Manager) BSVII position.

PMOC is suggesting that VTA should consider succession planning and transition planning for staff turnover situations.

PMOC is concerned that VTA may have difficulties filling key positions with qualified transit individuals due to the high demand for transit professionals in the U.S. and especially in the California market.

PMOC is concerned about the delay in executing the UPRR draft Mitigation and Reimbursement Agreement (formerly called the Final Engineering Cost Reimbursement Agreement) prior to the Support of Excavation Early Works at the West portal.

PMOC is concerned with the increase of the cost of the Early Work Package 3 (West Portal/TBM Launch Structure) from $140M estimate in December 2022 to $535M in August 2024 and the impact of the cost increases on the project budget including a major draw from the budget contingency.

PMOC is concerned that the order of magnitude cost saving ideas VTA is considering are not adequate to address the BSVII program funding gap and to allow adequate cost and schedule contingencies.

E. Table 1 Core Accountability Items

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

Project Progress		**Amount ($M)**	**Percent of Total**
Total Expenditures	Actual cost of all eligible expenditures completed to date[3]	$1,091.9	*8.6%*
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 ($)**	**Percent**
Total Contracts Awarded	Value of all contracts (design, support, construction, equipment) awarded: % of total value to be awarded	$1,425	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	N/A	48 (planned)	0

[1] *Includes $1.657 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 and 80 expenditures in Project Development, reported through July 31, 2024, based on accruals.*

2. PMOC Observations and Findings

A. Summary of Monitoring Activities

The PMOC oversight commenced in July 2020. PMOC has since received documents and coordinated with VTA via email and telephone conversations. *This report covers project status, and documents received through August 31, 2024 (and including the July 2024 monthly progress reporting received August 30, 2024). The monthly PMOC oversight call was conducted on September 12, 2024, discussion at which covered those documents received in July 2024.*

VTA submitted their Expedited Project Delivery (EPD) Pilot Program application on April 7, 2021, and FTA/PMOC Risk Workshops were held on May 10-12, 2021. FTA selected the Bay Area Rapid Transit (BART) Silicon Valley Phase II (BSVII) project to advance in the EPD Pilot Program in September 2021 and on October 25, 2021, FTA issued a Letter of Intent (LOI) to obligate funds for BSVII contingent upon VTA meeting specified conditions by October 25, 2023.

In October 2022, VTA submitted a letter to FTA requesting the BSVII project be allowed to re-enter the New Starts Project Development phase of the Capital Investment Grants (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 allowing the extension of pre-award authority to the activities that are not allowed under Project Development phase of the New Starts (NS) CIG program, activities such as long lead procurement and construction.

On October 11, 2023, VTA transmitted to FTA/PMOC the BSVII cost and schedule new baselines including a total project budget of $12.237B and Revenue Service Date (RSD) in 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 $12.746B and a recommended RSD of February 2039.VTA adopted the results of January 2024 Risk review and formally requested FTA's approval to enter Engineering Phase in a letter dated March 29, 2024, with a total project cost of $12.746B in year-of-expenditure dollars and a Revenue Service Date (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 $5,098B (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.

As VTA continues to address the funding gap, VTA reported at the September 12, 2024, monthly meeting that they are considering major cost saving ideas that include the following:

Project Area	*Ideas*
Stations	*Station Layout Reconfiguration*
Parking	*Parking Structure Reduction*
Yard & Maintenance Facility	*Storage and Facility Reduction*
Tunnel / Contract Package 2	• *Tunnel Interior Reconfiguration* • *Tunneling from both east and west ends of alignment* • *Alternate build out of portals and other structures* • *Muck off-haul options (Salt Ponds)*
Criteria / Requirements	*Review of design criteria, requirements, and specifications*

B. Project Management Plan (PMP) and Sub-Plans

The following PMP and Sub-Plan documents include documents that were reviewed by the PMOC for BSVII program EPD readiness:

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

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 source 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 following updates to the PMP and sub-Plans to FTA to be reviewed by the PMOC:

Document Title	**Revision**	
	No.	**Dated**
Project Management Plan (PMP)	1	May 1, 2023

Document Title	Revision	
	No.	Dated
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

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, including the following updates to the PMP sub-Plans to FTA:

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

Document Title	Revision	
	No.	Dated
Project Delivery and Procurement Plan	0.G	November 1, 2023

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 OP 51 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-Plans 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 PMP and sub-plans. VTA submitted responses to FTA/PMOC comments on PMP and Sub-plan on July 31, 2024.

At the September 12, 2024, monthly meeting, VTA reported the following Status:

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

C. Management Capacity and Capability

Refer to Section B above for revision and submittal status of the Management Capacity and Capability Plan (MCCP) and other PMP Subplans to support VTA's New Starts request to enter Engineering.

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 MM/W 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.

At the September 12, 2024, monthly meeting, VTA presented the VTA's BART Silicon Valley Phase II Extension Program Organization and provided the following updates:

- *Made an offer to a candidate for the VTA Construction Director position with an anticipated start date in early October 2024. .*
- *Actively recruiting for the key (Quality Manager) BSVII position currently filled by an interim Quality Manager.*

D. 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 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 September 12, 2024, monthly meeting, VTA reported the following NEPA / Environmental Mitigations Status:*

- *Ongoing preparation of the quarterly Environmental Commitments Record (ECR)*
- *Ongoing review of KST submittals for conformance with environmental requirements*
- *Ongoing implementation of the Archaeological Testing Program*

E. 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), Santa Clara Station/Newhall Yard (CP3), and Underground Stations (CP4).

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 on December 31, 2022, pending reevaluation 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), Santa Clara Station/Newhall Yard (CP3), and Underground Stations (CP4).

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

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 the following table for the four contract packages included in baseline contracting plan.

Milestones		Contract Packages			
		CP1	CP2	CP3	CP4
Request for Qualifications	RFQ Release	2/26/21	12/29/20	9/13/21	6/29/21
	SOQ Response	5/18/21	3/19/21	11/30/21	9/23/21
	Shortlist	6/30/21	5/11/21	2/3/22	RFQ was cancelled 3/1/2022.
Request for Proposals	Pre-Final	4/15/22	7/19/21	5/20/22	
	Final	RFP was cancelled 12/31/2022.	9/24/21	RFP was cancelled 12/31/2022.	
	RFP Response		12/10/21		

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

The Final Tunnel and Trackwork (CP2) RFP was released on September 24, 2021, with the final addendum to this RFP released November 24, 2021. BART Silicon Valley Phase II Tunnel Partners (B2TP) and Kiewit Shea Traylor (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. Amendment #1, valued at $144M was executed in October 2023 for the Tunnel Boring Machine Purchase Order.

The Construction Management Services (CMS) Request for Proposal (RFP) was released on September 25, 2023. 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.

At the September 12, 2024, monthly meeting, VTA provided the following Project Delivery Method and Procurement Status:

- *Project Delivery Method:*
  - *Systems: Design-Bid-Build. PE complete, 60% design underway.*
  - *Facilities: Design-Bid-Build. PE complete, 60% design underway.*
- *CP2 Tunnel & Trackwork - Progressive Design-Build, Contract V20221*
  - *Contract executed 5/5/2022.*
  - *LNTP executed 6/9/2022.*
  - *NTP1 issued 9/7/2022 for Programming Services*
  - *NTP1A issued 2/21/2023 for Stage 1 Design Professional Services. Design underway.*
- *Railcar Procurement Update*
  - *Procurement of 48 vehicles for BSVII*
  - *This is in addition to the 60 vehicles for* Silicon Valley Berryessa Extension *(SVBX)*
  - *784 Fleet of The Future (FOTF) railcars delivered to BART.*
  - *Alstom will begin delivering the 48 vehicles for BSVII in 2025*

F. Design

VTA has been progressing designs and reassessing the division of scopes of work for all major packages other than CP2.

CP2 Tunnel and Trackwork

At the September 12, 2024, monthly meeting, VTA noted the following progress:

- *Ongoing design optimization process to evaluate possible savings.*
- Advance Partial Design Units (APDU):
  - APDU 2 Pre-Cast tunnel liner 100% complete design – In VTA review.
  - *APDU 3C - West Portal U-Wall SOE Rev. 2 – VTA verification for Approved for Construction (AFC) complete, revision pending.*

- *APDU 3D – West Portal Caterpillar SOE Final Design Rev. 2– VTA verification for Approved for Construction (AFC) complete, revision pending.*
- *APDU 3E – West Portal Ground Improvement Design Rev. 2 - VTA verification for Approved for Construction (AFC) complete, revision pending.*
- APDU 5A - DTSJ Enabling Work (Civil & Maintenance of Traffic (MOT)) – 100% Rev. 1 design in VTA/Stakeholder review.
- APDU 8B – East Portal Enabling Works - Over the Shoulder (OTS) review of 85% complete, comment resolution in progress.
- APDU 11B – West portal Temporary Power High Voltage Substation - 85% design review complete, VTA/Stakeholder review in progress.
- APDU 12A – Diridon Station Enabling Works and Utilities – APDU 12A Rev. 1 pending.
- APDU 14 – 28th Street Station Enabling Works – APDU 14 Rev. 1 pending.
- APDU 20 – Track and Tunnel Alignment– Comment resolution on 100% complete. Updates to D20 expected.

- *KST Design paused to evaluate optimizations.*
  - D05 – Program-wide Specifications – 85% review complete, resubmittal required, *not paused*.
  - D10 – Bored Tunnel Design –85% design review complete, KST reviewing VTA comments, *not paused*.
  - D15 – Tunnel Internal Structures - 85% design review complete, *paused*.
  - *D20 – Track and Tunnel – 85% design review complete, KST reviewing VTA comments, 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.*
  - *D45 – West Portal Design –85% design paused.*

Program-wide, Facilities and Systems Engineering

At the September 12, 2024, monthly meeting, VTA noted the following progress:

- *Design resources "pivoted" to evaluating optimization proposals by KST and MMW.*
- *Producing engineering studies as part of the MMW optimization proposal evaluation*
- *Reviewing the program designs for cost saving candidates and evaluating their feasibility and clarifying their ROM $ savings*
- ▪ *Participating in stakeholder meetings and finalizing the report in response to the referral letter from VTA.*
- *Continue the collaborative development of interface design requirements definition (KST & GEC).*
- *Supporting BART engagement by participating in technical working groups.*
- *Implementing changes to the technical requirements within the BSVII Program DCM*

G. Value Engineering and Constructability Reviews

VTA conducted a Value Engineering (VE) workshop in early 2020 based upon the 10% design (submitted December 2019) which consisted of a revised design of a 53-foot diameter deep single bore running 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 biddability and buildability of the EPD configuration.

VTA conducted a peer review September 22, 23, and 25, 2020. VTA established action items to implement based on the peer recommendations and is tracking the implementation of those action items in their risk register.

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.

Considering the FTA approval of 40% funding participation for the project, the PMOC and the VTA have discussed an informal Value Engineering workshop to examine potential cost savings that could be realized by further examination of project cost elements and value engineering suggestions and considerations. Real Estate Acquisition and Relocation

Refer to Section B above for revision and submittal status of the Real Estate Acquisition Management Plan (RAMP) 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 September 12, 2024, monthly meeting VTA presented a high-level summary, as of July 2024, of the Real Estate Acquisition / Relocation Status per the following Real Estate Summary Table:

PROJECT ACQUISITION STATUS											
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: *	*77*	*28*	*49*	*18*	*4*	*9*	*1*	*2*	*15*	*37*	*20*
Type of Take: Quantity											
BPE ** & Other Takes:	*4*		*4*	*1*		*2*			*1*	*3*	
Full Fee:	*9*	*7*	*2*	*1*					*1*	*15*	*9*
Other Multiple Takes (Easement/Fee):	*3*	*1*	*2*				*1*		*1*	*15*	*11*
Tunnel Easement:	*47*	*20*	*27*	*16*	*3*	*1*		*2*	*5*		
Roadway Easement:	*3*		*3*						*3*		
Utility Easement:	*4*		*4*						*4*		
Temporary Construction Easement:	*7*		*7*		*1*	*6*				*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

PROJECT ACQUISITION STATUS											
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: *	*77*	*26*	*51*	*16*	*7*	*10*	*0*	*3*	*15*	*37*	*13*
Type of Take: Quantity											
BPE ** & Other Takes:	*4*		*4*	*1*		*2*			*1*	*3*	
Full Fee:	*9*	*7*	*2*	*1*					*1*	*15*	*9*
Other Multiple Takes (Easement/Fee):	*3*		*3*	*1*				*1*	*1*	*15*	*4*
Tunnel Easement:	*47*	*19*	*28*	*13*	*6*	*2*		*2*	*5*		
Roadway Easement:	*3*		*3*						*3*		
Utility Easement:	*4*		*4*						*4*		
Temporary Construction Easement:	*7*		*7*		*1*	*6*				*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

During the September 12, 2024, monthly meeting VTA reported the following changes for July 2024:

1. *Possession of B3236 Multiple Takes.*
2. *Possession of B4001 Tunnel Easement.*
3. *Updated the "Parcels in Acquisition Process" for Tunnel Easements and Multiple Takes.*
4. *A number of Businesses and Tenant Relocations Completed*

During the September 12, 2024, monthly meeting VTA reported the following progress as of July 2024:

- *Legal/Plats Approved: 81%*
- *Appraisals Completed: 78%*
- *Offers made: 77%.*
- *Purchase Agreements Signed: 36%*

H. Public Involvement/Outreach/Communications

At the September 12, 2024, monthly meeting, VTA provided the following Public Involvement/Outreach/Communications updates:

- ***Public and Stakeholder Meetings and Presentations***
  - *28th Street/Little Portugal Stakeholder Tour (September 16)*
  - *Stakeholder Engagement*
  - *Community Working Group joint meeting (September 18)*
  - *Downtown/Diridon Construction Transportation Management Plan Stakeholder Engagement (ongoing)*
- ***Communications and Public Relations***
  - *Project Microsite Launched: vtabart.org (August 2024)*
  - *Congressional Project Funding Update (August 2024)*
  - *Thriving Business Program Launch (Fall 2024)*
  - *Blogs & Social Media*
- ***Tabling Events***
  - *Viva Calle (September)*
  - *Santa Clara Parade of Champions (October)*

I. Third-Party Agreements and Utilities

Refer to Section B above for revision and submittal status of the Third-Party Agreement Management Plan and other PMP Subplans to support VTA's New Starts request to enter Engineering.

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 the 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 September 12, 2024, monthly meeting, VTA provided the following Third-Party Agreements updates:

- *VTA and UPRR have resolved all comments on the draft Mitigation and Reimbursement Agreement for West Portal Early Works, except one comment regarding UPRR encroachment in VTA property which should be deferred and resolved in the next C&M agreement. This issue has been escalated to VTA executive leadership for resolution with UPRR executives.*

- *The total number of Third-Party Agreements is now 43.*
- *Critical Agreements prior to FFGA: 31*
  - *30 Executed, and 1 Open*
  - *The open critical agreement (UPRR Mitigation and Reimbursement Agreement for West Portal Early Works) is anticipated to be executed by late October 2024 with a Need by Date of December 13, 2024*
- *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)*

As noted in previous reports, VTA is pursuing a re-use strategy for the tunnel spoils that will require environmental clearance (by a lead agency other than FTA) and permits prior to implementation of that sustainability solution. The latest Third-Party Agreement tracking log has a separate tab that identifies associated permits needed for the re-use of the tunnel spoils at the South San Francisco Salt Pond. This is regardless of the funding source for the environmental clearance and with the understanding that if not obtained (either by BSVII or others), the contractor will use alternative disposal.

Summary of Utility Relocation Design and Construction Progress

LOCATION	RELOCATIONS DESIGN	RELOCATIONS IN CONSTRUCTION
OWNER LED RELOCATIONS		
West Portal / NHY / SCS	7	3
Diridon Station	8	6
Downtown San José Station	5	2
28th Street / Little Portugal Station	7	0
East Portal	5	0
Sub Total	**32**	**11**
CONTRACTOR LED RELOCATIONS		
West Portal / NHY / SCS	3	0
Diridon Station	3	0
Downtown San José Station	0	0
28th Street / Little Portugal Station	3	0
East Portal	2	0
Sub Total	**11**	**0**
Total	**43**	**11**

During the September 12, 2024, monthly meeting VTA reported the following:

- *West Portal:*
  - *PG&E 115kV interconnection – PG&E Construction 60% complete*

- *Cogent/Sprint final design package in-progress – easement pending.*
- *PG&E OHE construction to start in September.*
- *Zayo OH relocation final design package in-progress*

- *Diridon Station and West Vent Shaft:*
  - *Zayo construction in-progress*
  - *AT&T construction in-progress*
  - *SJWC construction complete*
  - *PG&E Gas relocation in Montgomery to start in September.*
- *Downtown Station:*
  - *PG&E gas construction complete*
  - *AT&T Construction NTO is with VTA for execution.*
- *East Portal:*
  - *SJWC relocation design in progress*

J. Construction

During the September 12, 2024, monthly meeting VTA reported the following early works procurement / negotiations activities and status of progress:

- Early Works Projects – Procurement / Negotiations:
  - EWP 2A – Precast Final lining, Material & Plant Procurement: negotiations ongoing.
  - EWP 3A – West Portal Initial Sitework: Construction ongoing.
  - EWP 3B – West Portal Sitework (Phase 2): negotiations ongoing.
  - EWP 3C.1 – Preparation for West Portal Enabling Works: Processing long-lead submittals.
  - *EWP 7A – West Portal Instrumentation & Monitoring: baseline monitoring started.*
  - EWP 9A – TBM Tunnel Support Equipment: negotiations ongoing.
  - *EWP 11A – West Portal TBM and Plant Power: KST reviewing/approving equipment shop drawing packages.*
  - *EMP 11B – West Portal TBM and Plant Power Phase 2: KST receiving/reviewing the initial equipment shop Drawings.*
  - Construction – West Portal:
    - *Started underground utilities:*
      - *Electrical duct bank and vaults*
      - *Sanitary sewer and storm drain*
      - *Industrial Water*
  - *Continued Soil Treatment and Site Grading operations (structural fill and AB placement)*
  - *Hazardous Material Removal (soils containing lead, asbestos pipe, oily sludge) on-going.*
  - *Completed installation of Instrumentation and Monitoring Devices at existing UPRR track; started 90-day baseline data collection.*
  - *Updating VTA policies and procedures – Construction Administration*
  - Ongoing weekly Construction meetings with KST

- Construction – Facilities–Downtown San José, Diridon Station, 28th Street/ Little Portugal:
  - Property protection assessment development ongoing.
  - Developing enabling Works packages for the station facilities
  - Completed additional geotechnical investigation (borings) at Downtown and Diridon BOH locations.
  - *CTMP and CSA planning and coordination with KST on-going*

- Construction – Project-wide:
  - KST developing Pre and Post Construction Property Survey plans.
  - Reviewing obstructions report/plan for existing structure foundation investigations along the tunnel alignment.

K. 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 a separate VTA procurement.

On May 2, 2024, the VTA Board of Directors authorized the General Manager/CEO to enter into an agreement with the San Francisco Bay Area Rapid Transit (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.

At the September 12, 2024, monthly meeting, VTA reported that Alstom will begin delivering the 48 vehicles for BSVII in 2025.

L. Project Cost

VTA transmitted to FTA/PMOC on October 11, 2023, their new baseline cost estimate that 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 OP 33 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 a Revenue Service Date (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 is summarized below.

SCC	Title	Cost Estimate – YOE (in $M)

10	Guideway & Track Elements	$2,900
20	Stations, Stops, Terminals, Intermodal	$2,037
30	Support Facilities: Yards, Shops, Admin. Buildings	$352
40	Sitework & Special Conditions	$582
50	Systems	$1,409
	Construction Subtotal (10 – 50)	**$7,280**
60	ROW, Land, Existing Improvements	$241
70	Vehicles (48)	$205
80	Professional Services	$2,973
	Subtotal (60 – 80)	**$3,419**
90	Unallocated Contingency	$1,657
100	Finance Charges	$390
	TOTAL (SCC 10-100)	**$12,746**

VTA has reported expenditures through July 31, 2024, including accruals, which total $1,091.9M. 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 $1,425M through July 31, 2024.

At the During the September 12, 2024, monthly meeting VTA reported the following Budget / Cost updates for the July 2024 reporting period:

- *No changes to budgets in current period.*
- *Budget updates / transfers in process to reflect executed CP2 amendments.*

M. Project Schedule

VTA provided a July updated schedule with a data date of 01Aug24. A full analysis was completed on this schedule.

The new VTA baseline schedule has a target Revenue Service Date (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 12MAY37, and "FFGA RSD" with a date of 28FEB39 have remained the same. The Substantial Completion (Completion of Phase 2 Testing, Systems (CP1) Contractor Oversite by BART) activity has been removed and replaced with "Systems Substantial Completion". The date for this activity has been pushed from 09NOV35 to

29JAN36, a push of 52 working days. The start of BART OCC Validation has also been pushed out to the first quarter of 2036. Due to the change in Systems Substantial Completion the Project Contingency was decreased to keep the RSD date the same.

VTA noted that the critical path excluding the contingency and reserve includes the following items:

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 oversite
8. BART OCC Validation / Testing

The near-critical items as of this update are:

1. CP2 – TBM procurement, fabrication, and delivery
2. TBM Plant temporary power at the West Portal

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

The critical path on the overall schedule has total float at 0. CP2 Newhall Yard Enabling Works I&M Baseline Monitoring is driving the critical path. This activity has lost 52 working days this update with the estimated finish date going from 13AUG24 to 25OCT24. This path leads to the TBM activities and the remainder of the critical path.

Within the Program Management and Administration schedule the LOE activity for Environmental Mitigation - All CPs has been added to the schedule and is on the critical path.

The ROW, Design and Third-Party schedules have a mix of Duration percent complete and Physical percent complete. With Physical percent default, the percentage must be manually entered along with the actual finish date. It appears as if the information is not being manually entered as the percentages have remained at zero. This continues to be an issue as the percent complete is not being managed.

In the ROW schedule there have been 51 activities with new Original Durations. There are (37) activities that have actual start dates but are showing 0% complete. This number has increased from last month. These activities have a Physical % which mean they need to be manually adjusted each update with a percentage and it appears this is not being done. There are 54 activities this period with no progress and 17 with diminishing progress. There are no activities on the longest path.

In the Design schedule there are activities indicating 100% however have no actual finish dates and have Expect Finish Constraints assigned to them. There are 9 activities that have actual start dates but are showing 0% complete. These activities have a Physical % which means they need to be manually adjusted each update with a percentage, and it appears this is not being done. There are no design activities on the critical path.

In the Utility schedule there was an added activity for PG&E Connect 115 KV Temporary Power in the TBM Power section of the schedule. Original durations have been increased for the Utility Owner Construction on 7 activities.

In the Third Party schedule the duration for Mitigation and Cost Reimbursement Agreement for West Portal has been reduced to 454 from 738 working days. These are activities that have a Physical % type and are not being manually adjusted with an update for a percentage.

Vehicles & Parking: The activity for the Project Closeout has been added to the schedule. The milestone for Ready to Receive Excavated Material has been pushed out by 52 working days. Vehicle Testing / Commissioning is on the longest path.

In the Testing and Commissioning schedule the Original Duration for LOE activity Revenue Service Phase has been reduced from 828 to 776. The activity for Project Contingency has been reduced from 312 to 260.

CP1 Systems Schedule: there are 6 milestones with variances including the Systems Substantial Completion which has moved out by 52 working days.

For the CP2 Construction: Three As built activities have been added for Enabling Works. Three In Progress activities were added also for Enabling Works. Two Planned activities were added for West Portal Fit-Out Ancillary Building Construction and West Portal Fit-Out Ancillary Building. Fourteen activities have had their Activity Descriptions changed. Four activities have diminishing progress this period, TBM Order to Launch LOE, CP2 Construction Contract LOE, Santa Clara Station Enabling Works Site Grading and CP2 Newhall Yard Enabling Works I&M Baseline Monitoring. There were five activities for Enabling Works that could have started however did not. Sixteen milestones are showing variances, and they have all been moved out. There have been relationship changes made to this schedule. There are activities without finish relationships.

For Yard/SC Station: Interface Milestone Yard/SC Station Ph2/Systems Ph2 is the start of the path of loss of 52 working days. There were 32 milestones with variances to their dates. All have been moved out. There one activity on the longest path and that is Yard/SC Station NTP. Previously there were no activities on the longest path.

For the Underground Stations (CP4): There were 9 milestones with variances to their dates. All have been moved out.

During the September 12, 2024, monthly meeting VTA reported the following Project Schedule updates for the July 2024 reporting period:

- *Major critical path elements include the TBM Launch Structure, TBM Mining, Tunnel Interior, and West Portal structures followed by Systems Construction/Testing.*
- *Critical path extended by 2.5 months.*
- *Project schedule contingency was consumed (2.5 months) to mitigate critical path push.*

N. 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 on-going risk review meetings with project and discipline teams, updating risk response plans and risk register. VTA has included the FTA and PMOC in the BSVII Risk review sessions for May, June, July, August, September, and October 2023. *VTA continues to include the PMOC in their monthly risk review meetings going forward.*

VTA has indicated, 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. As of the risk workshop held in January 2024, this register has not been provided to PMOC.

The project risk profile may well have changed either favorably or unfavorably since the EPD submission and is likely 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) approved innovations. The Entry to Engineering risk workshop for the project was conducted in January 2024 with the FTA, the project sponsor and PMOC. The PMOC has proposed a few 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.*

New Risk:

BSV-218 - Potential for delayed start of EWP 3C pushing critical path work: *This newly added risk captures the uncertainty with budget authorization and/or available funding that could delay NTP of EWP 3C West Portal work, potentially delaying critical path work. The CP2*

team has directed KST to continue with long lead permits to minimize delays and is targeting to go to the Board Meeting for the full value of EWP 3C.

BSV-219 - Reduced Capacity Yard: *This newly added optimization pertains to streamlining the yard, including reducing track capacity to 11x10 car sets instead of 20 and not constructing permanent structures for several buildings at this time. This reduced yard capacity could result in capital cost savings. This concept has been presented to BART, but more discussions are needed before implementation.*

BSV-220 - Refinements PGW-003 - Fire Standpipe to reduce capital costs: *This newly added optimization pertains to providing a manual standpipe system for the project that will result in elimination in fire protection pumps and associated power supply and controls, thereby reducing capital costs. This refinement has been approved in SSRC ROD #02-2024 (6/27/2024).*

BSV-221 - Various CP1,3,4 refinements (PGW-001-2,4-5,8-9) identified by GEC team to reduce costs for CP1, CP3 and CP4 scope: *This newly added item captures the potential opportunities shown below. Next steps include meeting with BART to get their agreement and changing the DCM accordingly.*

- *PGW-001 - Permanent Generators to reduce UPS Backup time.*
- *PGW-002 - Elimination of Blast Relief Shafts at DTSJ Station*
- *PGW-004 - Eliminate SOE Demo at Portals*
- *PGW-005 - Eliminate Stairwell Pressurization*
- *PGW-008 - Reduce Comms Loads on UPS*
- *PGW-009 - Reduce SOE Offset*

BSV-222 - Refinements PGW-006 and PGW-010: *This newly added item captures the potential opportunities shown below. Next steps include meeting with BART and FLSSC to get their agreement with these refinements.*

- *PGW-006 - Combine Fans and Eliminate 1 Fan Plant at 28th Station.*
- *PGW-010 - Eliminate Fan Plant at Diridon West Vent Shaft*

BSV-223 - CP2 Optimization 3.03: Replace current segmental structure into a concept similar to a Box Culvert: *This newly added optimization pertains to replacing the current segmental structure with a concept similar to that of a Box Culvert with earthen fill on the sides supporting the tracks. This has potential for significant capital cost savings. Next steps include coordinating with the CP1 team on box culvert feasibility for EVS design and the potential to reduce area for ventilation.*

BSV-224 - CP2 Optimization #6.01 Raceways on PCTL and Conversion to MC Cable: *This newly added optimization pertains to transferring raceways from the center wall and walkway to conduit and MC cable in 'snake' tray that is mounted on the PCTL. This concept could reduce project costs.*

BSV-225 - CP2 Optimization #7.03 Utility supply: *This newly added optimization pertains to VTA paying directly for temporary utilities (water, sewer, gas, electricity, etc.). VTA may get*

preferred rates and would pay directly to the utility supplier to avoid KST markups. This could result in project cost savings.

BSV-226 - CP2 Other Various Optimizations moving forward: *This newly added item captures the potential opportunities shown below. For Item 1.02, VTA to evaluate potential ROW and environmental implications and coordinate with City of San Jose. For Item 1.04, VTA to revise the instrumentation requirements in the TRs as to spacing and the type of instrumentation required in the S- Curve area.*

- *1.02 - Optimization Idea #2: DTSJ Circular East Vent Shaft*
- *1.04 - Optimization Idea #4: I&M Spacing & Quantities*
- *2.01 - Optimization Idea #1: Fault Zone Special Segment*
- *2.02 - Optimization Idea #2: Adit Skew*
- *2.03 - Optimization Idea #3 Standard PCTL + Portal PCTL/Station Design in Tunnel (TVA)*
- *4.01 - Optimization Idea #1: Architectural TR's for Concrete Color and Finish*
- *6.04 - Optimization Idea #4: Increase Lighting Spacing*
- *7.01 - Optimization Idea #1: OSHA 30-H Training vs KST Training*

BSV-227 - CP2 Other Remaining Optimizations being evaluated: *This newly added item captures the potential opportunities shown below. These optimizations are currently under evaluation.*

- *1.01 - Optimization Idea #1: DSTAT WV&ES Relocation and Reconfiguration*
- *5.02 - Optimization Idea #2: Remove West Portal Intrusion Wall*
- *5.05 - Optimization Idea #5: Use Permanent Slab as Working Slab*

BSV-228 - Station Finish and Alternative Material Cost Reduction Opportunities #11 to 29: *This newly added optimization pertains to various cost reduction opportunities for station finishes by using alternate material, GFRC, miscellaneous metals, illuminated handrail, GKD mesh, feature wall at SCSTA, architectural barrier fencing, garage façade, roof sections, protected membrane roof system at DSTAT, modified bitumen roof, parapet cap at DTSJ, fire rated glazing, skylights, metal stud and framing, terrazzo, terracotta, finished ceiling and lighting. VTA is deciding which opportunities to incorporate into the design.*

Retired Risk:

BSV-123 - Potential for NEPA Re-evaluations to take longer than anticipated: *Design changes proposed as part of innovations and/or additional third-party requests may require additional environmental clearances or slow down the environmental re-evaluation process. As CEQA approval was obtained in June 2024 and NEPA document approval was obtained in March 2024, this risk is now retired.*

Increased Risk:

BSV-138 - Design interfaces between GEC and KST leads to integration issues, errors, and disputes: *This risk pertains to interdependency of CP2 PDB design with VTA GEC design. Various design optimizations are being identified and currently being implemented to reduce construction costs. As these have the potential for complicated design interfaces and require additional focus, risk probability has increased.*

BSV-154 - UPRR extended coordination delays PDB contractor during design and construction: *This risk pertains to the possibility of UPRR being non-responsive or otherwise delaying the design builder's completion of design/construction activities. As the need by date is now late 2024 prior to the start of construction of slurry walls for the West Portal SOW, risk probability has increased.*

BSV-171 - Scope shifts between CP's leads to potential delays: *Scope roles/responsibilities are anticipated to shift within various contracts which could result in missed scope and/or lack of clear ownership. This could result in additional cost and schedule delays. As there is now higher potential for interface issues due to implementing scope shifts along with optimizations, risk probability has increased.*

BSV-184 - Community request for changes to 28th Street station facilities, architectural and aesthetics elements: *This risk pertains to community concerns regarding the design of station headhouse and location of BOH which could result in design changes to above-grade elements, there-by causing redesign costs and delays. Based on stakeholder engagement, requested design changes are envisioned, and risk probability has increased as a result.*

Reduced Risk:

BSV-168 - Construction staging of tunnel operation at Newhall yard: *As the tunnel contractor will occupy approx. 3/4 of the yard site for tunnel operations staging, this risk captures the potential for delayed vacation of the yard area by the time the yard (CP3) contractor gets onboard. As we now have control of the CP3 release date, risk probability has decreased.*

Provided in the table below are the Top 10 risks as reported by VTA for the period (please also refer to Attachment E for additional risk detail).

VTA July, 2024 Risk Register Top 10		
Risk ID	Risk Title	VTA Risk Score
BSV-196	Failure to secure a lump-sum price with KST resulting in Off-ramp.	20
BSV-203	Timely readiness and cost of the West Portal TBM launch facility.	20
BSV-211	Opportunity for eliminating DTSJ secondary HH.	15
BSV-005	Unanticipated or inadvertent damage to historic buildings, critical utility & other structures due to vibration and/or settlement.	12
BSV-029	VTA financial capacity / funding plan to finance potential project cost increases.	12
BSV-036	Shortage of construction labor to support aggressive schedule resulting in competition for resources.	12
BSV-096	Testing and Commissioning delays due to various factors.	12
BSV -138	Design interfaces between GEC and KST leads to integration issues, errors and	12
BSV-152	Truck traffic volume for disposal of muck from the tunnel resulting in additional costs.	12
BSV-154	UPRR extended coordination delays PDB contractor during design and construction.	12
	Threat Opportunity	

During the PMOC monthly meeting held September 12, 2024, VTA presented the following progress updates:

- *Ongoing internal risk review meetings with Program, Project, Discipline Leads and key stakeholders.*
- *Key changes to the Program Risk Register summarized below:*

Change[1]	Risk	Notes
Retired	• BSV-205 - Potential for litigation on approved NEPA Re-evaluation and CEQA Addendum	• No litigation on approved CEQA addendum. Risk is now retired.
Upgrade	• BSV-218 - Potential for delayed start of EWP 3C pushing critical path work but within NSEE approved baseline	• The current funding gap resulted in VTA Board initiating a 60-day hold for the Early Works Package (EWP) 3C. The EWP 3C NTP is now pushed approx. 2 months and now anticipated to wait until Oct 2024 Board Meeting. It has potential to impact Program's critical path. Risk probability is increased as a result.
Downgrade	None (see note 1)	
New	• BSV-229 - Unanticipated ground born impact to utilities resulting in damage	• New risk added to split the risk of unanticipated utility damage from the original risk BSV-005 unanticipated damage to historic building and other structures.

Note 1: Only major changes including addition of new risk, retirement of existing risk or change in risk score from one risk zone to the another (i.e., from red to yellow and so forth) are reported in this table. Monthly update to the BSVII Program Risk Register include other changes to the risk scoring.

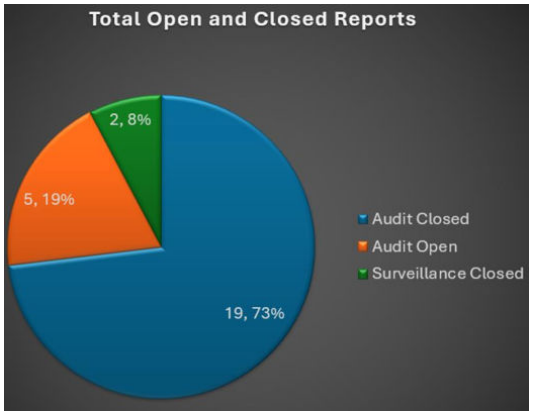
O. Quality Assurance/Quality Control

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.*

During the September 12, 2024, monthly meeting VTA reported the following quality activities:

- *Contract Package-2 KST*
  - *Completed Design Work Plan Audit of KST Design Work Plan Rev. 4.01*
  - *Completed Surveillance follow up to Early Works Audit Part 1 and confirmed governing construction specifications.*
  - *Initiated Early Works Audit Part 2*
  - *Corrective Action Request (KST-CAR-2024-003) on Requirements Verification Traceability Matrix (RVTM) delivery with Design Submittals, CAR resolution in progress with KST*
  - *QA Review Comments*
    - *Asphalt Test Program Plan*
    - *Program Wide Procurement Procedure*
- General Engineering Consultant
  - *Completed Document Control Plan Audit of GEC Document Control Plan Rev. 1, resulted in four findings.*
  - *Corrective Action Request (GEC-CAR-2024-001) on RVTM delivery with Design Submittals, CAR resolution in progress with GEC*
- BSVII Program
  - *Continued Third-Party Utility Coordination Procedure Audit of PMT Third-Party Utility Coordination Procedure Rev. 1*
  - *Continued Document Control Plan Audit of PMT Document Control Plan Rev. 3*
  - *Fully executed Revision 2 of the BSVII Quality Management Plan*
- BSVII Construction Management (CM)
  - *Initiated quality workshop with CM (Bechtel)*
  -

	Closed	*Open*	*Total*
Findings	*93*	*26*	*119*
Observations	*15*	*19*	*34*



P. 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.

The monthly SSRC meetings commenced in January 2021, with the latest meeting held October 25, 2023. 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.

The first FLSSC meeting was conducted on October 7, 2021. FLS (Fire Life Safety) continues to monitor project progress, but there are no significant updates to report. 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.

During the September 12, 2024, monthly meeting VTA reported the following System Safety and Security Risk Management / Certification activities:

- *The Safety and Security team are tracking all potential design changes to capture any safety or security risks that should be considered or evaluated.*
- *Safety and Security Review Committee (SSRC):*
    - *The August 28, 2024, SSRC meeting included the following:*
        - *Updates to the current certification status of KST, including two potential packages ready for SSRC at the September meeting.*
        - *Discussions related to how safety and security is integrated into the Configuration Change process.*
        - *Development of a Threat and Vulnerability Status memo for the PMOC.*
- *Fire Life Safety and Security (FLSS) Activities*
    - *A FLSSC meeting was held on August 20, 2024, to further review potential FLSS issues being tracked including:*
        - *FD comments on the Interim Design Submittal – Fire Life Safety Report*
        - *Potential elimination of stairwell pressurization*
        - *Sprinklers in high-ceiling areas*

Q. Americans with Disabilities Act (ADA)

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

R. 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 is including 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 that program coordination.

No update was provided at the September 12, 2024, monthly meeting. 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.

S. 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 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 September 12, 2024, monthly meeting.

T. Action Items Table

Item		Responsible Party	Date			Status / Action Required
No.	Description		Identified	Due	Complete	
155	Notify PMOC when EWPs are executed	VTA	2/8/2024	3/1/2024		***In-Progress*** *7/11/2024 – VTA notified PMOC about execution of additional EWPs*
164	*Provide PMOC with a job description / qualifications of the Quality Manager position*	*VTA*	*7/11/2024*	*8/8/2024*	*8/7/2024*	***New & Closed***
167	*Provide PMOC with Program Management Services Scope of Work*	*VTA*	*8/8/2024*	*9/12/2024*		***Open***
168	*Provide PMOC status update on coordination with TBM builder*	*VTA*	*8/8/2024*	*9/12/2024*		***Open***
169	*Provide PMOC information about the number of rings for the TBM and basis for the determination of the optimum number .*	*VTA*	*9/12/2024*	*10/10/2024*		***New & Open***
170	*Provide PMOC information about the ring reinforcement (Temperature reinforcement or structural reinforcement).*	*VTA*	*9/12/2024*	*10/10/2024*		***New & Open***
171	*Provide PMOC reason for a single gasket instead of double gasket for the rings for waterproofing.*	*VTA*	*9/12/2024*	*10/10/2024*		***New & Open***

3. 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 10 Project Risks

Attachment F. Project Milestones/Key Events Attachment G. Project Map

Attachment G Project Map

Attachment H, FTA Enter the New Starts Engineering Phase Approval

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
CPUC	California Public Utilities Commission
CSC	City of Santa Clara
CSJ	City of San José
DCM	Design Criteria Manual
EVS	Emergency Ventilation Structure
EPD	Expedited Project Delivery
FLSS	Fire, Life, Safety and Security
FTA	Federal Transit Administration
FOTF	Fleet Of The Future
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
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
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
UPRR	Union Pacific Railroad
VE	Value Engineering
VTA	Santa Clara Valley Transportation Authority

B. Monthly Meeting Agenda

Monthly Coordination Meeting/Teleconference
VTA BART Silicon Valley Extension Phase II
Thursday, September 12, 2024 – 10:00am (Pacific)
Conference Connection: MS Teams

1. Introductions/Roll Call
2. Key Agency-level updates (organization, financial, legal, safety, etc.)
3. Action Items from latest Monthly Call
4. Issues and Concerns from latest Monthly Meeting
5. Project Status
    a. Project Management Organization Updates
        i. PMP and sub-plans
        ii. Management Capacity and Capability
    b. Project Summary Description
    c. Key Project Issues
        i. Key Personnel staffing update
        ii. Construction Management Services Onboarding update
        iii. Program Management Services Procurement Update
        iv. Update on Agreements for Early Works Packages
        v.
    d. NEPA / Environmental Mitigations
    e. Project Delivery Method and Procurement Status
        i. Project-Wide
        ii. Systems DBB
        iii. CP2 PDB
        iv. Facilities DBB
        v. Stations DBB
    f. Design Status
        i. Project-Wide
        ii. Systems
        iii. CP2 – Tunnel & Trackwork
        iv. Facilities
        v. Stations
    g. Real Estate Acquisition/Relocation Status
    h. Public Involvement/Outreach
    i. Third-Party Agreements
    j. Utilities
    k. Construction
    l. Project Controls
        i. Schedule Updates
        ii. Cost and Expenditures Updates
        iii. Change Order Status
        iv. Contingency Status
    m. Project Risk Management
    n. Quality Assurance / Quality Control

    o. System Safety and Security
6. New Action Items
7. Upcoming Monthly Coordination Meetings:
    a. October 10, 2024, 10:00am (Pacific)
    b. November 14, 2024, 10:00am (Pacific)

C. Monthly Meeting Attendees

Organization	Name	E-mail	9/12/2024
FTA Region IX	Susan Ko	susan.ko@dot.gov	x
FTA Region IX	Jean Mazur	jean.mazur@dot.gov	x
VTA	Afshin Abtahi	aabtahi@vtabsv.com	x
VTA	Bernice Alaniz	bernice.alaniz@vta.org	x
VTA	Chris DuVilla	cduvilla@vtabsv.com	x
VTA	Erik Blum	eblum@vtabsv.com	x
VTA	Keith Gilliam	kgilliam@vtabsv.com	x
VTA	Kevin Kurimoto	kevin.kurimoto@vta.org	x
VTA	Khair Amini	KhairMohammad.Amini@vta.org	x
VTA	Monica Born	mborn@vtabsv.com	x
VTA	Nellie Moussa	nmoussa@vtabsv.com	x
VTA	Rob Ostermiller	rostermiller@vtabsv.com	x
VTA	Ronak Naik	ronak.naik@vta.org	x
VTA	Rosemarrie Gonzalez	rosemarrie.gonzalez@vta.org	x
VTA	Samantha Mccleary	Samantha.mccleary@vta.org	x
VTA	Tom Maguire	tom.maguire@vta.org	x
BART	Ni Lee	nlee@bart.gov	x
CPUC	Daniel Kwok	daniel.kwok@cpuc.ca.gov	x
CPUC	Rupa Shitole	rupa.shitole@cpuc.ca.gov	x
WSP	Anthony Murphy	tony.murphy@wsp.com	x
HNTB	Chuck Morganson	cmorganson@hntb.com	x
Bechtel	Linda Miller	ljmiller@bechtel.com	x
WSP	Lurae Stuart	lurae.stuart@wsp.com	x
HNTB	Marcus Ng	mang@hntb.com	x
HNTB	Suresh Kataria	skataria@hntb.com	x
PMOC	Emile Jilwan	emile.jilwan@atkinsrealis.com	x
PMOC	Kyle Knudson	kyle.knudson@atkinsrealis.com	x
PMOC	Laurel Espenlaub	laurel.espenlaub@atkinsrealis.com	x
PMOC	Nadeem Tahir	nadeem.tahir@atkinsrealis.com	x

D. List of Documents Received

Document	Received
SVBX B&A Study Report	*8/25/2024*
2024-08-CA-BSVII-OP25-ProjectMonitoring Report-Draft.docx Comments	*8/28/2024*
2024-09 September BSVII mly agenda.draft.docx Comments	*8/28/2024*
BSVII_Monthly_Progress_Report_July_2024.pdf	*8/30/2024*
VTA BSVII Detailed Schedule_July 2024.pdf	*8/30/2024*
Third party agreement tracking 7/31/24.xlsx	*8/30/2024*
BSVII-ProjectRiskRegister JUL-2024 Clean Draft 08-09-2024.xlsx	*8/30/2024*
VTA BSVII MPS_July_08-26-2024.xer	*8/30/2024*

E. VTA Top 10 Project Risks

Risk ID	Risk Title	Risk Description	Risk Score	Action Items Description
BSV-196	Failure to secure a lump-sum price with KST resulting in Off-ramp.	Cause: KST's unwillingness to accept reasonable risk strategies/sharing within VTA budget. Risk: Failure to agree on lump-sum and come to terms with KST. Impact: Off-ramp with CP2 contract scope, increased interface risk, design completion delays, construction escalation costs, etc.	20	1. Implement EWPs (like West Portal development) as early construction item during Stage 1 to lessen the impacts/delays of implementing an off-ramp. 4. Develop details of off-ramp plan (including options for design completion, novating TBM procurement contract), partial termination, and other procurement packages to reduce costs and complete the remaining Work Packages. 5. Compare Tunnel Package cost proposal with the ICE.
BSV-203	Higher cost of the West Portal TBM launch facility	Cause: Finalized negotiations that have resulted in agreed value of EWPs (3A and 3C). Risk: Higher than anticipated cost and longer time to construct the West Portal facility Impact: Delays to launch of TBM operations	20	3. Implementing partial NTP for KST sub-contractor to start submittals, shop drawings and procurement long lead items prior to start of Caterpillar Shaft construction. Incorporate partial NTP into the schedule to evaluate time savings / critical path. 5. Budget transfer from contingency to augment CP2 budget.
BSV-211	Opportunity for eliminating DTSJ Secondary Headhouse	Cause: VTA's VE study identified elimination of DTSJ Secondary Headhouse Risk: Reduction in capital cost for eliminating DTSJ SH as well as all ROW parcels associated with it Impact: Direct cost savings	15	1. Implement the approved VE and realize savings as part of 60% design estimate.
BSV-005	Unanticipated damage to historic buildings, critical utilities & other structures	Cause: Vibration and/or settlement during construction. Risk: Unanticipated or inadvertent damage to buildings (especially historic buildings), structures and/or utilities. Impact: Additional cost to mitigate; along Santa Clara St, but extending to the area encompassed by settlement trough.	12	8. KST to develop instrumentation and monitoring program for sensitive structures. VTA to support KST in obtaining access to install and monitor instrumentation as appropriate. 9. KST to prepare mitigation design following findings of PPS.
BSV-029	VTA financial capacity / funding plan to finance potential future project cost increases	Project is currently at an early stage of design. Changes in cost may result from further design development and coordination with stakeholders. It is conceivable that future cost estimates will exceed current available funding and/or local funds may expire, necessitating the identification of additional funding sources and/or debt financing. This could result in 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 may create the need to pay a premium.	12	2. Continue to monitor economic trends. 3. Continue project public outreach efforts.
BSV-096	Testing and Commissioning delays due to various factors	Testing and commissioning delays due to: - Insufficient time allocated to the schedule for testing activities. - Unanticipated systems integration/interface issues. - Inadequate installation verification and QA/QC processes implemented. - Failed testing of equipment and/or testing parts requiring major rework. - Improper handoff from other CPs to systems contractor.	12	2. Develop detailed resources loaded schedule for system's testing, commissioning and training activities. 3. Rigorous implementation of lessons learned including integrating BART's Operations (Maintenance and Engineering) team into the design, construction and testing phases of the program. 4. PMT to work with GEC to ensure clear definition of the inspection and test conditions to be included in the CP1/3/4 contract documents as they constitute SOW definition. Also, PMT to work with the CP 2 Management Team to ensure KST technical deliverables clearly specify equivalent requirements for their contracted SOW. As part of the review process with BART and other stakeholders the intent is to give reviewers the opportunity to comment on the stated installation and test conditions specified. 5. Introduce the Rail Acceptance Officer early on during the testing phase. 6. Establish joint testing and commissioning organization, under an experienced systems integration manager. Ensure Project key personnel include: Interface/Integration Manager (Facilities Design), Systems Design Integration and Systems Testing/Start-Up Manager. 7. VTA, BART and other stakeholders jointly develop all technical, operational and maintenance requirements for the rail systems, and fixed facility systems. 8. Develop detailed SOW services for installation verification and QA/QC within procurement contracts.

Risk ID	Risk Title	Risk Description	Risk Score	Action Items Description
				9. VTA and its representatives responsible for defining testing, turnover and acceptance for their integrated testing and pre-revenue demonstration in support of passenger service. 10. Develop an integrated schedule based on contracts NTPs for commencing final design, procurement of long lead items, and construction planning. Schedule must have construction commencing with CP2 by April 2023 with appropriate utility relocations and new services to support TBM launch. 11. Review GEC's Interim Design Submittal Technical Specs for inclusion of T&C requirements 12. Review KST's 85% DU submittals (Tech Specs, RVTM's) for inclusion of inspection/test conditions for respective components.
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	2. Coordinate with GEC and KST design teams to work within one consolidated model and properly integrating/managing design and contract interfaces. 5. Conduct additional coordination with CP teams to address changed interfaces and minimize interface issues.
BSV-152	Truck traffic volume for disposal of muck from the tunnel resulting in additional costs	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.) Risk: Muck disposal limited by number of trucks per day, impact to public traffic requiring additional work constraints or limitations. 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.	12	4. Determine maximum and average truck count per day during TBM mining for removal of spoils. 5. Investigate market capacity of trucks. 7. Establish potential overflow location(s) on-site. 8. Consider weekend, extended hour hauling if required and allowed.
BSV-154	UPRR extended coordination delays PDB contractor during design and construction.	UPRR operates within the railroad easement on VTA property adjacent to the proposed Santa Clara station, West Portal, and Newhall Yard. Applicable UPRR requirements for work adjacent to their facilities will be included in the contract documents. Risk is associated if UPRR is non-responsive or otherwise delays the design builder completion of design/ construction activities.	12	2. Monitor Design Builder progress. 3. Coordinate with UPRR Engineering on various items including joint use maintenance road and relocation of UPRR facilities with the new road, drainage system to accommodate surface runoff from UPRR easement at Newhall yard, and other construction activities such as flagging and construction work zones. 4. Execute Mitigation and Cost Reimbursement Agreement for the West Portal Early Works (aka Final Engineering Agreement) with UPRR. 5. Escalate to UPRR Executive Team if UPRR is non-responsive in the identified timeframe.

Source: BSVII Monthly Progress Report July 2024

F. 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

G. Project Map

U.S. Department of Transportation
Federal Transit Administration

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

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

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

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

Dear Ms. Gonot:

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

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

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

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

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

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

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

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

Local Financial Commitment

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

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

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

Scope, Schedule, Cost, and Technical Capacity

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

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

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

Civil Rights

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

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

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

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

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

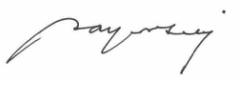
Information Collection and Analysis Plan

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

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

Sincerely,

7/31/2024

X 

Ray Tellis

Signed by: RAYMOND SELVIN TELLIS

Regional Administrator