



VTA's BART Silicon Valley Phase II Extension Project

Santa Clara
Community Working Group Meeting

September 15th, 2022

Agenda

- Welcome & Introduction
- Recent Engagement Summary
- Proposed CP2 Innovations
- Station Refinement Process for Downtown & Diridon
- Potential West Side Underground Concourse Concept
- CWG Member Report Out
- Next Steps



- Ana Vargas-Smith, *Reclaiming Our Downtown*
- Christian Malesic, *Silicon Valley Central Chamber of Commerce*
- Todd Trekell, *Hunter Storm*
- David Schoenwetter, *Santa Clara University*
- Jack Morash, *South Bay Historic Railroad Society*
- John Urban, *Newhall Neighborhood Association*
- Jonathon Evans, *Old Quad Residents Association*
- Luke De Vogelaere, *San José Earthquakes*
- Ron Miller, *Bellarmino College Preparatory*

Upcoming Meetings



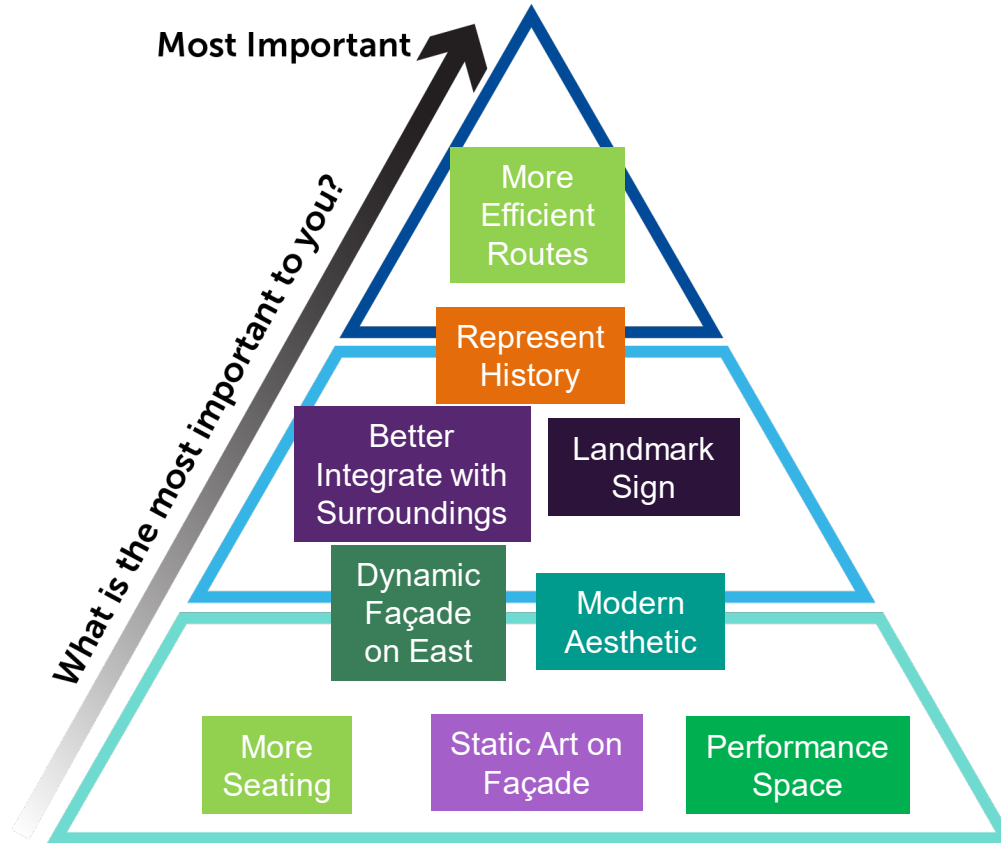
- Upcoming CWG Dates
 - November 15th, 16th, 17th 2022
- VTA Board of Directors vta.org/about/board-and-committees
 - Board of Directors' Workshop Meeting: September 16, 2022, 9:00 am
 - Board of Directors' Meeting: October 6, 2022, 5:30 PM
 - Board of Directors' Meeting: November 3, 2022, 5:30 PM
- Kristen will email alerts for other meetings



Recent Engagement Summary

Erica Roecks, VTA

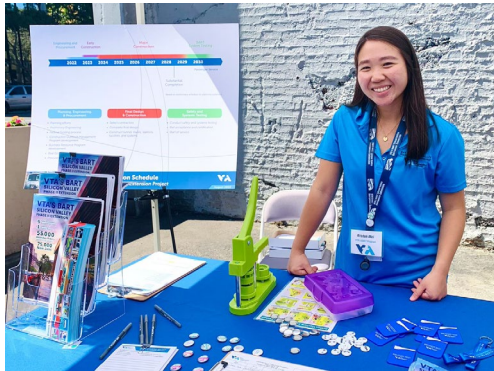
Station Priority Pyramid Group Exercise – Summary



Community Social



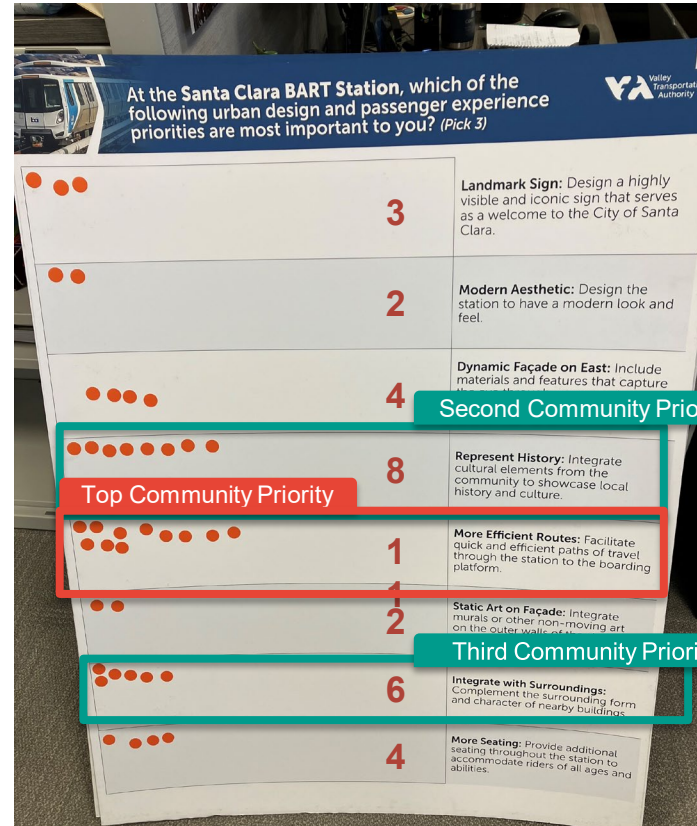
Community Social



Community Social Feedback



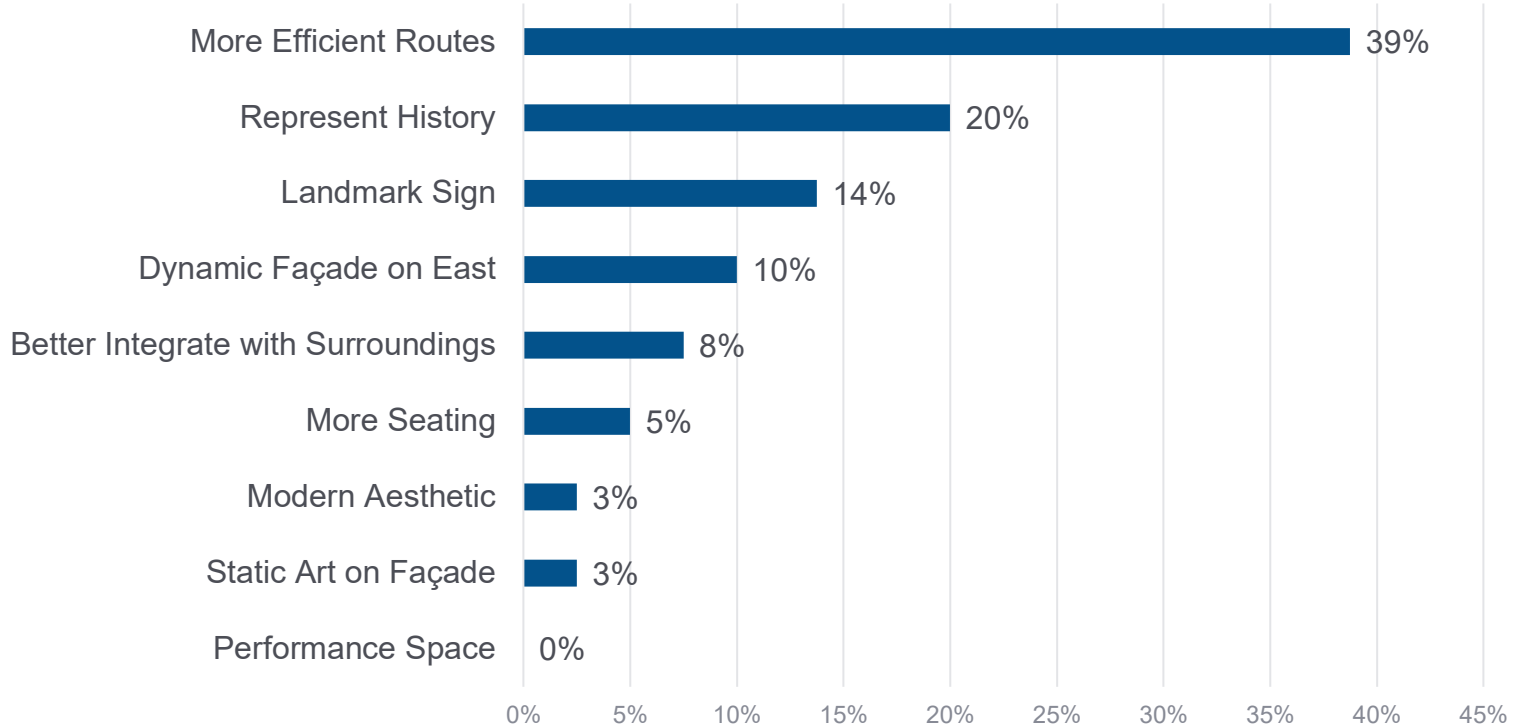
Santa Clara Rank
Landmark Sign: 6
Modern Aesthetic: 7 (tied)
Dynamic Façade on East: 4 (tied)
Represent History: 2
More Efficient Routes: 1
Static Art on Façade: 7 (tied)
Integrate with Surroundings: 3
More Seating: 4 (tied)



Santa Clara Station Community Feedback



Santa Clara Station Community Feedback, Averaged (2022)





Proposed CP2 Innovations

Tony Bauer, VTA



Tunneling Methodology Peer Exchange
Contract Package 2 - Tunnel and Trackwork Innovations
Station Design Refinements

Joint VTA/BART Working Committee Meeting – August 26th
VTA Board of Directors – September 1st
VTA Board of Directors Workshop – September 16th

Innovation Phase: Goals & Criteria



1



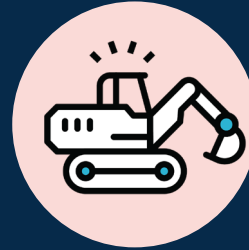
Operations
Maintenance
Safety

2



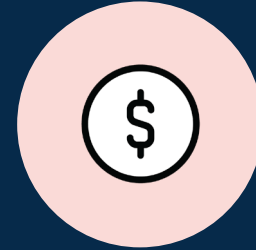
Passenger Experience

3



Constructability

4



Improve Cost and
Schedule



38 innovations initially developed and further consolidated into 16 innovations through a series of collaborative technical workshops with VTA, BART and CP2 Contractor (Kiewit Shea Traylor Joint Venture)

Innovations/Optimizations were ranked into the following groupings:

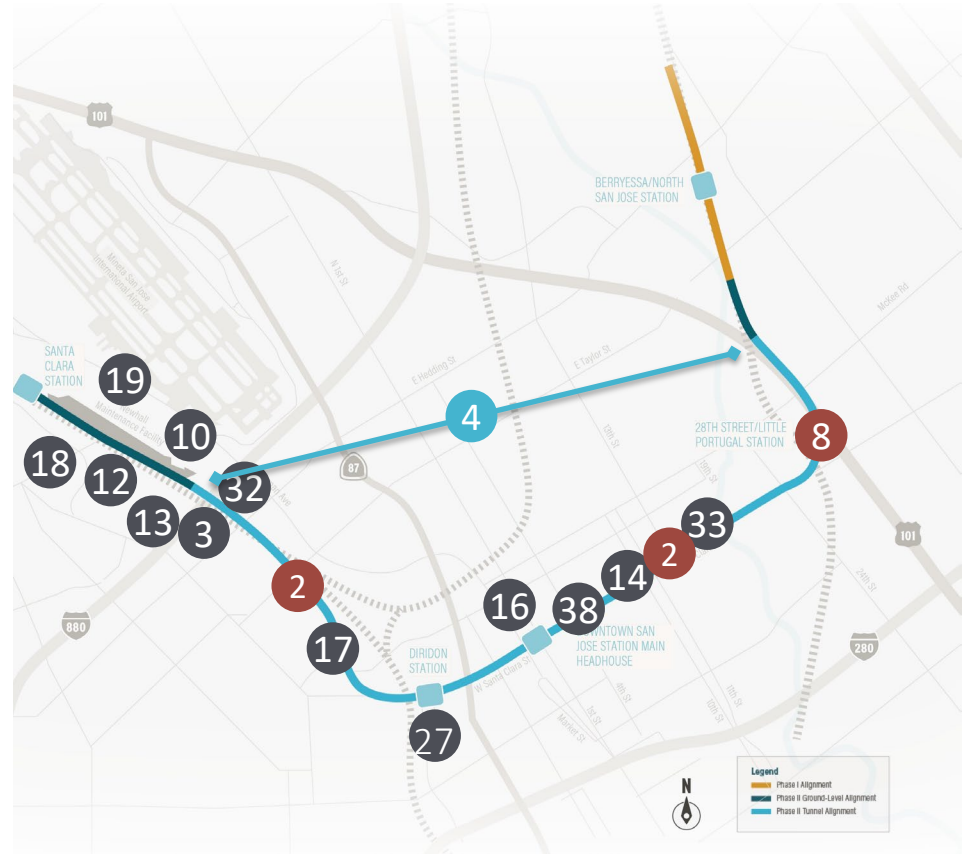
- High, Medium and Low Value and Retired

Limited Notice to Proceed period issued with a 90-day Innovation Phase for further design development, evaluation and estimating of 16 innovations

Key Innovations



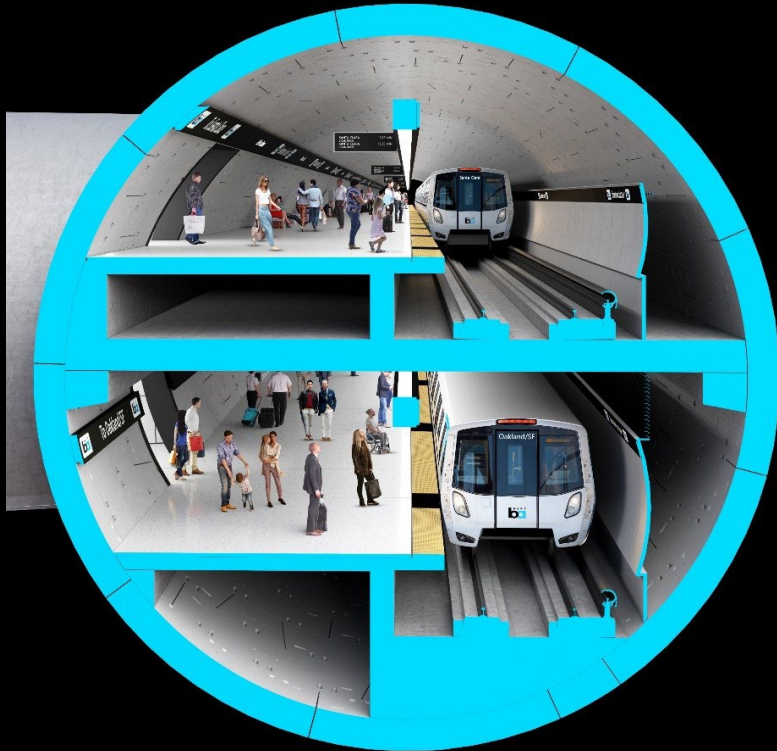
- 4 Single Bore Tunnel w/ Side-by-Side Tracks & Center Platform
- 8 28th Street/Little Portugal Station Reconfiguration
- 2 Ventilation Optimization



Single Bore: Side-by-Side Tracks w/ Center Platform

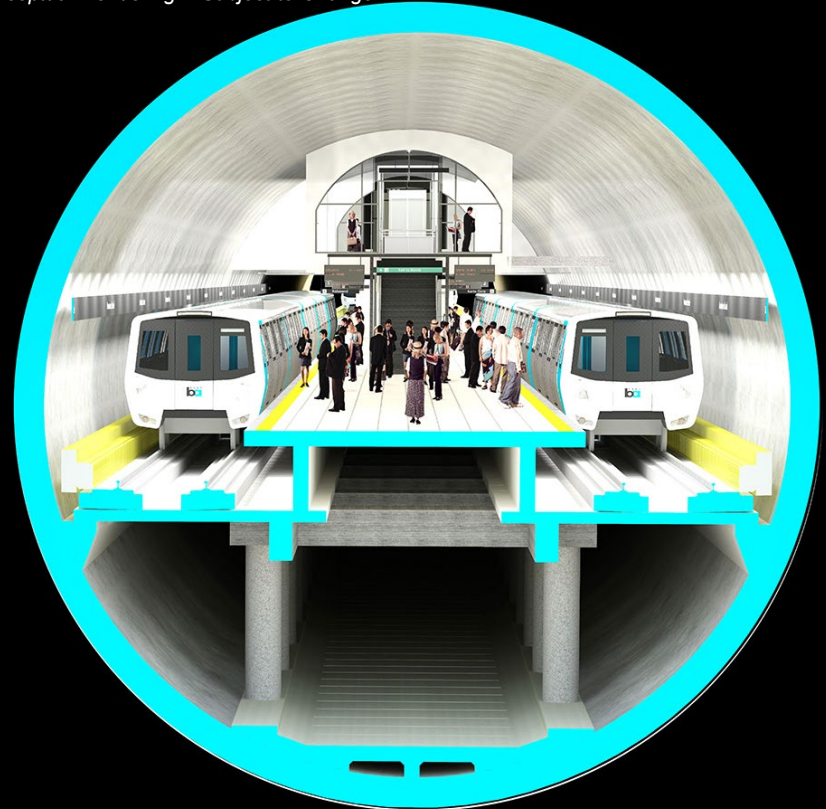


ORIGINAL DESIGN



PROPOSED INNOVATION

Conceptual Rendering – Subject to Change



Single Bore: Side-by-Side Tracks w/ Center Platform

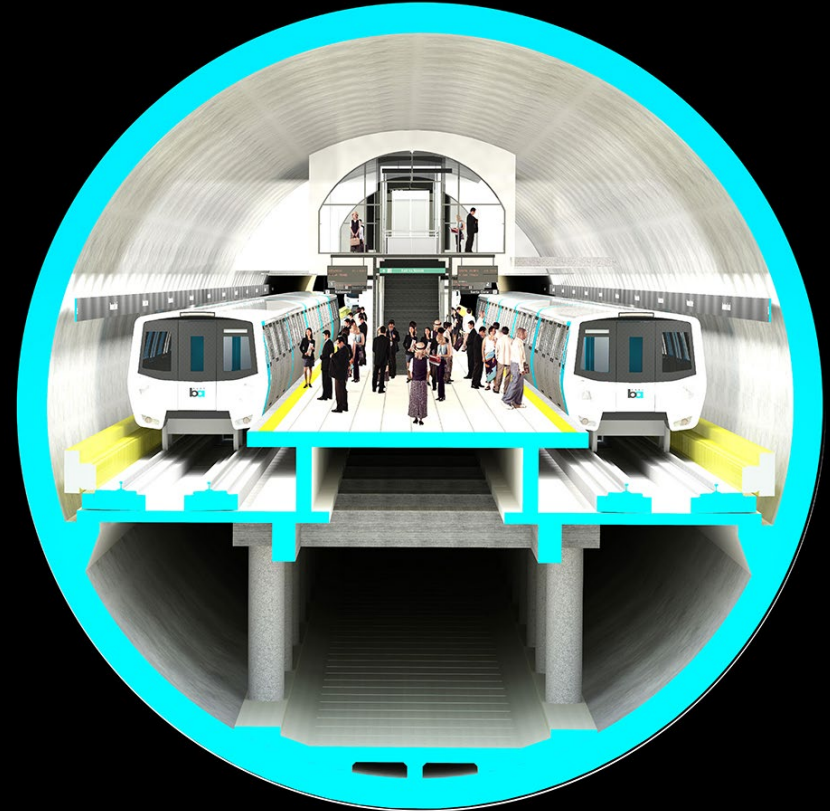


Solutions & Improvements:

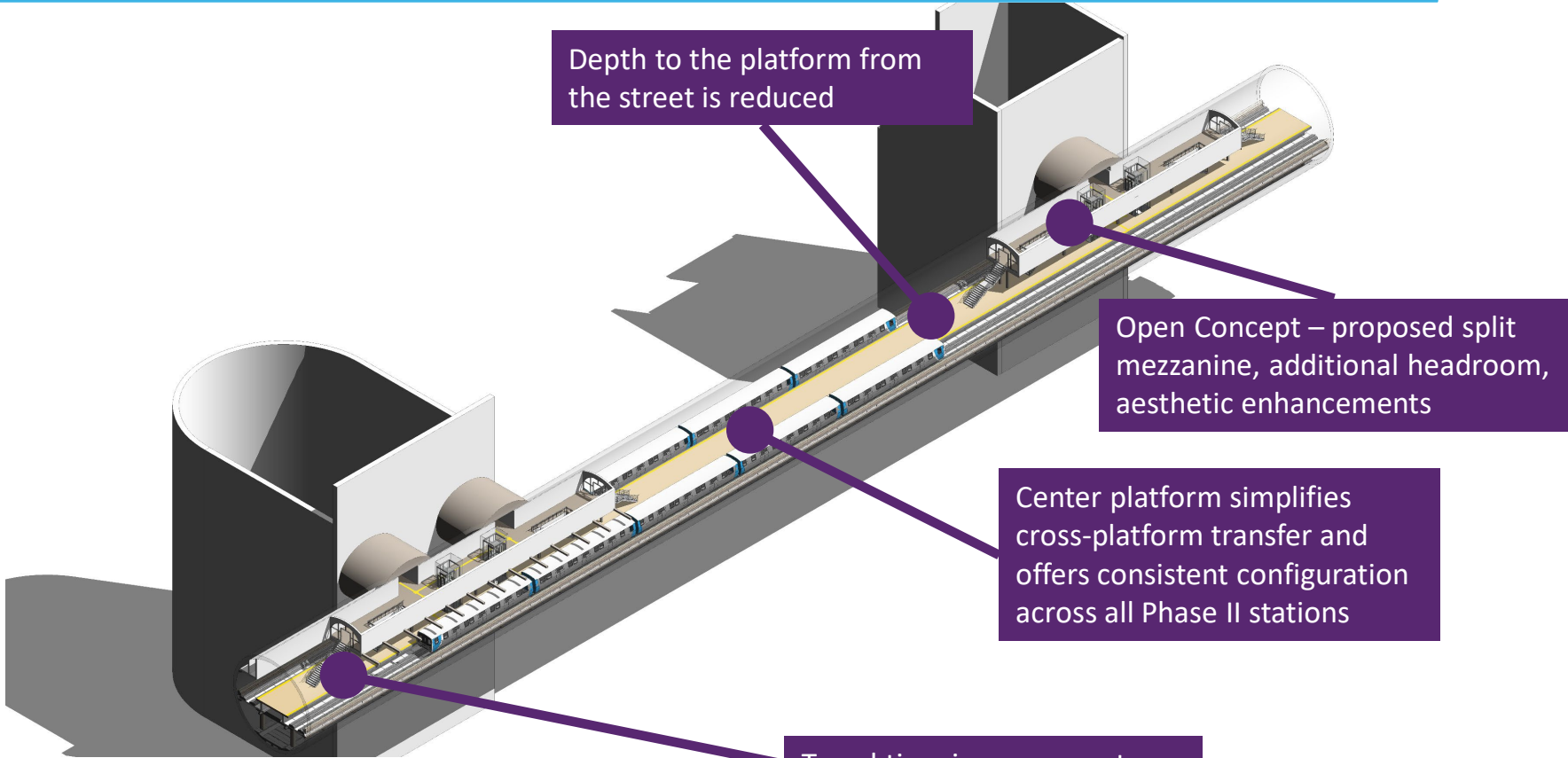
- Operational flexibility – better cross over locations and opportunity for future access
- Passenger Experience is improved with:
 - Standardized wayfinding
 - Simplified path of travel & reduced depth of station entrance building
 - Center platform and mezzanine
 - More intuitive emergency egress and shorter distance to point of safety
- Improves construction schedule and sequencing
 - Reduces operations within interior buildout steps
- Optimizes size and location of adits (connection between the tunnel & station entrance building)

PROPOSED INNOVATION

Conceptual Rendering – Subject to Change



Downtown San Jose Station Layout



Depth to the platform from the street is reduced

Open Concept – proposed split mezzanine, additional headroom, aesthetic enhancements

Center platform simplifies cross-platform transfer and offers consistent configuration across all Phase II stations

Travel time improvements

Single Bore Side-by-Side Tracks w/ Center Platform Summary



CRITERIA

 Improved  Neutral



OPERABILITY

- Side-by-side is more conventional from an operations standpoint and it improves headways over the Original Design



MAINTAINABILITY

- Simplified interior structures and trackwork leading to easier maintenance than Original Design



SAFETY

- Enhanced safety through consistent egress to non-incident tunnel. Simpler for emergency responders to address issues



PASSENGER EXPERIENCE

- Center platform and side-by-side configuration simplifies passenger experience compared to stacked station configuration



RISK

- Increased tunnel diameter, balanced by simplified interior build-out construction



COST

- Reduced cost compared to stacked configuration



SCHEDULE

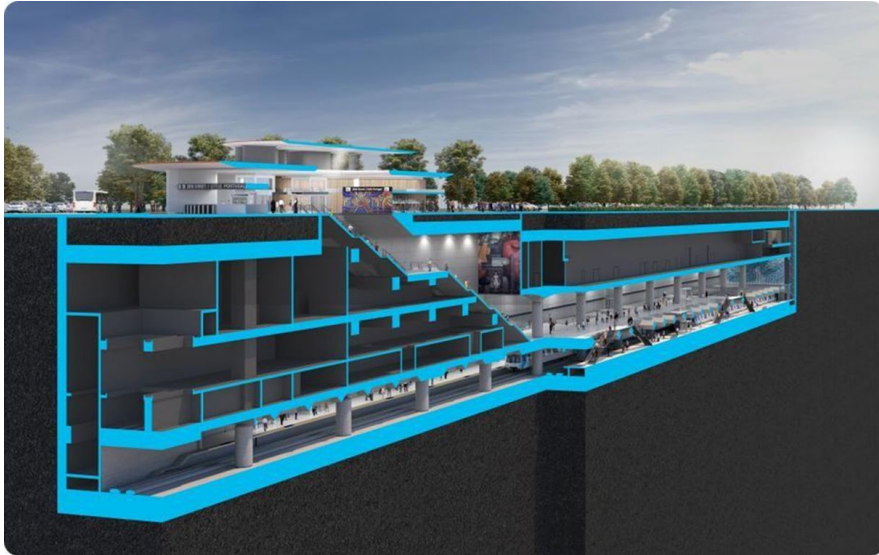
- Allows for efficiencies in tunnel construction including interior build-out, which are challenged by stacked configuration during tunneling

28th Street/Little Portugal Station Reconfiguration



ORIGINAL DESIGN

ORIGINAL DESIGN - CONSTRUCTION

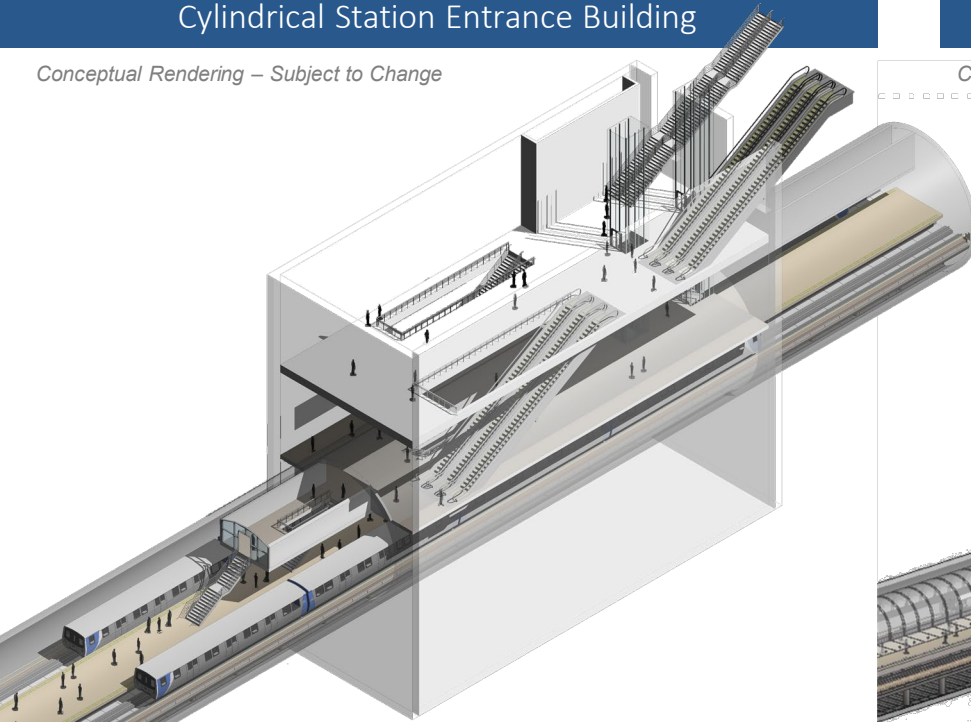


28th Street/Little Portugal Station Proposed Innovations



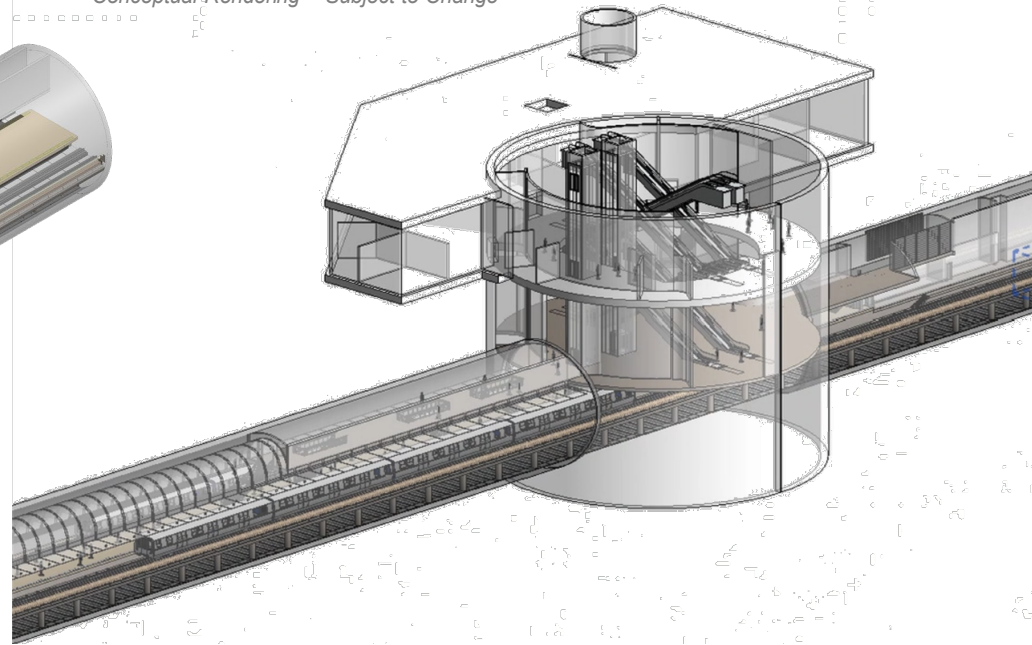
Option 1 – Rectangular Excavation of Station Shaft with Cylindrical Station Entrance Building

Conceptual Rendering – Subject to Change



Option 2 - Cylindrical Excavation of Station Shaft with Cylindrical Station Entrance Building

Conceptual Rendering – Subject to Change



28th Street/Little Portugal Station Reconfiguration Summary



CRITERIA

↑ Improved = Neutral

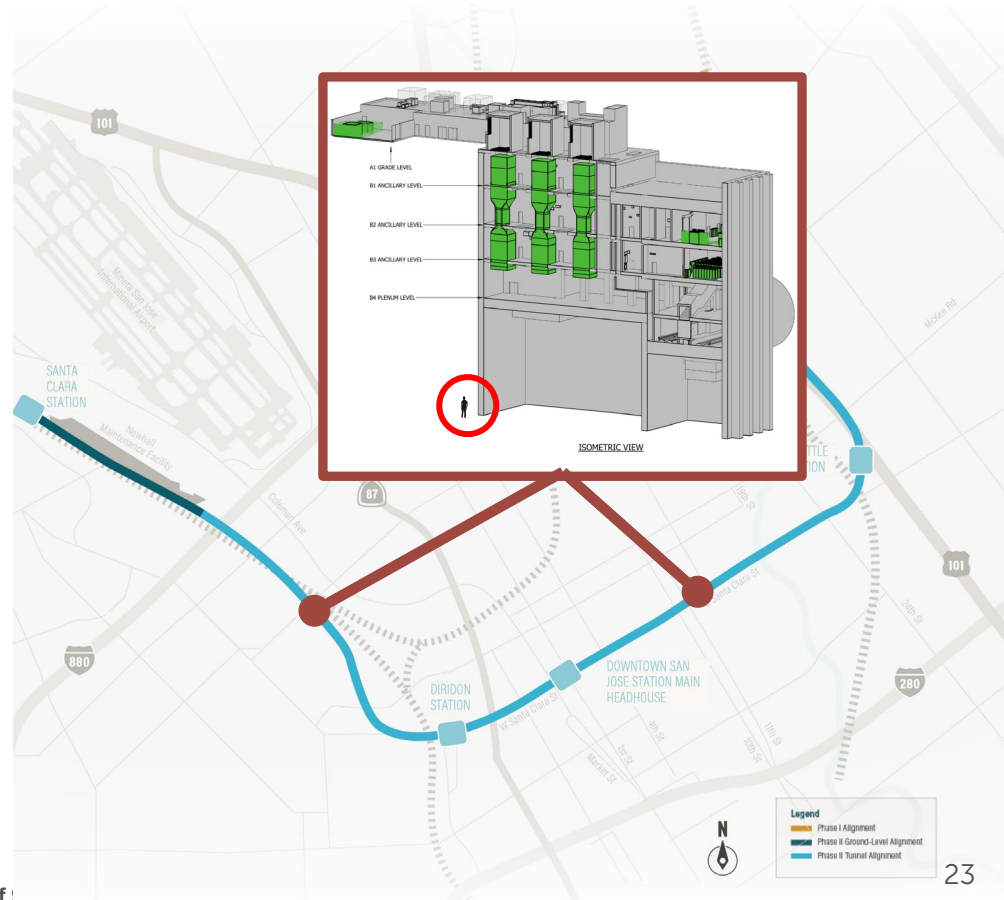
- | | |
|------------------------|--|
| ↑ Operability | <ul style="list-style-type: none">• Take advantage of similarities to DTSJ and Diridon Stations |
| ↑ Maintainability | <ul style="list-style-type: none">• Enhances maintainability through consistent configuration for all three underground stations |
| ↑ Safety | <ul style="list-style-type: none">• Passenger safety enhanced with standard center platform configuration similar to DTSJ and Diridon” |
| ↑ Passenger Experience | <ul style="list-style-type: none">• Center platform with simplified access from headhouse• Simplified wayfinding |
| ↑ Risk | <ul style="list-style-type: none">• Significantly reduces excavation volume and simplifies interface between CP2 and CP4• Smaller footprint enhances worker safety and impacts to surrounding community |
| ↑ Cost | <ul style="list-style-type: none">• Reduced cost compared to Original Design open-cut approach for station construction |
| ↑ Schedule | <ul style="list-style-type: none">• Reduced overall construction duration at this site |

Ventilation System Optimization

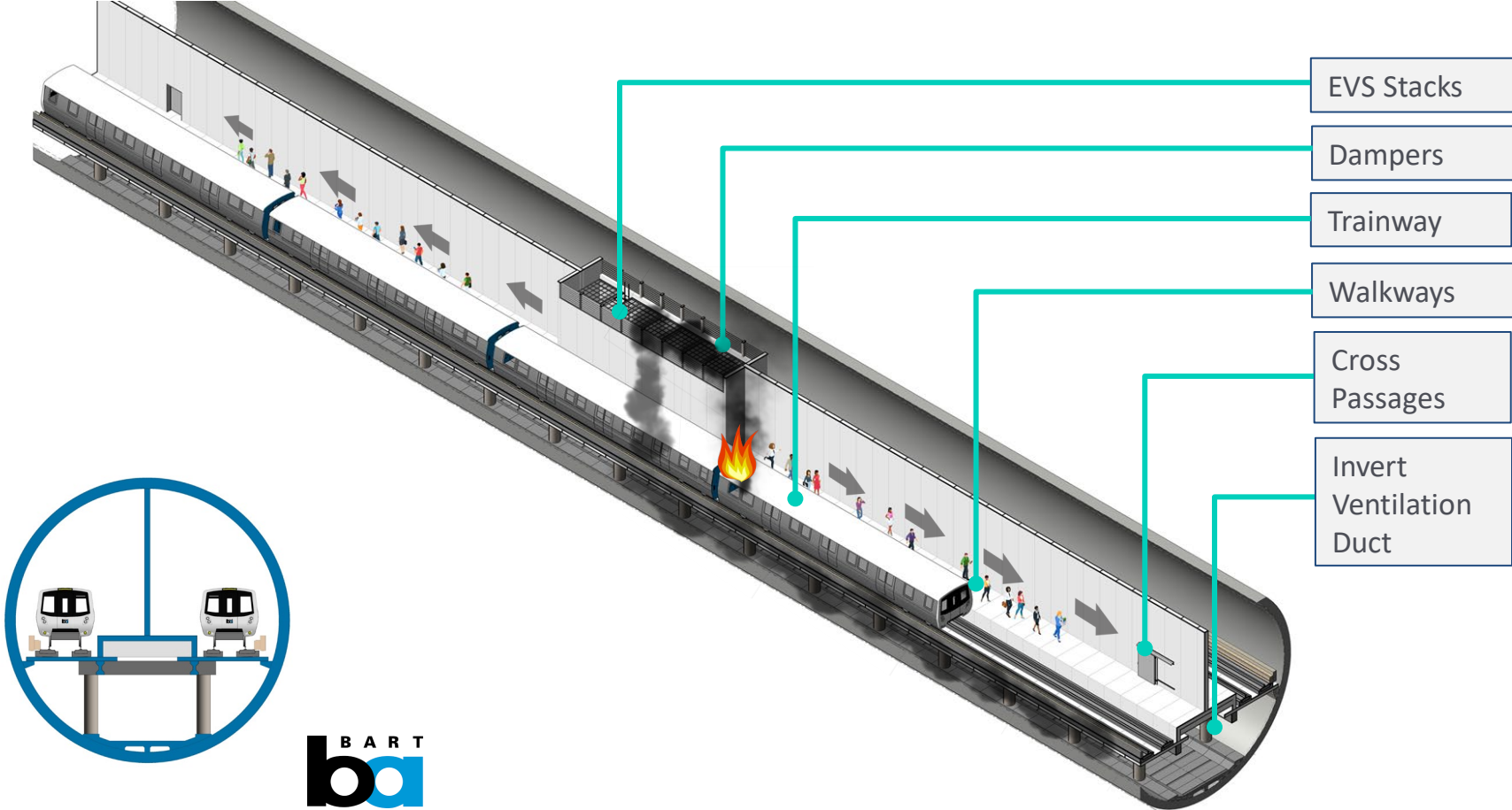


Identified Challenges with Mid-Tunnel Facilities:

- Additional fans required with original design
- Real estate acquisition and business displacements
- Complicated utility relocations
- Significant cost to construct
- Impacts to neighborhoods & traveling public



Ventilation System Optimization










Ventilation System Optimization Summary



CRITERIA

 Improved  Neutral

	OPERABILITY	<ul style="list-style-type: none">• Consolidates operational elements to the stations
	MAINTAINABILITY	<ul style="list-style-type: none">• Less infrastructure to maintain, back-of-house elements are consolidated to the station locations
	SAFETY	<ul style="list-style-type: none">• Reduces access points to the system improving threat vulnerability• Wider emergency walkways along the length of the tunnel
	PASSENGER EXPERIENCE	<ul style="list-style-type: none">• N/A
	RISK	<ul style="list-style-type: none">• Significantly reduces excavation and impacts to adjacent properties in the dense urban environment around the MTFs
	COST	<ul style="list-style-type: none">• Elimination of large buildings and significant excavations• Eliminated four emergency ventilation fans
	SCHEDULE	<ul style="list-style-type: none">• Improves schedule by reducing the amount of infrastructure needing to be constructed

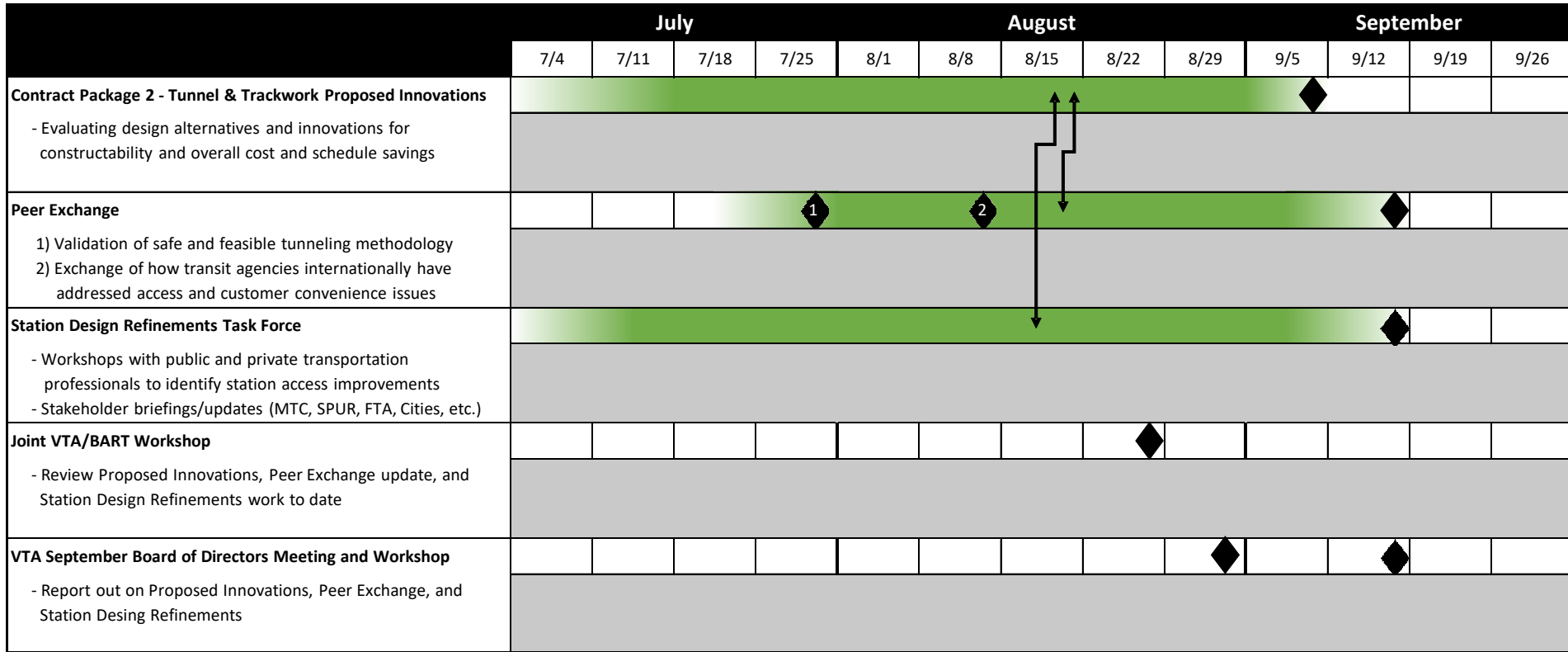
Future Anticipated CP2 VTA Board Updates/Actions



Anticipated VTA Board Updates/Actions for Tunnel/Track Contract (CP2)	2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ongoing Updates												
Awarded Stage 1 Services <i>(Innovations, programming services, engineering design, construction planning, etc.)</i>		◆										
Innovations Overview			◆									
Early Work Package #1 <i>(TBM order, utility relocations, building demolitions, site prep and portal)</i>												
Early Work Package #2 <i>(Enabling works, site prep and concrete structures)</i>												
Stage 2 <i>(Heavy Construction)</i>												

*anticipated schedule dependent on peer review and station refinement outcomes

BART Silicon Valley Phase II: Recent and Upcoming Coordination



Ongoing Activities



Key Meeting/Completion of Effort



Input to effort





Station Refinement Process for Downtown & Diridon Stations

Adriano Rothschild, VTA



3. Consistent with the unanimous December 2021 recommendation of the San Jose City Council, explore and make public the findings and trade-offs explicit in critical design options for the BART station design at Downtown and Diridon Stations, within the extents of the currently approved project including exploration of accommodations for future project elements, and within the timelines determined by the Federal Transit Administration (FTA) that will enable the project to move forward with a full funding grant agreement (FFGA), specifically to:
 - a. Improve connectivity for riders between transit systems connect at Diridon Station
 - b. At the Downtown Station, both (a) improve access and further enhance safety for pedestrians entering the Downtown Station from both sides of Santa Clara Street, and (b) improve boarding and circulation on that platform
 - c. At both stations, improve the integration of the station design with very high-density transit-oriented development

[Link to VTA BOD Packet](#)

Station Refinement Considerations



Urban Design	Station Experience	Implementation
<ul style="list-style-type: none">• TOD integration• Station design integration• Intermodal connectivity• Pedestrian demand	<ul style="list-style-type: none">• Legibility/directness• Travel time• Visibility and safety• Aesthetic expression/Identity	<ul style="list-style-type: none">• Cost• Constructability• Construction impacts• Right-of-way impacts• Environmental & schedule impacts

Additional considerations

- **Rider Groups:**
 - Regular riders
 - Occasional riders
 - First-time riders
- **Rider Sub-groups:**
 - Foreign language speakers
 - Seniors
 - Persons with disabilities
 - Families
 - Travelers
 - Cyclists
 - Etc.

Meet Technical Requirements and Achieve Goals



- Stay within parameters of approved project
 - Project footprint
 - BART facility requirements
 - Fire/life/safety requirements
- Be buildable, operable, and maintainable
- Budget and cost effectiveness (capital, operations, maintenance costs)
- Sustainability



Station Refinements for Downtown & Diridon



	Benefits & Challenges
Primary Entrance Building Shaft Shape & Size	<p>Circular shaft provides structural integrity for excavation and reduces costs by eliminating need for internal bracing.</p> <p>Rectangular shaft provides for potential expansion of headhouse downtown, and provides better opportunity for TOD integration.</p>
Secondary Entrance Locations	<p>Diridon: exploring opportunities for additional/ future entrances to be more integrated with future DISC concourse.</p> <p>Downtown: exploring opportunities for entrances south of Santa Clara Street. Cultural (Historic) resources are primary constraint.</p>



Potential West Side Underground Concourse Concept

Erica Roecks, VTA

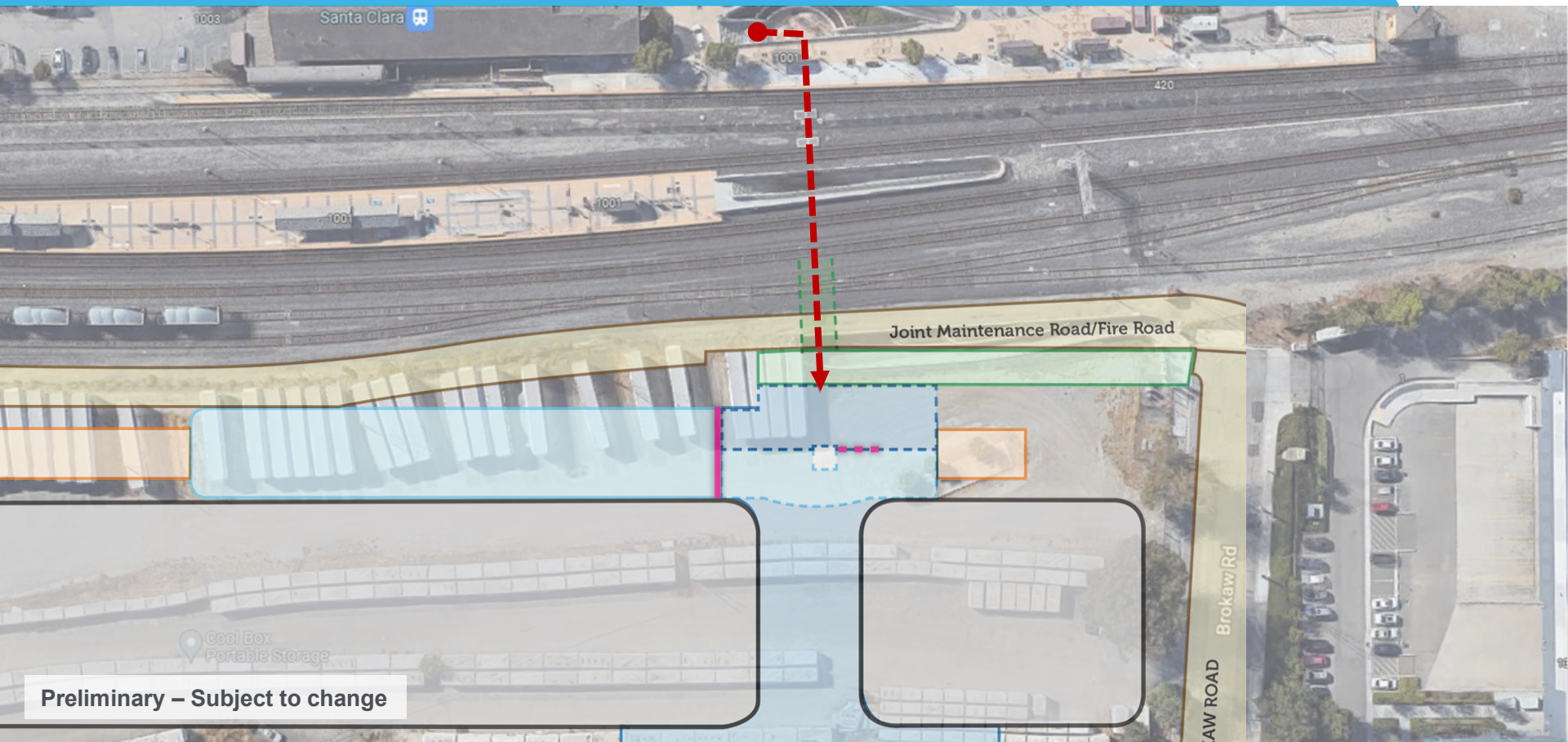
Elevated Concourse with Potential West Side Underground Concourse



Features/Path of Travel:

- Access from the **east side via elevated concourse** over tracks
- **Direct access to underground concourse and platform above** from the **west side** of the BART station from the existing pedestrian undercrossing serving the Santa Clara Transit Center and west Santa Clara

Potential West Side Underground Concourse: Access to/from West



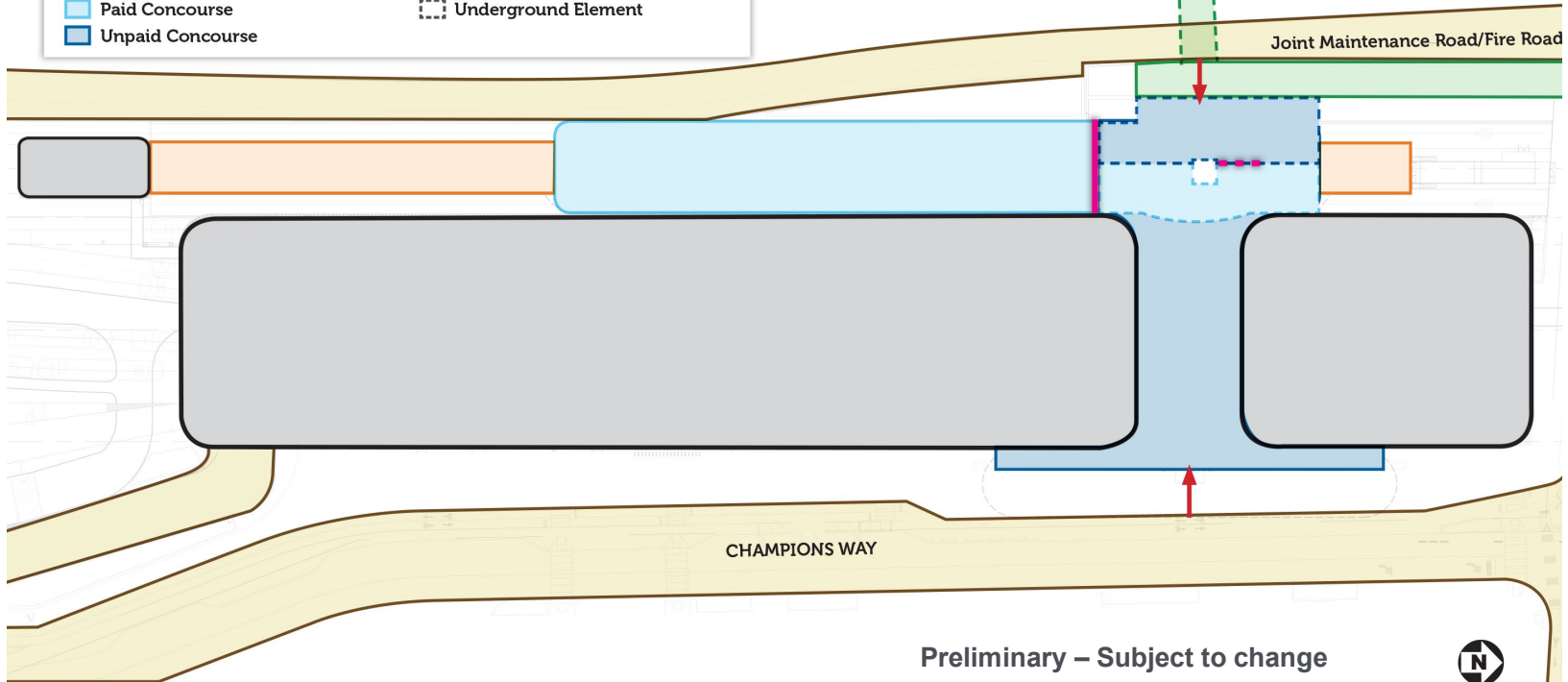
Preliminary – Subject to change

Potential West Side Underground Concourse



LEGEND

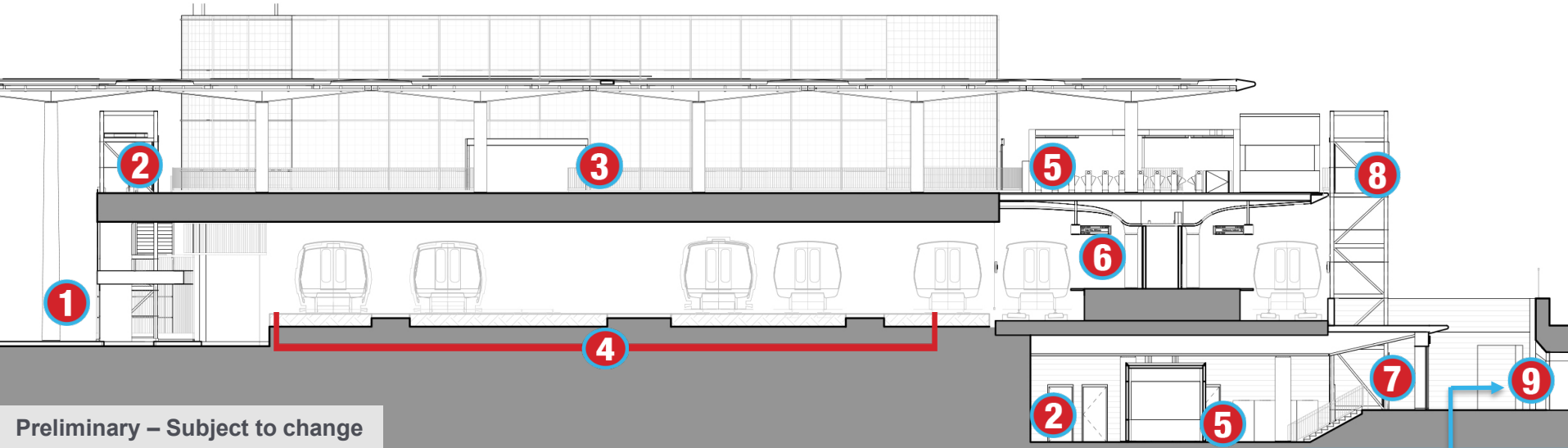
- Station Entrance
- Fare Gate
- Ground-Level Passenger Platform
- Paid Concourse
- Unpaid Concourse
- Pedestrian Undercrossing
- Parking Garage & Other Facilities
- Roadways
- Underground Element



Preliminary – Subject to change



Elevated Concourse Design with Potential West Side Underground Concourse



Preliminary – Subject to change

- | | | |
|-----------------------------------|-----------------------|--|
| 1 Champions Way Station Entrance | 4 BART Storage Tracks | 7 West Station Entrance |
| 2 Escalators, Elevators, & Stairs | 5 Faregates | 8 Elevators & Stairs: Elevated Concourse |
| 3 Elevated Concourse | 6 Station Platform | 9 Existing Pedestrian Undercrossing |

Existing Pedestrian Undercrossing to Santa Clara Transit Center

Potential West Side Underground Concourse Conceptual View of Entrance



Potential West Side Underground Concourse Conceptual View from Santa Clara Undercrossing



Santa Clara Station Underground West Entrance
View from Santa Clara Undercrossing



Preliminary – Subject to change

Elevated Concourse with Potential West Side Underground Concourse



Considerations/Constraints:

- **Elevation issues** aligning underground concourse with the existing ped undercrossing
- **Second set of fare gates and Station Agent Booth** required per BART's standards
- **Ventilation system** required for underground concourse
- **Structural framing** needed to support overhead railroad structures and platform above West Side Underground Concourse
- Due to high water table, **extensive engineering is required** to excavate and construct this underground structure foundation
- Waterproofing and sound absorption requirements

Potential West Side Underground Concourse is included in the CP3 RFP as an optional bid item and may require VTA Board direction/approval.



CWG Member Report Back

Report Back – Santa Clara



- Ana Vargas-Smith, *Reclaiming Our Downtown*
- Christian Malesic, *Silicon Valley Central Chamber of Commerce*
- Todd Trekell, *Hunter Storm*
- David Schoenwetter, *Santa Clara University*
- Jack Morash, *South Bay Historic Railroad Society*
- John Urban, *Newhall Neighborhood Association*
- Jonathon Evans, *Old Quad Residents Association*
- Luke De Vogelaere, *San José Earthquakes*
- Ron Miller, *Bellarmino College Preparatory*

How have you been sharing information and updates on BSVII with your community?

What have you heard from your communities?

Next Steps

- Next CWG meeting:
November 17th
 - Phase II Update
 - Real Estate Update
 - Community Engagement
 - CWG Member Report Back