



**CAPITOL CORRIDOR JOINT POWERS AUTHORITY
MEETING OF THE BOARD OF DIRECTORS
Wednesday, February 16, 2022 | 10:00 a.m. | Virtual**

Due to social distancing regulations in place, public participation will be via teleconference only.

You may join the CCJPA Board Meeting via Zoom as follows:

- Call 1-669-900-6833.
- Enter access code 836 5480 3130.

You may watch the Board Meeting live at www.capitolcorridor.org/ccjpa-board.

The full agenda packet, supplemental materials, and presentation materials will be available for download at www.capitolcorridor.org/ccjpa-board.

You may submit a public comment via the following methods:

- 1) Submit written comments:
 - Send email to ccjpaboard@capitolcorridor.org.
 - Indicate “Public Comment” as the subject line.
 - Please submit your comments as far in advance as possible. Emailed comments received by 2:00 pm on Tuesday, February 15th will be provided to the Board in advance of the meeting and will be included as part of the permanent Meeting record. Comments received after that time will be provided to the Board following the Meeting; *or*
- 2) Submit verbal comments:
 - Call 1-669-900-6833.
 - Enter access code 836 5480 3130.
 - Dial *9 to raise your hand when you wish to speak.
 - Public comment is limited to two minutes per person, per item.

AGENDA

- I. Call to Order
- II. Roll Call and Pledge of Allegiance
- III. Report of the Chair
- IV. Consent Calendar *Action*
 1. Approve Continuation of Virtual Meetings During the COVID-19 Pandemic
 2. Approve Minutes of the November 17, 2021 Meeting
 3. Authorize Application for the FY 2022 Transit and Intercity Capital Improvement Program (TIRCP) to Support Sacramento Valley Station Projects
 4. Authorize Contract with Cummins to Support Renewable Diesel
 5. Authorize Agreement with Transystems for Federal Railroad Administration Grants Support for Sacramento to Roseville Third Mainline Track, Phase Two
 6. Authorize Procurement for On-Call Project Management and Construction Management Services
- V. Action and Discussion Items
 1. *Adopt FY 2022-23 – FY 2023-24 Annual Business Plan *Action*
 2. Right-of-Way Safety, Security, and Trespasser Deterrence Program Update *Info*
 3. Legislation and Funding – State and Federal Update *Action*
 4. Capital Project Update - Link21 *Info*

- 5. Managing Director's Report
- 6. CCJPA Project and Program Updates
 - a. CCJPA Annual Independent Audit (FY 2021 & FY 2020)
 - b. Capitol Corridor Annual Performance Report (FY 2021)
 - c. CCJPA/Amtrak Operating Agreement (FY 2022)
 - d. January 24th Schedule Change (Train & Bus)
 - e. Marketing and Communications Activities
 - f. South Bay Connect
 - g. Sacramento to Roseville Third Track
 - h. California Passenger Display System (CalPIDS)
 - i. Davis Crossover and Signal Replacement
 - j. Stege Crossover and Signal Upgrade
 - k. Agnew Siding
- VI. Board Director Reports
- VII. Public Comment
- VIII. Closed Session
 - 1. Initiation of litigation (Govt. Code Section 54956.9(c)), No of cases: 1
- IX. Open Session
 - 1. Announcement from Closed Session, if any
- X. Adjournment. Next Meeting Date: 10:00 a.m., April 20, 2022 – Location TBD

Info
Info

*Requires an affirmative vote of at least two-thirds (11) of the appointed members.

The CCJPA Board reserves the right to take action on any agenda item. Consent calendar items are considered routine and will be enacted, approved, or adopted by one motion unless a request for discussion or explanation is received from a CCJPA Board Director or from a member of the audience.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Authorize Continuation of Virtual Meetings During the COVID-19 Pandemic

PURPOSE

For the CCJPA Board to take necessary actions under Assembly Bill (AB) 361 to continue to hold virtual Board of Directors meetings during the pandemic as authorized by law in accordance with Government Code Section 54953(e) and other applicable provisions of the Ralph M. Brown Act.

BACKGROUND

At the November 17, 2021 CCJPA Board of Directors meeting, the CCJPA Board authorized under the continuation of virtual Board meetings pursuant to AB 361 (Resolution 21-24). At the February 16, 2022 meeting, the CCJPA staff is requesting authorization from the CCJPA Board to utilize the provisions enacted by AB 361 to continue to meet remotely with teleconferenced meetings during a proclaimed emergency as authorized by law in accordance with Government Code Section 54953(e) and other applicable provisions of the Ralph M. Brown Act.

AB 361 was signed into law on September 17, 2021 and allows for fully virtual board meetings during a state of emergency. AB 361 amends Section 54953 of the Brown Act to allow virtual board meetings through January 1, 2024 in any of the following circumstances:

1. The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.
2. The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.
3. The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

These circumstances allow agencies to hold entirely virtual board meetings during the current pandemic, while California is in a proclaimed state of emergency. The previous teleconference rules under the Brown Act also remain in place but are not as flexible.

Most importantly, in order to continue to hold virtual meetings when a state of emergency remains active, the board must make findings every 30 days that 1) the board has reconsidered the circumstances of the state of emergency and 2) the state of emergency continues to directly impact the ability of the members to meet safely in person or state or local officials continue to impose or recommend measures to promote social distancing.

RECOMMENDATION

The SCG recommends that the CCJPA Board authorizes the legislative and subordinate legislative bodies to utilize the provisions enacted by AB 361 to meet remotely with teleconferenced meetings during a proclaimed emergency as authorized by law in accordance with Government Code Section 54953(e) and other applicable provisions of the Ralph M. Brown Act.

Motion: The CCJPA Board adopts the attached resolution.

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

In the Matter of Authorizing
the District's legislative and subordinate
legislative bodies to utilize the provisions
enacted by AB 361 to meet remotely
with teleconferenced meetings
during a proclaimed emergency as
authorized by law in accordance with
Government Code Section 54953(e)
and other applicable provisions of the
Ralph M. Brown Act.

Resolution No. 22-1

WHEREAS, meetings of the Capitol Corridor Joint Powers Authority are subject to the provisions of the Ralph M. Brown Act ("Brown Act"), the State's local agency public meeting law (Cal. Gov. Code 54950-549630, to ensure that the public can attend, watch, be informed about, and participate in the affairs of the District as its legislative bodies conduct their proceedings; and

WHEREAS, the arrival of the COVID-19 pandemic in 2020 brought shelter-in-place orders from public health officials, which prohibited the normal congregation of public officials and members of the public to meet in the manner contemplated by the Brown Act; and

WHEREAS, this condition caused Governor Newsom to issue Executive Orders N-25-20, N-29-20, and N-35-20 that collectively modified certain requirements of the Brown Act to permit remote participation in public "virtual meetings" while still facilitating genuine "safe" public participation and governmental transparency; and

WHEREAS, on June 11, 2021, the Governor issued Executive Order N-08-21, which rescinds the aforementioned modifications made to the Brown Act, effective September 30, 2021, after which local agencies are required to observe all the usual Brown Act requirements as they existed prior to the issuance of the Governor's Executive Orders; and

WHEREAS, Assembly Bill 361, introduced in February 2021 and passed on September 10, 2021 provides local agencies with the ability to meet remotely during gubernatorially proclaimed "state emergencies" under modified Brown Act requirements in a manner akin to the Governor's Executive Orders; and

WHEREAS, the State has authorized the continuation and/or resumption of such remote teleconferencing upon meeting certain established criteria and conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code Section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the State caused by conditions as described in Government Code Section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist along the Capitol Corridor route, specifically a state of emergency has been proclaimed due to the continuing effects of COVID-19 and its variants, which present an imminent risk to the health and safety of public meeting attendees, which has continued since the Governor's Proclamation of a state of emergency on March 4, 2020 to the present day; and

WHEREAS, Federal, State, and local health officials recognize that social distancing measures are still one of the most effective means of addressing the imminent risk to health and safety of public meeting attendees during the current state of emergency; and

WHEREAS, the Board of Directors does hereby find that COVID-19 and its variants have caused, and will continue to cause during the Governor's proclaimed state of emergency, conditions of peril to the safety of persons within the Capitol Corridor route that are likely to be beyond the control of services, personnel, equipment, and facilities of the Capitol Corridor and its Managing Agency, and

WHEREAS, the Board of Directors desires to proclaim a local emergency and ratify the proclamation of the state of emergency by the Governor of the State of California, and

WHEREAS, AB 361 addresses "meetings of a legislative body of a local agency as those terms are defined," and Government Code Section 54952 defines "legislative body" to include subordinate legislative bodies, and

WHEREAS, as a consequence of the local emergency, the legislative and subordinate legislative bodies of the District may be directed to conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code Section 54953, as authorized by subdivision (e) of Section 54953 with the further directive that such legislative and subordinate legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of Section 54953; and

WHEREAS, all appropriate measures are otherwise being taken to ensure public participation and public access to the CCJPA's Brown Act governed meetings, including the swift resolution of any remote meeting disruption (e.g., a public comment line unexpectedly disconnects, a meeting agenda was sent out with the incorrect web link or dial-in information, the agency's internet connection is interrupted, etc.) before proceeding to take further action on items appearing on a meeting agenda; and

WHEREAS, these appropriate measures include allowing the public an opportunity to provide public comment directly - that is, live and at any point prior to public comment being officially closed during a public meeting (although comments may also be made in advance of a meeting indirectly, orally, written, or otherwise); and

NOW, THEREFORE, BE IT RESOLVED that the CCJPA Board of Directors does hereby resolve as follows:

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

Section 2. Proclamation of Local Emergency. The Board hereby proclaims that a local emergency now exists throughout the Capitol Corridor route, and social distancing still appears necessary in order to avoid face-to-face in-person meetings from presenting an imminent risk to the public health of the community.

Section 3. Ratification of the Governor's Proclamation of a State of Emergency. The CCJPA Board hereby ratifies the Governor of the State of California's Proclamation of a State of Emergency, effective as of its issuance date of March 4, 2020.

Section 4. Remote Teleconference Meetings. The Executive Director and legislative and subordinate legislative bodies of the CCJPA are hereby authorized and directed to take all actions necessary to carry out the intent and purposes of this Resolution including, conducting open and public meetings in accordance with Government Code Section 54953(e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective until or such time the Board of Directors adopts a subsequent resolution in accordance with Government Code Section 54953(e)(3) to extend the time during which the legislative and subordinate legislative bodies of the CCJPA may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

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ACTION:	DATE:	ATTEST:
Ayes:		
Noes:		<hr/> Jacqueline R. Edwards Secretary
Abstain:		

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

Regular Board Meeting

Capitol Corridor Joint Powers Authority Board of Directors

DRAFT Minutes of the 125th Meeting

November 17, 2021

The 125th meeting of the Board of Directors of the Capitol Corridor Joint Powers Authority (CCJPA) was held at 10:30 a.m., Wednesday, November 17, 2021, via teleconference, pursuant to Governor Gavin Newsom's Executive Order N-15-21. Chair Saylor presided; Jacqueline R. Edwards, Recording Secretary.

I. Call to Order. Chair Saylor called the meeting to order at 10:33 a.m.

II. Roll Call and Pledge of Allegiance.

Directors present: Don Saylor, Yolo County Transportation District (YCTD); Raul Peralez, Santa Clara Valley Transportation Authority, (SCVTA); Bevan Dufty, San Francisco Bay Area Rapid Transit District (BART); Lucas Frerichs, YCTD; Lisa Gillmor, SCVTA; Bruce Houdesheldt, Placer County Transportation Planning Agency (PCTPA); Janice Li, BART; John McPartland, BART; Robert Raburn, BART; Rebecca Saltzman, BART; and Jim Spring, Solano Transportation Authority (STA).

Absent: Directors Debora Allen, BART; Kerri Howell SRTD; Steve Miller, SRTD; and Harry Price, STA.

Directors Jim Holmes, PCTPA, and Ron Rowlett, STA, entered the Meeting later.

III. Report of the Chair. Chair Saylor gave instructions regarding the virtual meeting, how to access presentation materials online, Public Comments, and Board Members' remarks. Chair Saylor gave remarks regarding the continuance of virtual meetings.

IV. Continuation of Virtual Meetings During the COVID-19 Pandemic. Robert Padgette, Managing Director, gave opening remarks about the continuation of virtual meetings during the Covid-19 Pandemic.

Chair Saylor invited questions or comments from the Board on item IV.

The item was discussed.

Chair Saylor invited comments from the Public on Item IV. No comments were received.

Director Saltzman moved the adoption of Resolution No. 21- 24, In the Matter of Authorizing the District’s Legislative and subordinate legislative bodies to utilize the provisions enacted by AB 361 to meet remotely with teleconferenced meetings during a proclaimed emergency as authorized by law in accordance with Government Code Section 54953(e) and other applicable provisions of the Ralph M. Brown Act. Director Raburn seconded the motion, which was carried by a unanimous roll call vote.

The motion brought by Director Saltzman and seconded by Director Raburn was carried by unanimous roll call vote. Ayes: 11 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Houdesheldt, Li, McPartland, Raburn, Saltzman, and Spering. Noes: 0. Absent: 6 – Directors Allen, Holmes, Howell, Miller, Price, and Rowlett.

V. Consent Calendar.

Director Raburn moved the adoption of Item V.1, Approve Minutes of the September 15, 2021 Meeting and Item V.2, Stege Crossover and Signal Upgrade Project: Budget Modification.

Chair Saylor invited comments from the Public on Items V.1 and V.2. No comments were received.

The motions brought by Director Raburn and seconded by Director Gillmor, Item V.1 – That the Minutes of the Meeting of September 15, 2021, be approved, and Item V.2 – That Resolution No. 21-25, Authorizing a Budget Revision for the Stege Crossover and Signal Upgrade Project, be adopted, carried by unanimous roll call vote. Ayes: 11 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Houdesheldt, Li, McPartland, Raburn, Saltzman, and Spering. Noes: 0. Absent: 6 – Directors Allen, Holmes, Howell, Miller, Price, and Rowlett.

Director Holmes entered the Meeting.

VI. Action and Discussion Items.

1. COVID-19 Vaccine Mandate and Schedule Adjustment. Managing Director Padgett gave opening remarks Leonel (Leo) Sanchez, Deputy Managing Director, presented the item, highlighting the health and safety update with Amtrak and local partners; and the Post-COVID Service Recovery and the Critical Factors – health and safety, ridership, budget, and equipment availability.

Chair Saylor invited questions or comments from the Board on item VI.1.

The item was discussed.

Chair Saylor invited comments from the Public on Item VI.1. Mike Barnbaum addressed the Board.

2. CCJPA FY 2021-22 Budget Modification – Amtrak Operations and California Integrated Travel Project (Cal-ITP) Contactless Payment Terminals. Managing Director Padgett gave opening remarks. Catherine Relucio, Manager of Budget, and Administration, presented the item, highlighting the Annual CalSTA Allocation – the CCJPA Operations, Administrative Management, Supplemental Allocations, and CA IPR Supplemental Allocations.

Chair Saylor invited questions or comments from the Board on item VI.2.

The item was discussed.

Chair Saylor invited questions or comments from the Public on Item VI.2. Mike Barnbaum addressed the Board.

Director Raburn moved the adoption of Resolution No. 21- 26, In the Matter of Adopting the Budget Modification of the Fiscal year 2022 Budget for Amtrak Operations and California Integrated Travel Project Contactless Payment Terminals.

Director McPartland seconded the motion, which was carried by a unanimous roll call vote. Ayes: 12 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Holmes, Houdesheldt, Li, McPartland, Raburn, Saltzman, and Spering. Noes: 0. Absent: 5 – Directors Allen, Howell, Miller, Price, and Rowlett.

Director Rowlett entered the Meeting.

3. CCJPA FY 2021-22 Budget Modification – Amtrak Operations and California Integrated Travel Project (Cal-ITP) Contactless Payment Terminals. Manager of Budget and Administration Relucio, presented the item, highlighting the Fiscal Year (FY) 2022 Operating Agreement and Operating Budget that utilize the Federal funds.

Chair Saylor invited questions or comments from the Board on item VI.3. No comments were received.

Director Houdesheldt moved the adoption of Resolution No. 21- 27, In the Matter of Approving the Agreement for the Provision of Rail Passenger Service (“FY 2022 Operating Agreement”) Between the National Railroad Passenger Corporation and the Capitol Corridor Joint Powers Authority. Director Saltzman seconded the motion, which was carried by a unanimous roll call vote.

Ayes: 13 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Holmes, Houdesheldt, Li, McPartland, Raburn, Rowlett, Saltzman, and Spering. Noes: 0. Absent: 4 – Directors Allen, Howell, Miller, and Price.

4. California Integrated Travel Project (Cal-ITP) Extending with SC Soft for Monterey-Salinas Transit (MST) Minimum Viable Product (MVP). Managing Director Padgett gave

opening remarks. Jim Allison, Manager of Planning, presented the item, highlighting that CCJPA holds the funding to support the statewide development of CAL-ITP, and the extension of SC Soft's relationship to MST's MVP subject so that eligibility for discounts can proceed.

Chair Saylor invited questions or comments from the Board and the Public on item VI.4. No comments were received.

Director Raburn moved the adoption of Resolution No. 21- 28, In the Matter of Approving the Agreement for the Provision of Contract to SC Soft for the Continuation of the Monterey-Salinas Transit Minimum Viable Product Test with the Capitol Corridor Joint Powers Authority. Director Holmes seconded the motion, which was carried by a unanimous roll call vote.

Ayes: 13 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Holmes, Houdesheldt, Li, McPartland, Raburn, Rowlett, Saltzman, and Spering. Noes: 0. Absent: 4 – Directors Allen, Howell, Miller, and Price.

5. California Integrated Travel Project (Cal-ITP) - Amendment to Increase Capacity of Xentrans Contract. Manager of Planning Allison, presented the item, highlighting the expansion of budgetary capacity to the originally awarded Cal-ITP "Staffing" Contract for Xentrans.

Director Frerichs moved the adoption of Resolution No. 21- 29, In the Matter of Approving the Agreement Amendment with Xentrans Inc, to Increase Budget Capacity for Supporting Cal-ITP. Director Raburn seconded the motion, which was carried by a unanimous roll call vote.

Ayes: 13 – Directors Saylor, Peralez, Dufty, Frerichs, Gillmor, Holmes, Houdesheldt, Li, McPartland, Raburn, Rowlett, Saltzman, and Spering. Noes: 0. Absent: 4 – Directors Allen, Howell, Miller, and Price.

Chair Saylor invited questions or comments from the Board and the Public on Item VI.5. No comments were received.

6. Capitol Corridor Annual Performance Report (FY 2020-21). Managing Director Padgett gave opening remarks and introduced Priscilla Kalugdan, Manager of Capitol Corridor Marketing and Communications, presented the item, highlighting the Key Performance Markers: the CJJPA results, ridership, revenue, Farebox Ratio, on time performance, overall customer satisfaction, and the Board Survey results.

Chair Saylor invited questions or comments from the Board and the Public on Item VI.6. No comments were received.

7. Legislation and Funding – State and Federal Update. Managing Director Padgette, presented the item, highlighting the State Legislation and Funding and the ongoing efforts; the Partnership on Supply Chain Infrastructure Program; and the CRISI Grant.

Chair Saylor invited questions or comments from the Board on Item VI.7.

Item was discussed.

Chair Saylor invited questions or comments from the Public for Item VI.7. Mike Barnbaum addressed the Board.

8. State Rail Plan Update. Managing Director Padgette gave opening remarks and introduced Shannon Simonds, Senior Transportation Planner with Caltrans, Division of Rail & Mass Transportation, who presented the item, highlighting the California State Rail Plan and touched on their strategic vision, the framework, the Northern California Megaregion Vision Map, and updates.

Chair Saylor invited questions or comments from the Board on Item VI.8.

Item was discussed.

Chair Saylor invited questions or comments from the Public for Item VI.8. Mike Barnbaum addressed the Board.

9. Capital Project Update – Link 21. Managing Director Padgette gave opening remarks and introduced Camille Tsao, Manager of Special Projects, Capitol Corridor, who presented the item, highlighting the Link21 Co-Creation Outreach, including the webinars, improvements, and public agency outreach. Tsao, Manager of Special Projects, Capitol Corridor, introduced Sadie Graham, Capital Project Manager, BART. Graham, Capital Project Manager, BART, highlighted the Value Capture Objectives and the timeline. Tsao, Manager of Special Projects, Capitol Corridor, continued to highlight the Stage Gate Approach and the next steps for future phases.

Chair Saylor invited questions or comments from the Board on Item VI.9. No comments were received.

10. Managing Director’s Report. Managing Director Padgette discussed Capitol Corridor’s ridership and service performance; trespasser fatalities; the Upcoming Corridor Conversations; and the new members of the team.

Chair Saylor invited questions or comments from the Board on Item VI.10.

Item was discussed.

Chair Saylor invited questions or comments from the Public for Item VI.10. Mike Barnbaum addressed the Board.

11. CCJPA Project and Program Updates. The item was not discussed.

VII. Board Member Reports. Chair Saylor invited Board Member reports.

Houdesheldt thanked staff, PCPTA, and CCJPA for the participation on the California Transportation Commission on the importance of the Third Rail.

VIII. Public Comment. Chair Saylor invited comments from the public. No comments were received.

IX. Adjournment. The Meeting adjourned at 12:05 p.m.

Next Meeting Date: 10:00 a.m., February 16, 2022.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Authorize Application for the FY 2022 Transit and Intercity Capital Improvement Program (TIRCP) to Support Sacramento Valley Station Projects

PURPOSE

For the CCJPA Board to authorize the submission an FY 2022 TIRCP grant application for projects related to the Sacramento Valley Station (SVS).

BACKGROUND

As discussed in Item V.3, the California State Transportation Agency (CalSTA) released the call for projects for the Transit and Intercity Rail Capital Program (TIRCP) 2022 Award Cycle. CCJPA has been a successful applicant for every TIRCP grant opportunity that has been available. This year, the CCJPA staff have identified projects for the FY2022 TIRCP program with our partners the City of Sacramento (the City) and the Sacramento Area Council of Governments (SACOG).

Each of the projects below relate to building up intermodal transit ridership that serves the SVS and the regional transit networks around Sacramento. CCJPA proposes the FY 2022 TIRCP application in support of our transit partners, the City and SACOG, as the Capitol Corridor service and SVS are a focal point of Sacramento, CCJPA's busiest station.

The suite of projects planned for this TIRCP submittal are as follows:

1. SVS Pickup/Dropoff and Light Rail Platform Relocation and Bus Mobility Center Design
2. Re-Routing and Stop Enhancement of Regional Commuter Transit for Downtown Sacramento
3. Layover and Zero-Emissions Fueling Center
4. California Integrated Travel Project (Cal-ITP) Compatible Contactless Readers for Regional (and Local) Commuter Transit Operations

The basis for these four projects has emerged from the prior 2020 CCJPA-led TIRCP application submitted (first three projects) and the 2018 TIRCP award provided to CCJPA (for the Cal-ITP Contactless Readers). While the City and SACOG would be the implementers or work with further transit partners to deliver on these projects, the Capitol Corridor, along with all the other regional, and local transit services are expected to benefit from the synergy created as these transit modes are better integrated as per the goals of the California State Rail Plan.

The total funding requested of the 2022 TIRCP request is estimated at \$40 million. The final amount will be verified prior to the March 3, 2022 application due date.

RECOMMENDATION

The SCG recommends that the CCJPA Board authorizes the CCJPA to apply for FY 2022 Transit and Intercity Rail Capital Program funding to support the development and construction of the four projects related to the Sacramento Valley Station described above, which will be executed by our partners at the City of Sacramento and the Sacramento Area Council of Governments.

Motion: The CCJPA Board adopts the attached resolution.

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

In the Matter of
Approving CCJPA Staff to Apply for FY 2022
TIRCP Funding for a Suite of SVS Related Projects

Resolution No. 22-2

WHEREAS, the State of California provided a grant opportunity under the FY 2022 Transit and Intercity Capital Improvement Program (TIRCP) with applications due on March 3, 2022; and,

WHEREAS, the set of following projects have been planned by staff of the CCJPA, the City of Sacramento and the Sacramento Area Council of Governments,

- SVS Pickup/Dropoff and Light Rail Platform Relocation and Bus Mobility Center Design
- Re-Routing and Stop Enhancement of Regional Commuter Transit for Downtown Sacramento
- Layover and Zero-Emissions Fueling Center
- Cal-ITP Compatible Contactless Readers for Regional (and Local) Commuter Transit Operations, and,

WHEREAS, the identified projects were each identified and developed out of prior TIRCP funded projects; and,

WHEREAS, the CCJPA is an eligible applicant for the FY 2022 TIRCP funding program and prepared to work with our City of Sacramento and SACOG partners for project delivery; and,

RESOLVED, that the CCJPA Board does hereby authorize the CCJPA to make an application for the FY 2022 TIRCP grant funding program for the Suite of related Sacramento Projects identified;

AND BE IT FURTHER RESOLVED, that the CCJPA Board hereby authorizes the CCJPA Executive Director or their designee to enter all necessary agreements required to implement the Project with the use of the anticipated FY 2022 TIRCP funding.

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ACTION:	DATE:	ATTEST:
Ayes:		<hr style="width: 80%; margin: 0 auto;"/> Jacqueline R. Edwards Secretary
Noes:		
Abstain:		

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Authorize Contract with Cummins to Support Renewable Diesel

PURPOSE

For the CCJPA Board to authorize an agreement with Cummins Inc for the amount not-to-exceed \$125,000 to replace locomotive engine parts in support of the Renewable Diesel (RD) testing program.

BACKGROUND

In 2016, the Capitol Corridor began to explore alternative fuel options that would burn cleaner than the petroleum diesel being used and work with the Tier IV Charger locomotives joining the fleet. Renewable diesel, which is a fuel primarily composed of biomass waste and residue, was identified as a potentially viable option. While RD is an attractive alternative to petroleum diesel, as it meets the same ASTM D975 fuel specifications, it must be tested and certified before regular use in locomotive engines.

As authorized by the CCJPA Board through resolutions 17-07 and 19-06, CCJPA has been testing the use of Renewable Diesel in its locomotives. The initial phase of the engine run with RD has been completed and as part of phase two, components such as injectors, valves, and catalyst bricks are being tested for reliability.

The project is entering its final phase, where engine component degradation will be tested using RD, and data from said tests compared to engine cycles using conventional diesel. The goal of this testing is to identify any changes to engine lifecycle from the use of RD; this will require injectors, a cylinder head with valves, and six catalyst bricks from the engine exhaust re-burn units to be removed and evaluated for mechanical degradation. These engine parts will therefore need to be replaced, which would be performed by Cummins Inc. as the original manufacturer of the engines and sole supplier of parts. The initial budget estimate for this work is \$100,000, however, to allow for unanticipated expenses that may arise, we are requesting authorization to enter into an agreement with Cummins Inc. for a not-to-exceed amount of \$125,000 which would be funded by CCJPA Operating funds.

RECOMMENDATION

The SCG recommends that the CCJPA Board authorize an agreement with Cummins Inc. for a not-to-exceed budget of \$125,000 for the equipment required to complete the Renewable Diesel Project which will be funded by CCJPA Operating funds, and authorize the CCJPA Executive Director or their designee to execute all necessary and appropriate actions and agreements for the implementation of the Project.

Motion: The CCJPA Board adopts the attached resolution.

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

Resolution No. 22-3

In the Matter of Authorizing an Agreement with Cummins Inc. for a Not-to-Exceed Amount of \$125,000 of Operations funding for Renewable Diesel Testing Project/

WHEREAS, the CCJPA Board, through Resolutions 17-07 and 19-06 previously authorized the testing of renewable diesel for CCJPA service; and

WHEREAS, renewable diesel fuel has significant “well to wheels” reductions in greenhouse gas emissions; and

WHEREAS, phase I and phase II testing showed no degradation of performance or safe function when used in Northern California intercity passenger rail locomotives; and

WHEREAS, further testing will require removal and replacement of locomotive parts; and

WHEREAS, Cummins, Inc. is the original manufacturer of the locomotive engines and the sole supplier of parts; and

WHEREAS, CCJPA has identified \$125,000 in available Operations funds to support this testing; and

RESOLVED, that the CCJPA Board does hereby authorize the agreement with Cummins Inc. in the amount of not-to-exceed budget of \$125,000, funded by CCJPA Operating funds, to support the replacement of locomotive engine parts for the Renewable Diesel project.;

AND BE IT FURTHER RESOLVED, that the CCJPA Board hereby authorizes the CCJPA Executive Director or their designee to execute all necessary and appropriate actions for the implementation of the Project.

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ACTION:	DATE:	ATTEST:
Ayes:		<hr style="width: 80%; margin: 0 auto;"/> Jacqueline R. Edwards Secretary
Noes:		
Abstain:		

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

In the Matter of
Approving CCJPA Staff to Potentially Award Over \$100,000
of Funding to Transystems for Grant Application Support

Resolution No. 22-4

WHEREAS, CCJPA has awarded an on-call consulting contract to Transystems as one of three on-call consulting firms; and,

WHEREAS, Federal Railroad Administration (FRA) grant programs may be announced at any time and CCJPA has a need to obtain funding for the second phase of the Sacramento to Roseville Third Mainline Track project; and,

WHEREAS, CCJPA’s staffing capacity requires the assistance of consultants to support these complicated grant applications; and,

RESOLVED, that the CCJPA Board does hereby authorize the CCJPA to enter into an agreement with Transystems through a work directive to the CCJPA’s on-call Master Services Agreement with Transystems for grant support for a not-to-exceed amount of \$160,000;

AND BE IT FURTHER RESOLVED, that the CCJPA Board hereby authorizes the CCJPA Executive Director or their designee to execute all necessary and appropriate actions for the implementation of the Project.

#

ACTION:	DATE:	ATTEST:
Ayes:		<hr style="width: 80%; margin: 0 auto;"/> Jacqueline R. Edwards Secretary
Noes:		
Abstain:		

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

In the Matter of authorizing a procurement for
an on-call Master Services Agreement for Project
and Construction Management for CCJPA led Projects

Resolution No. 22-5

WHEREAS, CCJPA has successfully awarded prior on-call consulting contracts to provide CCJPA capability to deliver on planning studies, analysis, design and environmental services, and engineering; and,

WHEREAS, CCJPA project the need to obtain Project Management and Construction Management (PM/CM) expertise to help deliver on the project implementation end of project delivery; and,

WHEREAS, CCJPA’s staffing capacity requires the assistance of consultants to support the PM/CM phase of project delivery; and,

WHEREAS, CCJPA identifies the need for up to \$15 million of funding capacity for PM/CM services over a period of up to ten years; and,

RESOLVED, that the CCJPA Board does hereby authorize CCJPA staff to procure an on-call Master Services Agreement for a Project Management and Construction Management (PM/CM), to deliver on project and construction management related work directives issued by CCJPA for which funding is secured, and that the total capacity of the on-call support not exceed \$15 million with a service period of ten years, with no guaranteed minimum.

AND BE IT FURTHER RESOLVED, that the CCJPA Board hereby authorizes the CCJPA Executive Director or their designee to execute a master contract to an awarded PM/CM contractor.

#

ACTION:	DATE:	ATTEST:
Ayes:		<hr style="width: 80%; margin: 0 auto;"/> Jacqueline R. Edwards Secretary
Noes:		
Abstain:		

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Adopt FY 2022-23 – FY 2023-24 Annual Business Plan

PURPOSE

For the CCJPA Board to approve the Draft CCJPA FY 2022-23 – FY 2023-24 Annual Business Plan Update, which will be submitted to the California State Transportation Agency.

BACKGROUND

The draft FY 2022-23 – FY 2023-2024 Annual Business Plan (ABP) Update was released for public review on January 12, 2022. Public workshops for the ABP were held January 18-20, 2022. Comments received during the public review process have been incorporated as appropriate. At the February 16, 2022 meeting, CCJPA staff will present the draft ABP to the CCJPA Board for approval. The draft ABP and summary of public comments received are included in the supplemental materials of this agenda packet for the CCJPA Board to review. The Board-approved draft ABP will be finalized and submitted to the Secretary of the California State Transportation Agency (CalSTA) by April 1, 2022.

Due to the COVID-19 global pandemic, CCJPA reduced service beginning in March 2020 and expects to continue to operate a temporary reduced operating plan for train and bus service until at least the first quarter of FY 2022-23. Future increases in train and bus service will be based on changing health and financial conditions as well as equipment and workforce availability.

Capitol Corridor Route	FY 2022-23	FY 2023-24
Sacramento – Oakland	30 weekday/22 weekend trains	30 weekday/22 weekend trains
Oakland – San Jose	14 daily trains	14 daily trains
Sacramento – Roseville	2 daily trains (with plans for up to 20)	2 daily trains (with plans for up to 20)
Roseville – Auburn	2 daily trains	2 daily trains

In summary, this ABP calls for restoration of the Capitol Corridor train service plan to pre-COVID levels (30 weekday and 22 weekend trains) during the first quarter of FY 2023 (as reflected in the budget forecasts included in this ABP); provides a capital program that is consistent with the CCJPA *Vision Implementation Plan* (adopted November 2016), aligns with the *California State RailPlan* (December 2017); and conforms with the guidelines for the new state funding opportunities via the enactment of SB 1 to support the CCJPA’s service expansion plans.

- **Long-term service plan improvement activities** over the next two fiscal years will include the engineering design of the Sacramento to Roseville service expansion project and the environmental and design phase of the South Bay Connect (formerly Oakland to San Jose Phase 2A) project. CCJPA will also continue to partner with BART on the initial planning stages for Link21, a new Transbay rail crossing, including BART and standard gauge interregional passenger rail services.
- CCJPA will continue to work with Union Pacific Railroad to **maintain railroad right-of-way infrastructure** in prime condition to reduce delays and ensure excellent on-time performance [90%+] for Capitol Corridor trains.
- **Improvements to rolling stock include** improving onboard bike storage and testing of renewable diesel as an alternative fuel source, which will present an exciting opportunity to decrease carbon emissions associated with train operations.
- **Service amenity improvements** include continual Wi-Fi portal improvements in content and bandwidth; modernization of the Passenger Information Display System across State-supported intercity passenger rail services, with implementation ongoing through calendar year 2022; and a Minimum Viable Project (MVP) phase for the California Integrated Ticketing Program (CallTP), which is intended to introduce new ticketing options to the public.
- The CCJPA's **marketing strategies** for FY 2022-23 and FY 2023-24 will focus on developing and implementing a comprehensive marketing plan to attract and grow ridership to pre-pandemic levels. Over the next two fiscal years, CCJPA will develop renewed partnerships with new destinations, create programs to enhance the overall customer experience, and seek out opportunities to grow ridership via micro-markets. Seasonal campaigns are planned to position Capitol Corridor as a distinct regional service brand, and CCJPA will continue to coordinate with local partners and Amtrak on promotions, outreach, and shared marketing collateral efforts.

Compared to the current period (FY 2021-22), the FY 2022-23 and FY 2023-24 total proposed budgets for the CCJPA's operating, marketing, and administrative expenses are expected to increase by eleven percent in FY 2022-23 due to projected low ridership, significant reduction in fare revenue, and an increase in operating costs. The historic heavy reliance on passenger fare revenue to support operations necessitates a larger funding requirement to support the Capitol Corridor Service operations due to the impacts of the pandemic. There is an unusual level of uncertainty regarding operating costs and passenger revenue that will likely necessitate later updates to the budget forecasts. As well, the funding request incorporates a recategorization of budget line items for operational efficiency, provides additional resources to respond to capital project work, and includes funding for resources for ticketing and revenue collection as a result of the California Integrated Travel Project.

Funding Request – In Millions

	AUTHORIZED	PROPOSED	
	FY 2021-22	FY 2022-23	FY 2023-24
	<i>Reduced Service</i> ¹	<i>Full Service</i>	<i>Full Service</i>
Operating			
Amtrak Operating Expenses	\$ 56.20	\$ 67.69	\$ 69.74
Amtrak Operating Revenue	\$ (19.56)	\$ (28.01)	\$ (33.23)
Operating - Amtrak (Expenses less revenue)	\$ 36.63	\$ 39.68	\$ 36.50
Operating - Other ³	\$ 1.20	\$ 1.58	\$ 1.86
CCJPA Administrative Management			
Administration	\$ 2.96	\$ 3.65	\$ 3.80
Marketing	\$ 1.17	\$ 1.69	\$ 1.69
TOTAL CCJPA Funding Requirement	\$ 41.97	\$ 46.60	\$ 43.85
CCJPA SUPPLEMENTAL ALLOCATION			
Minor Capital	\$ 0.50	\$ 0.50	\$ 0.50
Capitalized Maintenance	\$ 1.00	\$ 1.00	\$ 1.00
TOTAL CCJPA Supplemental Allocation	\$ 1.50	\$ 1.50	\$ 1.50
CA INTERCITY PASSENGER RAIL SUPPORT			
California Integrated Travel Program (CalITP)	\$ 2.50	\$ 6.49	\$ 0.60
Onboard Technology (Wi-Fi)	\$ 2.54	\$ 2.88	\$ 2.94
Link21 (New Transbay Rail Crossing)	\$ 1.50	\$ 1.50	\$ 1.50
TOTAL CA IPR Supplemental Allocation	\$ 6.54	\$ 10.87	\$ 5.04

As presented in the table above, the operating budgets for FY 2022-23 and FY 2023-24 were developed using historical operating costs and service data/metrics. Amtrak is expected to provide its final estimates (operating expenses, ridership, and revenues) for FY 2022-23 in Spring 2022, at which time, staff will update the funding request in the final ABP that is submitted to CalSTA in June 2022. The operating budget update and any other budget estimate revisions will be included in Section 9 of the CCJPA FY 2022-23 – FY 2023-24 Annual Business Plan submitted to CalSTA. As well, operating budget changes will be included in the FY 2023 CCJPA/Amtrak operating contract (effective October 1, 2022), which will be scheduled to be presented to the CCJPA Board for adoption at its September 21, 2022 meeting.

RECOMMENDATION

It is recommended that the CCJPA Board approve the draft CCJPA FY 2022-23 – FY 2023-24 Annual Business Plan and submit a copy of the Annual Business Plan to the Secretary of CalSTA. Approval of the revised Annual Business Plan Update requires an affirmative vote of at least two-thirds (11) of the appointed members.

Motion: The CCJPA Board adopts the attached resolution.

BEFORE THE
CAPITOL CORRIDOR JOINT POWERS AUTHORITY
BOARD OF DIRECTORS

In the Matter of
Approving the Draft Fiscal Year 2022-23 to
FY 2023-24 Annual Business Plan
For the Capitol Corridor Joint Powers Authority/

Resolution No. 22-6

WHEREAS, the CCJPA staff have prepared a Draft FY 2022-23 – FY 2023-24 Annual Business Plan (ABP) Update, held a series of public workshops to solicit input from between January 18-20, 2022, and received public comments, which were incorporated into the draft document as appropriate; and

WHEREAS, CCJPA staff has, in the ABP update, included updated service plans and operating cost estimates as a result of the COVID-19 global pandemic and its impact on travel demand for the Capitol Corridor intercity passenger rail service; and

WHEREAS, the ABP Update reflects a plan to restore train service to pre-COVID-19 pandemic levels in the first quarter of FY 2023, which is 30 weekday trains and 22 weekend trains; and

WHEREAS, the ABP, and outlines a capital funding strategy to advance the Capitol Corridor Joint Powers Authority’s (CCJPA) Capital Improvement Program (CIP) that incorporates relevant elements of the California State Rail Plan (December 2017), and conforms with the guidelines for the new state funding opportunities via the enactment of SB 1 to support the CCJPA’s service expansion plans; and

WHEREAS, for the draft Annual Business Plan, CCJPA is requesting funding to support Administration, Operations, and Marketing to operate the Capitol Corridor service in the amount of \$46.60 million for FY 2023; \$1.5 million for Minor Capital and Capitalized Maintenance; and supplemental allocations to support the California Intercity Passenger Rail services in the amount of \$10.87 million for the California Integrated Travel Project, Onboard Wi-Fi, and Link21; and

WHEREAS, CCJPA expects to receive Amtrak’s operating forecast in Spring 2022 and will update the funding request in the FY 2022-23 and FY 2023-24 Annual Business Plan Update to reflect the funding need to operate the Capitol Corridor Service in the final version that will be submitted to the California State Transportation Agency (CalSTA) in June 2022; and

WHEREAS, CCJPA staff will continue working with the California State Transportation Agency, Caltrans, the other California Intercity Passenger rail partners, and Amtrak to monitor ridership demand and pursue cost saving strategies and additional funding opportunities to support the service; and therefore be it

RESOLVED that the CCJPA Board does hereby approve and adopt the draft FY 2022-23 - FY 2023-24 Annual Business Plan Update for the Capitol Corridor Service;

AND BE IT FURTHER RESOLVED, that the CCJPA forthwith transmit a copy of this resolution to CalSTA and Caltrans.

#

ACTION:	DATE:	ATTEST:
Ayes:		<hr/> Jacqueline R. Edwards Secretary
Noes:		
Abstain:		

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022
FROM: Robert Padgette
 Managing Director, CCJPA
SUBJECT: Right-of-Way Safety, Security, and Trespasser Deterrence Program Update

At the February 16, 2022 CCJPA Board of Directors meeting, staff will provide an update on the Right-of-Way (ROW) Safety and Security program. The presentation will address improving safety for railroad employees, railroad passengers, and members of the public, and improving on-time performance by discouraging trespassing, illegal dumping, and vandalism on the railroad right-of-way.

RECOMMENDATION

For information only.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Legislative and Funding – State and Federal Update

State Legislation and Funding

Governor Newsom Releases Proposed FY 2022-23 State Budget, Includes Series of Transformational Investments in Transportation Infrastructure

On January 10, 2022, Governor Newsom released his proposed Fiscal Year 2022-23 budget, based on the latest economic forecasts available to the Governor and his Department of Finance. The \$286.4 billion budget proposes to invest significant new state funding to address the Administration's top priorities, including pandemic response & relief, homelessness, transportation infrastructure, combatting climate change, wildfires, emergency response, and drought.

The budget includes the following one-time investments in transportation infrastructure:

- Priority Transit and Rail Projects - \$2 billion for transit and rail projects statewide that improve rail and transit connectivity between state and regional/local services.
- High Priority Grade Separations and Grade Crossing Improvements - \$500 million to support critical safety improvements throughout the state.
- Emerging Opportunities - \$200 million to invest in demonstration and pilot projects in high carbon-emitting sectors, such as maritime, aviation, rail, and other off-road applications, as well as support for vehicle grid integration at scale.
- Heavy-Duty Zero-Emission Vehicles and Supporting Infrastructure - \$935 million to deploy 1,000 zero-emission short-haul (drayage) trucks and 1,700 zero-emission transit buses and \$1.1 billion for zero-emission trucks, buses, and off-road equipment and fueling infrastructure.
- High-Speed Rail - \$4.2 billion to complete high-speed rail construction in the Central Valley, advance work to launch service between Merced and Bakersfield, advance planning and project design for the entire project, and leverage federal funds.
- Active Transportation - \$750 million to General Fund to advance projects that increase the proportion of trips accomplished by walking and biking, increase the safety and mobility of non-motorized users, advance efforts to regional agencies to achieve GHG goals.
- Climate Adaptation - \$400 million for state and local climate adaptation projects that support climate resiliency and reduce risks from climate impacts.
- Southern California Mobility Projects - \$1.25 billion to deliver critical projects in Southern California.

Source: California Transit Association Funding Update – January 10, 2022

Transit and Intercity Rail Capital Program (TIRCP) 2022 Award Cycle

The California State Transportation Agency (CalSTA) released the call for projects for the Transit and Intercity Rail Capital Program (TIRCP) 2022 Award Cycle. The 2022 TIRCP grant cycle will program projects starting with the 2022-23 fiscal year and ending with the 2026-27 fiscal year. The new program cycle will include previously awarded and active Cycle 4 projects that have not been fully allocated by the end of the 2021-22 fiscal year, and new projects from Cycle 5. The Greenhouse Gas Reduction Fund (GGRF) and SB 1 continue to provide substantial funding to be programmed toward new projects in the TIRCP. While funding estimates for the program are considered reasonable as of the date of the guidelines, GGRF funds are subject to impacts from market forces and auction proceeds. Submission of electronic versions of the project cover letter and Project Narrative Document must be completed by March 3, 2022.

Under Consent Item IV.3, CCJPA staff is requesting authorization from the CCJPA Board of Directors to submit an application for the TIRCP program to support a suite of Sacramento Valley Station projects that would provide benefit to Capitol Corridor passengers. (See Item IV.3)

Federal Legislation and Funding

First Notice of Funding Opportunity (NOFO) Under Infrastructure Investment and Jobs Act (IIJA)

FY 2022 National Infrastructure Investments (Local and Regional Project Assistance)

The Infrastructure Investment and Jobs Act of 2021 authorized and appropriated \$1.5 billion to be awarded by the Department of Transportation (“DOT”) for Local and Regional Project Assistance Program Grants under National Infrastructure Investments. This Notice of Funding Opportunity (NOFO) solicits applications for projects funded under the Local and Regional Project Assistance Program, known as the RAISE Grants program. The Department intends to amend this NOFO to provide more details on or before January 30, 2022. As with previous rounds, funds for the FY 2022 RAISE Transportation program are to be awarded on a competitive basis for projects that will have a significant local or regional impact.

RAISE Transportation Discretionary Grants may not be less than \$5 million and not greater than \$25 million, except that for projects located in rural areas the minimum RAISE Transportation Discretionary Grant size is \$1 million. Projects eligible for funding include a highway or bridge project under Title 23, a public transportation project under Title 49, Chapter 53, a passenger rail or freight rail transportation project or a port infrastructure investment, including inland port infrastructure and a land port-of-entry. Eligible Applicants for RAISE grants include: States and the Dist. of Columbia, a unit of local government, a public agency or publicly chartered authority established by one or more States and/or a special purpose district or public authority with a transportation function, et al. Applications must be submitted by 5:00 PM Eastern on April 14, 2022.

Source: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=337382>

Amtrak Office of the Inspector General Report - Governance: Amtrak Has Begun to Address State Partners' Concerns About Shared Costs but Has More Work to Do to Improve Relationships (OIG-A-2022-005)

The Amtrak Office of the Inspector General released a report titled “*Governance: Amtrak Has Begun to Address State Partners’ Concerns About Shared Costs But Has More Work to Do to Improve Relationships (OIG-A-2022-005)*”. The objectives for the report were to identify and assess the challenges associated with cost sharing on state-supported routes and the extent to which the company is working independently, and with its state partners, to address them.

Although the company has addressed some of the concerns associated with cost sharing on its state-supported routes, the report found that three challenges persist. First, there remain conflicting perspectives between Amtrak and its state partners about control over decision-making and the level of support Amtrak provides to those partners. Second, there remain unaddressed issues with the cost-sharing methodology despite the company’s efforts to improve its ability to directly assign costs to state partner’s trains. Third, the company’s state partners question whether the company has effective quality controls in its cost-calculation and bill-development process, and some state partners do not understand the company’s process. State partners’ perceptions about these issues affect their trust in the company, with about one-third having high trust around cost-sharing, one-third moderate trust, and one-third low trust.

The ongoing congressionally mandated discussions about the cost-sharing methodology offer a meaningful opportunity to begin resolving the challenges we identified. To capitalize on this opportunity, it is recommended that Amtrak coordinate with state partners and FRA, likely through the State-Amtrak Intercity Passenger Rail Committee, to clarify which decisions affecting state partner costs the company must control and the level of support the company can provide. It is also recommended that the company clarify and document decisions about the relationship between costs and service and how to handle capital costs. In addition, it is recommended that taking steps to better assure state partners that their bills are accurate, such as documenting the cost-calculation and bill-development process and sharing this information with them.

Source: <https://amtrakoig.gov/audit-documents/audit-reports/governance-company-needs-comprehensive-framework-successfully-manage>

RECOMMENDATION

For information and discussion.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022

FROM: Robert Padgette
Managing Director, CCJPA

SUBJECT: Capital Projects Update – Link21

PURPOSE

To provide the CCJPA Board with information on the Link21 Program in preparation for Board action at the April 20th Board meeting to approve advancement to the next phase.

BACKGROUND

At each CCJPA Board of Directors meeting, CCJPA staff highlights a capital project in a presentation to the Board. For the February 16th meeting, CCJPA and BART staff will present a summary of work completed to-date on the Link21 program and the proposed action for the Board to consider at the April Board meeting. Attached, in the supplemental materials of this agenda packet, for your reference is a memorandum outlining the work completed to support advancement to the next phase of the program.

RECOMMENDATION

For information and discussion.

CCJPA CAPITAL PROJECTS

February 2022

Project Name	Project Description	Projected Completion	CCJPA Secured Funds	CCJPA Contribution	Partner Contribution	Total Project Cost
South Bay Connect (Oakland to San Jose Phase 2A)	Environmental, design, and construction to relocate Capitol Corridor service between Oakland Coliseum and Newark from Niles Subdivision to Coast Subdivision, which will decrease travel time between Oakland and San Jose and to improve connections to SF Peninsula.	Environmental: Nov-22 Design: Dec-24 Construction: Apr-29*	\$ 190,363,000	\$ 307,002,000	N/A	\$ 307,002,000
Sacramento to Roseville Third Main Track Phase I	Construct first phase of third main track and layover facility improvements in order to increase service frequency between Sacramento and Roseville.	Environmental: Nov-15 Design: Mar-23 Construction: Apr-27	\$ 87,700,000	\$ 174,300,000	N/A	\$ 174,300,000
SR84 Intermodal Bus Facility	New bus facility on SR84 connecting to the proposed Ardenwood Station on South Bay Connect, reducing travel time for transbay buses and shuttles.	Design: Dec-24 Construction: Apr-29*	\$ 8,100,000	\$ 42,420,000	N/A	\$ 42,420,000
Davis Station Signal Improvements	Improve the railroad signal system and replace track crossovers at Davis station to improve reliability and lifespan of the railroad infrastructure.	Sep-23	\$ 8,430,000	\$ 9,150,000	\$ 3,250,000	\$ 12,400,000
Agnew Siding	Design and construct 2,000' siding in the vicinity of the Santa Clara Great America Station.	Design: Oct-22 Construction: Mar-24	\$ 3,389,932	\$ 10,600,000	N/A	\$ 10,600,000
Steger Signal Improvements	Improvements to the railroad signal system in the vicinity of Richmond station which will result in improved reliability and better on-time performance.	Jun-24	\$ 5,690,000	\$ 5,690,000	\$ 1,000,000	\$ 6,690,000
Contactless Fare Payment Hardware	Payment hardware to support roll-out of contactless fare payments under CalITP.	Dec-22	\$ 2,500,000	\$ 2,500,000	N/A	\$ 2,500,000
CAPITAL PROJECT TOTAL			\$ 306,172,932	\$ 551,662,000	\$ 4,250,000	\$ 555,912,000

*CCJPA is working to pull in timelines subject to federal and state funding availability

CCJPA-Led Projects

Supporting the California Intercity Rail Services

February 2022

Project Name	Project Description	Projected Completion	Secured Funds	Total Project Cost
California Integrated Travel Program (CalITP)	Develop a governance structure and approach for a system that allows for seamless statewide travel and fare purchase across multiple agencies and modes	Pilot: October-22	\$ 33,340,000	\$ 33,340,000
California Passenger Information Display System (CalPIDs) Modernization	Design, test, and implement an improved passenger train arrival/alerts system all communication channels including station hardware, servers, data, and software	December-22	\$ 3,266,695	\$ 3,266,695
Network Integration	Support for initial Second Transbay Crossing study and Carquinez Strait Crossing Study	Ongoing	\$ 2,000,000	\$ 2,000,000
Link21 (New Transbay Rail Crossing)	Planning and implementation strategies for a new Transbay Rail Crossing (funded annually through the Annual Business Plan process)	Ongoing	\$ 1,500,000	\$ 1,500,000
Door Panel Procurement	Procurement of door panels for Caltrans-owned Surfliner Rail Cars	December-22	\$ 575,000	\$ 575,000
PARTNER PROJECT TOTAL			\$ 40,681,695	\$ 40,681,695



Date: February 11, 2022

From: Robert Padgett, Managing Director

To: CCJPA Board of Directors

Subject: Managing Director's Report – January 2022

The CCJPA Board will be provided with an update on year-to-date service performance and other service and program updates.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

MEMORANDUM

TO: Capitol Corridor Joint Powers Authority Board **DATE:** February 11, 2022
FROM: Robert Padgette
 Managing Director, CCJPA
SUBJECT: CCJPA Project and Program Updates

PURPOSE

To provide a report on work completed and work in progress up to the February 16, 2022 CCJPA Board meeting.

BACKGROUND

The following is a report on recently completed work and on work efforts currently underway:

- a. CCJPA Annual Independent Audit (FY 2021 & FY 2020) - As provided in the Joint Exercise of Powers Agreement between the CCJPA member agencies, the Controller-Treasurer's Office of the CCJPA is required to conduct an annual independent audit of the CCJPA and submit the report of such audit each year. The financial report stating the findings of the independent audit for the Fiscal Year 2020 - 21 (July 2020-June 2021) was prepared and submitted to the CCJPA member agency staff (Staff Coordinating Group [SCG]) for review and comments. Comments have been incorporated, and the final report has been transmitted to the CCJPA Board Directors and can be viewed [on the Capitol Corridor website](#).
- b. Capitol Corridor Annual Performance Report (FY 2021) - At the November 2021 meeting, CCJPA Board was presented with the draft Performance Report covering the Fiscal Year 2020-21 (October 2020-September 2021). Staff finalized the design (including graphics, videos, and photos) and developed a digital microsite. The FY 2021 Annual Performance Report has been released and is available for viewing at www.ccperformance.org. The report will be widely distributed to the State Legislature and other interested agencies. A copy of the report is included as part of the agenda materials for this meeting.
- c. CCJPA/Amtrak Operating Agreement (FY 2022) - Resolution 21-27 was adopted by the CCJPA Board at the November 17, 2021 Board meeting, authorizing execution of the FY 2022 Operating Agreement for intercity passenger rail and connecting bus service. The effective dates of the FY 2022 Operating Agreement are October 1, 2021 through September 30, 2022.

d. January 24th Schedule Change (Train and Bus) -

On January 24th, the Capitol Corridor implemented a new schedule. The January 24th schedule provides more midday service during the week in the eastbound direction, as well as increased late afternoon and evening weekday service. You can find the detailed changes for the [new train schedule](#) and [new bus schedule](#) online at <https://www.capitolcorridor.org/schedules/>.

The following is a summary of specific trip changes:

Weekday Westbound:

- *Added:* Trains 543 and 549
- *Canceled:* Trains 535 and 537

Weekday Eastbound:

- *Added:* Trains 534, 540 and 548
- *Canceled:* Trains 520, 526 and 544

Bus Connection Changes:

- *Redding to Sacramento:* Train 537 connection replaced with Train 541
- *Martinez to Eureka:* Train 526 connection replaced with 524 and Train 544 connection replaced with Train 542
- *Santa Cruz to San Jose:* Connection to Train 544 removed
- *San Jose to Santa Cruz:* Connection from Train 537 removed

e. Marketing and Communications Activities -

- o Completed Activities
 - i. See attached marketing activities report, which details work completed during the period of November - January 2022
- o Advertising, Promotions, and Offers:
 - i. 30th Anniversary – staff is continuing campaign to increase social engagement, thank riders for their loyalty, and bring attention to Capitol Corridor service and this milestone. The 30% anniversary discount continues through end of March.
 - ii. Spring/Summer offers: coordinating with ad agency to develop offers for summer to attract leisure markets
 - iii. Partnerships – exploring partnerships with CA State Parks & Rec, and other destinations as they open up for the spring/summer seasons.
- o Public Relations, Events, Outreach, and Customer Experience:
 - i. Continuing work with STA and PCTPA on videos to promote ridership
 - ii. Planning for On Board Surveys in June

f. South Bay Connect - Since concluding the initial Scoping Period for Environmental Impact Report (EIR) in August 2020, the project team is working on the technical analyses of environmental impacts for the draft EIR. Public outreach and engagement activities such as presentations and meetings with various local city councils and community groups are paused at this time until the draft EIR is poised for or is released. Development of the draft EIR will continue into mid-2022, and CCJPA continues to work with UPRR on modeling the shift of service to Coast Subdivision and understanding the need for infrastructure improvements necessary to maintain efficient passenger and freight railroad operations as a result of the project.

- g. Sacramento – Roseville Third Track Project - The Union Pacific Railroad (UPRR) has provided an extensive review and accepted the revised 25% design submittal. Together with the UPRR, the CCJPA and our engineering team has completed a field constructability review of the project. The CCJPA design team is now preparing the 30% design documents. CCJPA recently prepared a funding application to the FRA CRISI program in November 2021; awards are expected in April or May of 2022. Other funding plans are coming together as well, including an identification of \$30M in ITIP funds from the State in their draft ITIP plan as well as leadership from PCTPA to support Solutions for Congested Corridor funding for the project. When complete, this project will allow the Capitol Corridor to operate two additional round trips between Sacramento and Roseville. The future Phase II of this project will permit the Capitol Corridor to operate a total of 10 round trips in this segment. As evidenced by the prior action, the CCJPA is preparing to have support ready for quickly moving into Phase II development.
- h. California Passenger Display System (CalPIDS) - CCJPA is near the closing phases of software development and has key hardware components for supporting at-station communications, which will be supplemented by network hardware from AT&T. The PIDS hardware order will include Station Controllers, UPS, and minor hardware for each station is needed to interface with the new software. When software is completed, all the backend systems that rely upon train location details can be launched. Station design drawings are in development and are approved to move toward the 100% level for most all stations with the exception of the Sacramento station which will need special attention. As those are prepared, the respective station entities that oversee installation are getting design plans to review. In parallel, CCJPA is partnering with Amtrak for the cabinet installations once all stations have reached 100% design level. Subsequently, AT&T will drop their communications system to utilize each cabinet, and functionality of the updated PIDS system (using the older signs and audio components for now) will be tested, commissioned and turned over for full at-station service.
- i. Davis Crossover and Signal Replacement - The design team has continued working with the Union Pacific Railroad (UPRR) to refine the track design for this project and has submitted the 30% design for review and approval. The design team has similarly been developing design plans to modify the adjacent 2nd Street. The revised profile of 2nd Street will allow construction of the railroad track improvements without the need for a retaining wall between the street and the railroad. The City of Davis is preparing to construct this work. Following completion of the track design, the UPRR will complete the signal design and construct the project. When complete, this project will provide a gateway to the future replacement of the Davis boarding platforms with a safer, ADA-compliant arrangement utilizing a center island platform with grade-separated pedestrian access. Managed by Amtrak, the boarding platform project has kicked off with a design team selected by Amtrak. Capitol Corridor staff will work to help coordinate the interests of the stakeholders to help ensure a successful project.
- j. Stege Crossover and Signal Upgrade - The CCJPA is working with the UPRR to upgrade the crossovers and signal system at Stege, between Richmond and Berkeley. This project will improve on-time reliability by replacing the crossovers with higher-speed turnouts and by improving the reliability of the signal system. Union Pacific Railroad expects to begin construction on this project in 2022.

- k. Agnew Siding - On the single-track section between Newark and San Jose, the Agnew Siding project will provide a new location to meet and pass trains near the Santa Clara Great America station. Currently Capitol Corridor trains can see significant delays if there are opposing trains in this segment, but this new siding will halve those delays. The CCJPA design team is working on the 60% design of the project while pushing forward with utility relocations needed for this project. At the completion of the design and after the utility relocations are complete, the UPRR will construct the siding.

RECOMMENDATION

For information only.

Supplemental Materials



**CAPITOL
CORRIDOR**

Business Plan Update
FY 2022-23 & FY 2023-24

DRAFT ANNUAL BUSINESS PLAN
February 2022

INTERCITY PASSENGER RAIL SERVICE

Auburn | Sacramento | Davis | Suisun-Fairfield |
Martinez | Oakland | San Francisco | San Jose

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Executive Summary

Introduction. This Annual Business Plan (ABP) presents an overview of the Capitol Corridor Joint Powers Authority’s (CCJPA) strategic plan and funding request for the next two fiscal years (FY 2022-23 and FY 2023-24). This document outlines the service and capital improvements that have contributed to the Capitol Corridor’s success, identifies necessary improvements to sustain its growth, and incorporates customer input as detailed in Chapter 263 of California State Law.

Intercity passenger rail business plans are integral to the overall statewide planning, coordination, and budgeting of the services. The CCJPA will submit this draft ABP to the Secretary of the California State Transportation Agency (CalSTA) in April 2022 and, as necessary, a revised version can be submitted by June 15, 2022.

The ongoing pandemic brings a level of uncertainty to the CCJPA Business Plan that is reflected throughout the document. Impacts to ridership, staffing levels, equipment availability, and available funding are all possible with high degrees of variability expected depending on the trajectory of the pandemic. CCJPA has benefited from three tranches of federal funding provided to Amtrak for the State-Supported services which has helped us to support the Capitol Corridor operating costs during a time of an unprecedented decline in ridership and revenue. It is not clear if additional COVID-relief funding from the federal or state governments will be available to offset loss in revenue going forward. The information included in this document reflects our current expectations as of the date of the current version of the Business Plan. As we have since the beginning of the current public health crisis, CCJPA will continue to work closely with the State, Amtrak, Union Pacific, and other intercity rail partners to ensure that we adapt to continued changes due to the pandemic over the course of the planning period. CCJPA’s long-term plan is to return to full service as soon as health and financial conditions allow and build upon that with future service improvements and expansion.

As administrator of the Capitol Corridor®, the CCJPA’s primary focus is the continuous improvement of the train service through effective cost management, gaining share in the travel market, and delivering a customer-focused, safe, frequent, reliable, and sustainable transportation alternative to the congested I-80, I-680, and I-880 highway corridors. The CCJPA is governed by a Board of Directors comprised of 16 elected officials from six member agencies along the 170-mile Capitol Corridor route (see Figure 1-1):

- Placer County Transportation Planning Agency (PCTPA)
- Solano Transportation Authority (STA)
- Yolo County Transportation District (YCTD)
- Sacramento Regional Transit District (Sac RT)
- San Francisco Bay Area Rapid Transit District (BART)
- Santa Clara Valley Transportation Authority (VTA)

History. The Capitol Corridor service began in December 1991 with six daily trains between San Jose and Sacramento. The CCJPA assumed management responsibility for the service in October 1998. In August 2006, the CCJPA expanded service from 24 to 32 weekday trains between Sacramento and Oakland and from eight to 14 daily trains continuing to San Jose. In August 2012, the CCJPA utilized the reconfigured Sacramento station to optimize operational cost effectiveness and reduced service to 30 daily round trips between Sacramento and Oakland

Operating Plan. Due to the COVID-19 global pandemic, CCJPA reduced service beginning in March 2020 and expects to continue to operate a temporary reduced operating plan for train and bus service until at least the first quarter of FY 2022-23. For the purposes of budget forecasting, the business plan reflects a presumed return to full service during the first quarter of FY 2022-23 but future adjustments in those assumptions will be based on changing health conditions, Amtrak workforce availability, equipment availability, and financial resources to support operating costs.

The basic operating costs for the Capitol Corridor conform with Section 209 of the Passenger Rail Improvement and Investment Act of 2008 (PRIIA). This policy is used to develop the budget for the FY 2022-23 and any future CCJPA/Amtrak operating agreement, as summarized in the table below for the upcoming fiscal years. There has been a level of unpredictability in Amtrak operating costs, and operating efficiency requires significant improvement in order to return to pre-pandemic levels of train service.

Capitol Corridor Route	FY 2022-23	FY 2023-24
Sacramento – Oakland	30 weekday/22 weekend trains	30 weekday/22 weekend trains
Oakland – San Jose	14 daily trains	14 daily trains
Sacramento – Roseville	2 daily trains (with plans for up to 20)	2 daily trains (with plans for up to 20)
Roseville – Auburn	2 daily trains	2 daily trains
Operations Budget	\$39,682,000	\$36,503,000

Uniform Performance Standards. For this ABP, the CCJPA incorporates the most recent version of the Uniform Performance Standards (UPS) as modified by CalSTA. The table below provides an overview of the performance of the Capitol Corridor compared to the UPS as well as the updated forecasted UPS for the next two fiscal years:

Performance Standard	FY 20-21			FY 21-22	FY 22-23	FY 23-24
	Actual	Standard	% Difference	Standard	Standard	Standard
<u>Usage</u>						
Route Ridership	354,373	388,488	-9%	792,474	1,158,000	1,384,530
Passenger Miles	24,994,057	16,410,100	+52%	35,015,800	85,446,500	92,905,800
Total Operating Cost/Passenger-Mile	\$1.86	\$2.34	-21%	\$0.98	\$0.75	\$0.70
<u>Service Quality</u>						
End-Point On-Time Performance	90%	90%	0%	90%	90%	90%
Passenger On-Time Performance	92%	90%	+2%	90%	90%	90%
Operator Delays/10K Miles	302	>325	-7%	>325	>325	>325

Capital Improvement Program. The CCJPA’s Capital Improvement Program (CIP) is consistent with the CCJPA’s Vision Plan, regional and State of California transportation plans (e.g., Regional Transportation Plans [RTPs] and Caltrans’ 2018 State Rail Plan). The CIP includes projects in four broad categories: railroad infrastructure maintenance and improvements, rolling stock equipment improvements, service amenity improvements, and service plan improvements and expansions.

Long-term service plan improvement activities over the next two fiscal years will include the final engineering design of Sacramento to Roseville service expansion project and the environmental and design phase of South Bay Connect. CCJPA will also continue to work in partnership with BART on the initial planning stages for Link21, a new Transbay rail crossing, that includes BART and standard gauge interregional passenger rail services.

For railroad infrastructure maintenance and improvements, CCJPA will continue to work with Union Pacific Railroad to maintain railroad right-of-way infrastructure in prime condition to reduce delays and ensure excellent on-time performance [90%+] for Capitol Corridor trains with two large scale signal replacement projects near Davis Station and at Stege, near the Emeryville Station. In addition, design for improvements for passenger safety and accessibility at the Davis Station is currently underway in partnership with Amtrak, UPRR, and the City of Davis. For rolling stock improvements, testing of renewable diesel as an alternative fuel source presents an exciting opportunity to decrease carbon emissions associated with train operations. CCJPA is also coordinating closely with Caltrans to rehabilitate and extend the life of the existing fleet.



For service amenity improvements, customers can expect to see continual Wi-Fi portal improvements in content and bandwidth. CCJPA is partnering with the San Joaquin Joint Powers Authority (SJJPA), the San Joaquin Regional Rail Commission (management agency of the Altamont Corridor Express, or ACE), and the North County Transit District (NCTD) to modernize PIDS across State-supported intercity passenger rail services, with implementation ongoing through calendar year 2022. The California Integrated Travel Project (Cal-

ITP), in coordination with the California State Transportation Agency (CalSTA), will be entering a Minimum Viable Project (MVP) phase which is intended during the Fiscal Year to introduce new ticketing options to the public. This will require internal Capitol Corridor management and oversight changes, and as experienced by the public, there will be a notable change to ticket sales. CCJPA is presently developing the nature of the MVP and will engage with the public regarding future changes.

Marketing, Communications, and Customer Experience Strategies. The CCJPA’s marketing, communications, and customer experience strategies for FY 2022-23 and FY 2023-24 will focus on developing and implementing a comprehensive marketing and communications plan to attract and grow ridership to pre-pandemic levels, where market research and travel trends indicate opportunity for regrowth to those levels. Over the next two fiscal years, CCJPA will renew partnerships with destinations, create programs to enhance the overall customer experience, including the support of Cal-ITP and seek out opportunities to grow ridership via micro-markets. Seasonal offers will seek to attract new riders and position Capitol Corridor as a distinct regional service brand. CCJPA will continue to coordinate with local partners on promotions, outreach, and shared marketing efforts. Ridership has been slowest to bounce back on Capitol Corridor as compared to all the other state-supported routes nationwide. Winning back riders will require an aggressive approach to marketing that demands an increase in funds to support the planned efforts, beyond the flat budget allocation that has been provided for Marketing activities for the past twenty-plus years.

The CCJPA is committed to manage the service to meet or exceed near-term budget projections. Promotional programs and campaigns will showcase the Capitol Corridor as the preferred transport alternative in the Northern California Megaregion. CCJPA will conduct the planning analysis and cultivate the partnerships and funding opportunities necessary to make incremental as well as longer-term transformational changes to the Capitol Corridor route.

1. Introduction

The Annual Business Plan is submitted in draft form in April 2021 and final form by June 15, 2021, to the Secretary of the California State Transportation Agency (CalSTA), providing adequate time for Amtrak to develop its final operating cost estimates for the Capitol Corridor® intercity passenger rail service. As part of Chapter 263 of State Law that allowed for the transfer of the Capitol Corridor service to the CCJPA on July 1, 1998, the CCJPA is required to prepare an ABP that identifies the current fiscal year’s operating and marketing strategies; summarizes capital improvement plans for the Capitol Corridor; and includes the funding request to the Secretary of CalSTA for the CCJPA’s operating, administrative, and marketing costs for inclusion in the State Budget proposal to the Legislature.

The ongoing pandemic brings a level of uncertainty to the CCJPA Business Plan that is reflected throughout the document. Impacts on ridership, staffing levels, equipment availability, and available funding are all possible with high degrees of variability expected depending on the trajectory of the pandemic. CCJPA has benefited from three tranches of federal funding provided to Amtrak for the State-Supported services which has helped us to support the Capitol Corridor operating costs during a time of an unprecedented decline in ridership. It is not clear if additional COVID-relief funding from the federal or state governments will be available to offset loss in revenue going forward. There has been a level of unpredictability in Amtrak operating costs, and operating efficiency requires significant improvement to return to full service and expand to meet the service expectations as outlined in the CCJPA vision plan. The information included in this document reflects our current expectations as of the date of the current version of the Business Plan. As we have since the beginning of the current public health crisis, CCJPA will continue to work closely with the State, Amtrak, Union Pacific, and other intercity rail partners to ensure that we adapt to continued changes due to the pandemic over the course of the planning period. CCJPA’s long-term plan is to return to full service as soon as health and financial conditions allow and build upon that with future service improvements and expansion.

The CCJPA is governed by a Board of Directors comprised of 16 elected officials from six member agencies (listed below) along the 170-mile Capitol Corridor rail route (see Figure 1-1):

THE CAPITOL CORRIDOR PROVIDES A SUSTAINABLE TRANSPORTATION SERVICE CONNECTING THE THREE ECONOMIC EMPLOYMENT CENTERS IN NORTHERN CALIFORNIA: SACRAMENTO, SAN FRANCISCO/OAKLAND, AND SAN JOSE/SILICON VALLEY.

- Placer County Transportation Planning Agency (PCTPA)
- Solano Transportation Authority (STA)
- Yolo County Transportation District (YCTD)
- Sacramento Regional Transit District (Sac RT)
- San Francisco Bay Area Rapid Transit District (BART)
- Santa Clara Valley Transportation Authority (VTA)

The Capitol Corridor serves 18 train stations along the 170-mile rail corridor connecting the counties of Placer, Sacramento, Yolo, Solano, Contra Costa, Alameda, San Francisco (via motorcoach), and Santa Clara. The train service parallels the I-80/I-680 highway corridor between Sacramento and Oakland, and I-880 between Oakland and San Jose. In addition, the Capitol Corridor connects outlying communities to the train service via a dedicated motorcoach bus network as well as partnerships with local transit agencies that assist passengers traveling to destinations beyond the immediate vicinity of the CCJPA train stations.

Capitol Corridor train and connecting motorcoach services are developed with input from riders, private sector stakeholders (such as Chambers of Commerce), and public interests (such as local transportation agencies), along with the entities that help deliver the Capitol Corridor service – Amtrak, Union Pacific Railroad (UPRR), Caltrans, and the various transportation agencies and communities that are along the Capitol Corridor route.

2. Historical Performance of the Service

On December 12, 1991, the State of California Department of Transportation (Caltrans) and Amtrak initiated the Capitol Corridor intercity train service with six daily trains between San Jose and Sacramento. In 1996, legislation was enacted to establish the CCJPA, a partnership among six local transportation agencies sharing in the administration and management of the Capitol Corridor intercity train service.

In July 1998, an Interagency Transfer Agreement (ITA) transferred the operation of the Capitol Corridor service to the CCJPA for an initial three-year term, which was extended in 2001. In September 2003, legislation was enacted that eliminated the sunset date in the ITA and established the current, permanent governance structure for the CCJPA. The CCJPA now operates and manages the Capitol Corridor service through an operating agreement with Amtrak.

Under management of the CCJPA, collection and use of train operations and revenue data has been a consistent tool to expand and fine tune service plans to optimize ridership, increase revenue, achieve cost efficiency, and improve safety. Appendix A presents an overview of the financial performance and ridership growth of the Capitol Corridor service since its inception in December 1991.

Figure 1-1
Map of Capitol Corridor Service Area



3. Operating Plan and Strategies

The CCJPA aims to meet the travel and transportation needs of Northern Californians by providing safe, frequent, reliable, and sustainable Capitol Corridor intercity train service. CCJPA is increasing the use of detailed daily operating information (e.g. ridership, delays, safety incidents, and customer comments) to drive efficiencies and identify capital improvement needs to enhance the reliability of service. Applying business intelligence and analytics ensures that the CCJPA uses sound business principles in developing short- and long-term operating strategies for the Capitol Corridor trains.

Train Service and Expansions

The Capitol Corridor has maintained service at 30 weekday (22 weekend) trains between Sacramento and Oakland and 14 daily trains between Oakland and San Jose since August 2012. Due to the unprecedented effects of the COVID-19 global pandemic, CCJPA reduced train service to mitigate revenue shortfalls while still providing a critical transportation lifeline to essential and frontline workers during 2020. Immediately following the shelter in place orders in March of 2020, CCJPA reduced train service to ten trains per day. In June of 2020, the service frequency was increased to eight round trips on weekdays and five on weekends, representing fifty-five percent of pre-pandemic levels. In June of 2021, service frequency was increased to 11 round trips on weekdays and 9 round trips on weekends, representing 85% of pre-COVID service level. The short-term strategy is to match our service to demands as public health and financial conditions allow. CCJPA’s goal is to return to pre-pandemic train service levels by the first quarter of FY 2022-23.

CCJPA WILL CONTINUE TO PURSUE SPECIFIC STRATEGIES TO ADDRESS SEATING CAPACITY CONCERNS ON SELECT PEAK TRAINS, SUCH AS ADDING ADDITIONAL TRAIN CARS AS AVAILABLE.

Prior to the pandemic, through February 2020, the Capitol Corridor train service experienced ridership growth for 31 consecutive months. CCJPA will focus comprehensive strategies to restore service and ridership towards pre-pandemic levels in the FY 2022-23 and FY 2023-24 time period.

For FY 2022-23, CCJPA will continue the operation of the pulse schedule introduced on March 29, 2021, which is a regularized hourly arrival and departure pattern (i.e. 5:01, 6:01, 7:01, etc.). This was a major change in

CCJPA’s schedule and is in alignment with the California Rail State plan. Additionally, this new schedule connects Auburn to San Jose with a direct train each way seven days a week.

The CCJPA continues to plan for service expansions to/from Roseville and longer-term service expansions to/from San Jose. These service expansion/extension projects will also require additional rolling stock.

Motorcoach Service and Transit Connections

The Capitol Corridor provides dedicated motorcoach bus connections to San Francisco, communities along the Central Coast region south of San Jose (Salinas and San Luis Obispo), and communities east of Sacramento. In addition, the CCJPA partners with local transit agencies to offer expanded options for transit connections throughout the corridor. The CCJPA reimburses transit agencies through its Transit Transfer Program that allows Capitol Corridor passengers to transfer free of charge to participating local transit services. CCJPA partners with Santa Cruz Metro, El Dorado Transit Authority, and Monterey-Salinas Transit to share operating costs for the benefit of both agencies and their riders. Figure 3-1 illustrates the range of passenger rail, Amtrak Thruway bus, and other local transit connections available from Capitol Corridor stations.

Pursuant to Senate Bill (SB) 742 which was enacted in 2020 and enables the State-supported intercity passenger rail services (Capitol Corridor, San Joaquins, and Pacific Surfliner) to provide bus service to passengers without a train ticket as a part of a trip. During FY 2021-22 CCJPA formed a partnership with El Dorado Transit for the Sacramento to South Lake Tahoe route that allows for connecting service for Capitol Corridor riders, or local trips for those traveling along this route. This is an open-door service like the Monterey-Salinas Transit partnership. CCJPA will continue to explore the possibility of transitioning to an AC Transit provided connection for the service between Emeryville and San Francisco. CCJPA will explore other opportunities for similar partnerships with transit agencies.

FY 2021-22 Operating Plan

As of June 7, 2021, the Operating Plan is:

- Sacramento – Oakland - 22 weekday (18 weekend) trains
- Oakland – San Jose: *12 weekday trains/14 weekend trains
- Sacramento – Roseville – Auburn – 2 daily trains (one round-trip)

*Reduced from 14 to 12 weekday trains as of January 24, 2022

FY 2022-23 and FY 2023-24 Operating Plans and Strategies

CCJPA is currently planning to return to full service during the first quarter of FY 2022-23 subject to changing impacts of the pandemic on passenger demand, staffing, equipment availability, and budget.

Capitol Corridor Route	FY 2022-23	FY 2023-24
Sacramento – Oakland	30 weekday/22 weekend trains	30 weekday/22 weekend trains
Oakland – San Jose	14 daily trains	14 daily trains
Sacramento – Roseville	2 daily trains (with plans for up to 20)	2 daily trains (with plans for up to 20)
Roseville – Auburn	2 daily trains	2 daily trains
Operations Budget	\$39,682,000	\$36,503,000

CCJPA WILL PARTNER WITH AMTRAK TO INCREASE THE PRESENCE OF SECURITY AND THE FREQUENCY OF DEEP CLEANING AT SELECT EAST BAY STATIONS.

Safety and Security

The CCJPA will continue to work with partners, including UPRR, Amtrak, Caltrans, and Caltrain, to monitor and maintain the PTC system on Capitol Corridor rolling stock as well as along the route that Capitol Corridor trains operate on for safe and reliable train service.

During FY 2020-21 CCJPA implemented health and safety measures soon after the COVID-19 global pandemic. This included hand sanitizers aboard, enhanced cleaning procedures and mandated mask wearing while riding onboard. CCJPA will continue to work closely with Amtrak to identify additional measures to enhance health & safety.

Figure 3-1: Connecting Bus, Transit, and Train Services



Service Reliability

The CCJPA consistently takes action to address issues with service reliability and On-Time Performance (OTP). Two actions that were initiated in FY 2018-19 and that will continue are:

- Supporting an additional two Amtrak transportation supervisors in the Oakland to San Jose section of the route to address unauthorized trespassing and service incidents.
- Funding a right-of-way (ROW) cleaning crew (financed with CCJPA State Rail Assistance (SRA) funds and executed by UPRR) to address vegetation overgrowth, add and repair security barriers/fences, and remove homeless encampments along the ROW.
- Funding two Union Pacific patrol officers to identify safety issues along the corridor, including encampments, abandoned vehicles, and gaps in fencing.

The ROW Safety and Security Improvement Project is a partnership between CCJPA and UPRR to identify and mitigate safety/security concerns along the UPRR right-of-way, such as removing debris, vegetation mitigation, and temporary shelters. These actions help decrease trespasser fatalities as well as delays caused by debris on the tracks. The project is expected to continue in perpetuity based on available funding.

During FY 2021-22 CCJPA Board approved funding for two UPRR special agent positions dedicated to the CCJPA ROW. The Capitol Corridor-UPRR Special Agent support will improve safety and security and will improve on-time performance of trains by providing police support for railroad crossing enforcement/education, pedestrian and vehicle trespassing, illegal dumping, and vandalism on Capitol Corridor railroad rights of ways. The project is expected to continue in perpetuity based on available funding.

4. Capital Improvement Program

The CCJPA maintains a Capital Improvement Program (CIP) intended to incrementally improve the Capitol Corridor's reliability, travel times, OTP, safety/security, and to expand service frequency. These initiatives are supported by capital funding sources at the local, regional, state, and federal levels. As with other transit systems around the country, the COVID pandemic has depressed Capitol Corridor ridership and thrown projections of future ridership into uncertainty. However, there is no current basis for suspending or altering any of the projects currently ongoing within the CIP given the long-term strength of the travel market in the CCJPA service area.

Capital Improvement Program Funding

Since the inception of the Capitol Corridor service in 1991, more than \$1 billion has been invested or programmed to purchase rolling stock, build, or renovate stations, upgrade track and signal systems for increased capacity, and construct train maintenance and layover/storage facilities from a mixture of funding sources. Most of the funding has come from the State. See Appendix B for a list of current CCJPA capital projects, project status, and related funding.



The 2018 State Rail Plan update lays out a transformative long-term vision of the statewide railroad network. The Plan envisions capital investments supporting a multi-tiered freight and passenger rail operating environment that better serves travel markets with improved cost efficiency. The CCJPA's Northern California Megaregional Rail planning efforts, which evolved from the Vision Plan process, are coordinated within the larger context of the 2018

State Rail Plan. We are entering a period where from both the federal and state perspective opportunities for passenger rail funding have never been as promising. The passage of the November 2021 federal infrastructure bill coupled with the existing state SB1 funding programs is the reason why the years ahead for rail improvements are so promising. We are entering a period where emphasis on project delivery is critical to support ongoing investment at the levels established.

Programmed and Current Capital Improvements

Improvements made in this fiscal year as well as capital projects planned for FY 2023-24 and FY 2024-25 can be categorized into four broad categories: railroad infrastructure maintenance and improvements, rolling stock equipment improvements, service amenity improvements, and service plan improvements and expansions.

Specific Capital Improvement Program Discussion

Railroad Infrastructure Maintenance and Improvements

Davis Station Improvements Design

The CCJPA has entered a partnership with Amtrak, UPRR, and the City of Davis to begin a major program of improvements at the Davis station. This project will improve passenger safety and accessibility at this station while reducing train delays, improving railroad fluidity, and providing new pedestrian connectivity to adjacent neighborhoods. The first phase of this work will involve replacement of track crossovers and railroad signal system near the station. Construction of the first phase is expected to begin in FY 2021-22. Design of the remaining improvements will proceed concurrently.

Agnew Siding Improvement Design

Final design for a new passing siding in the Santa Clara-Great America station vicinity is underway and will be completed in FY 2021-22. To date, funding is available to cover all design and pre-construction activities. A new passing siding in the Santa Clara-Great America station vicinity would offer two benefits: 1) Provide a storage track to hold Capitol Corridor special/extra trains to



serve events at Levi's Stadium, which is adjacent to the Santa Clara-Great America Station; and 2) Reduce delays to Capitol Corridor and ACE trains due to unscheduled meets in the current single-track territory. These delays cascade throughout the respective train systems, causing further service disruptions and delays. As the design is being completed, CCJPA is working with the respective utility owners to be sure their facilities that cross under the railroad are protected or relocated in the area where the new track will be constructed. CCJPA is working to obtain the remaining funds to implement the project as soon as the design phase is complete.

Signal Replacement/Upgrade

The CCJPA has continued to work in partnership with UPRR to improve the railroad signal system. Two major signal replacement projects, funded jointly by UPRR and CCJPA, are underway including one near Davis Station and the second, at Stege, near the Emeryville Station. Consistent joint investments of CCJPA and UPRR have resulted in a reduction in signal-related train delays.

Grade Crossing Safety Upgrade

The CCJPA has begun a program seeking safety improvements to the many highway/railway grade crossings along our route. While CCJPA does not have direct authority to make improvements to railroad crossings, substantial increases in Federal funding for crossing improvements provide an opportunity to address needed safety improvements. CCJPA intends to work closely with UPRR, the California Public Utilities Commission, and local communities to highlight areas of concern and support efforts to implement improvements. The improvements will be made in concert with the various road authorities and the Union Pacific Railroad with an aim to reducing incidents and maintaining the safety and on-time performance of Capitol Corridor trains. If appropriate, the CCJPA will seek to promote separation (bridge) or closure of the crossings.

Bridge and Structure Improvement/Upgrades

The CCJPA has begun a program of improvements to bridges and related structures along the Capitol Corridor route. This program will focus on safety improvements and asset life extension. This program will supplement the work already performed by the Union Pacific Railroad and will aim to improve the safety and on-time performance of Capitol Corridor trains.

Capitalized Maintenance

The Capitol Corridor Capitalized Maintenance program focuses on upgrades and improvements to the railroad infrastructure to achieve and maintain a high level of on-time performance. In the past fiscal year, funding was used for improvements to the railroad track to improve passenger ride comfort and on-time reliability. The program also funded railroad signal system reliability improvements.

Rolling Stock Equipment Improvements

Wi-Fi Upgrade

In December 2020, the CCJPA completed significant Wi-Fi system upgrades to the entire Northern California bi-level fleet which serves both the Capitol Corridor and San Joaquin intercity routes. CCJPA, working with Caltrans DRMT, performs this work as a ‘center of excellence’ on behalf of the State’s northern intercity passenger rail systems. In due course, this is available to extend to the Southern California fleet. The upgrades were completed using a service model approach, in which both the capital, ongoing operating support costs, and the associated amenities (e.g., entertainment and service applications) are amortized over time to allow for appropriate and consistent technology life-cycle upgrades. While the bi-level fleet has been upgraded, the new Siemens ‘Venture’ cars, are tentatively scheduled to be outfitted with the same Wi-Fi system starting in early 2022. This start date has been amended due to overall delays with the Siemens ‘Venture’ car program deliveries. The second phase of the Siemens ‘Venture’ cars is still expected to be on schedule starting on January 2023 as cars are finalized. In addition to portal/landing page features described in Chapter 8, Marketing Strategies, the CCJPA will work with the Wi-Fi to test some internet traffic shaping treatments that can improve the overall passenger experience.

Renewable Diesel Testing

To help the State meet its greenhouse gas reduction targets and eliminate harmful air pollution emissions, CCJPA is actively engaged with its statewide rail partners and the California Air Resources Board (CARB) to complete testing of renewable diesel as a substitute for carbon-based diesel fuel with the intention to transition the fuel source during FY 2021-22. This project was delayed due to vehicle crossing accident damage that occurred to the unit being tested. The locomotive testing phase was completed after special permission was granted by the FRA to run the engine in the number two position. As we conclude the component analysis phase of the Renewable Diesel (RD) test, we are preparing for EPA certification and the eventual complete transition to RD in the upcoming fiscal year. This transition will require acquiring the RD needed to supply the CCJPA and SJJPA fleet, securing pricing that is comparable to conventional diesel, and getting buy in from Amtrak to utilize the same fuel for their long-distance fleet in order to avoid needing duplicate fuel storage.

Additional New Rolling Stock

Caltrans has procured new single-level passenger rail cars (Siemens ‘Venture Cars’, described above in Wi-Fi) and these cars will be delivered for use on the San Joaquin service (tentatively) beginning in Spring 2022. This delivery will result in a shift of some vehicles to CCJPA. In advance of the order of new rail vehicles for the NorCal IPR fleet, Caltrans is spearheading a fleet management plan that is supported by the CCJPA, SJJPA, and the LOSSAN Rail Corridor Agency.

Service Amenity Improvements

Bicycle Access

In prior years, CCJPA has implemented several projects to support bicycle access to the service, including the installation of new electronic bicycle lockers at most of our stations. The COVID-related decreased ridership has slowed the demand for additional bike storage on and off the train, but CCJPA will continue to maintain and install new angled bike racks in additional train cars as demand recovers.

California Passenger Information Display System (PIDS) Modernization

PIDS provides passengers with train arrival information at Capitol Corridor stations and the current system is in need of replacement. CCJPA is partnering with the San Joaquin Joint Powers Authority (SJJPA), the San Joaquin Regional Rail Commission (management agency of the Altamont Corridor Express, or ACE), and the North County Transit District (NCTD) to modernize PIDS across State-supported intercity passenger rail services, with implementation ongoing

through calendar year 2022. This project is currently capially funded but will likely transition to an ongoing operating cost in future fiscal years as the system matures to a maintenance phase.

California Integrated Travel Program (Cal-ITP)

CCJPA is managing a CalSTA and Caltrans DRMT-led, multi-agency initiative to research, develop and implement an Integrated Travel Program (Cal ITP) that will enable California residents and visitors to plan and pay for travel across multiple modes of transportation, including bus, metro, light and intercity rail, paratransit, bike hire, and ride-hailing services in California. With the help of dedicated Caltrans staff leading integration, the CCJPA is fiscally and programmatically supporting these critical objectives. 2021 was spent further developing program capacity in and building upon scale of data systems, hardware, and software that would need to be in place to support early program pilots, but the true Cal-ITP highlight of the year was implementing several pilot tests, called Minimum Viable Products (MVPs). The MVP for California Intercity Passenger Rail system commenced for the Capitol Corridor service, and while it builds on other MVP efforts for bus and light rail transit, the passenger rail operating environment presents unique challenges to overcome for both operations and the banking system. This work has continued into 2022 and will result in an MVP launch in mid-2022. While CCJPA will work with the State to continue supporting this effort, including receiving more funding in FY 2022-23, we are also working with CalSTA/Caltrans DRMT to explore governance options so that the fiscal oversight of Cal-ITP can eventually be handed off from CCJPA.

Service Plan Improvements and Expansions

Sacramento to Roseville Third Track Service Expansion Project

The Sacramento to Roseville Third Track Phase I Project is currently advancing to the 30% design phase with UPRR and working towards design by early 2023 completion. Over the course of 2021, the CCJPA developed a funding plan to cover the construction funding gap. Due to the various sources, the CCJPA will learn from a combination of federal and state sources if we have been successful in gathering the capital funding needed to complete phase one of this project, thus allowing two additional round trips to/from Roseville. Phase two of this project will add an additional seven round trips but no funding for those phases has commenced with all efforts being focused on assembling funding and completing design and right-of-way acquisition for the phase one effort.



South Bay Connect (Oakland to San Jose Service Expansion Project Phase 2A)

The South Bay Connect project comprises two main elements that have independent utility but work together synergistically: 1) the rerouting of Capitol Corridor train service from its existing UPRR Niles Subdivision to the UPRR Coast Subdivision between Oakland and Newark (called the South Bay Connect project) and 2) a new intermodal station at Ardenwood Park & Ride (on the border between the cities of Fremont and Newark) that connects north-south rail service and existing east-west transit and shuttle service across the SR84 Dumbarton transportation corridor, enhancing transit connections between Alameda County and the Peninsula (termed the SR84 Intermodal Facility project). The proposed service reroute reduces travel time by up to 13 minutes between Oakland and San Jose and reduces overall freight and passenger train congestion in the East Bay. The SR84 Intermodal Facility would allow Capitol Corridor passengers to reach destinations on the Peninsula, identified as an underserved market for the Capitol Corridor service in a previous study, via existing bus and shuttle services. Resulting increases in ridership from travel time reduction and new intermodal station connections would reduce vehicle miles traveled on the congested corridors of I-880 and SR84, resulting in lower overall transportation GHG emissions and harmful air pollutants. This project is being developed in coordination with a broad range of stakeholders, including Alameda CTC, AC Transit, and other public and private entities. The draft Environmental Impact Report (EIR) is expected to be released by the end of 2022 and the final EIR by the end of 2023. The SR84 Intermodal Facility project is also advancing with Caltrans District 4 through their project development process. For both project elements, the CCJPA will continue to seek additional funding required to complete construction.

Link21 (New Transbay Rail Crossing)

CCJPA is partnering with BART on the extensive planning efforts needed to deliver on a Northern California Megaregional Project, a new transbay rail crossing between San Francisco and Oakland with implications that extend far beyond just the connection across the San Francisco Bay. The planned new rail crossing is evaluating provisions to include BART and/or standard gauge passenger rail services. The undertaking of such a project involves considering project concepts, markets, options, formal alternatives, across over 21 Northern California counties and requires a multi-disciplinary team of expertise to complete the extensive process. Section 9 of this ABP continues to include resources to support the full-time staff positions and supporting resources over the next five years to advance the planning studies and outreach efforts for interregional passenger rail services serving the greater NorCal Megaregion as part of Link21.

5. Performance Standards and Action Plan

CCJPA maintains a customer-focused business model which emphasizes delivering reliable, frequent, safe, and cost-effective train service designed to sustain growth in ridership and revenue. During the past 20 years, ridership has trended upward as the service provides a viable, transport alternative to the parallel congested I-80/I-680/I-880 highway corridors that is competitive in terms of travel time, reliability, and cost.

The CCJPA develops performance standards for the Capitol Corridor service to be aligned with the Uniform Performance Standards (UPS) developed by the CalSTA. CCJPA has long used data analysis to drive cost effective service improvements and expects to increase the role of data in future fiscal years. Table 5-1 summarizes the UPS and CCJPA results for FY 2020-21 and for FY 2021-22 through October/November 2021, as well as the standards for the next two fiscal years. The effect of the ongoing pandemic on performance has been quite significant and creates a great deal of uncertainty on future performance expectations.

FY 2020-21 Performance Standards and Results

- Ridership: 354.3 thousand, a decrease of sixty-one percent compared to FY 2019-20.
- Revenue: \$8.9 million, fifty-six percent less than in FY 2019-20.
- System Operating Ratio (farebox ratio): 20 percent, forty-three percent less than FY 2019-20, primarily due to the decrease in ridership and revenue due to the COVID pandemic.
- On-Time Performance (OTP): End-Point OTP 90 percent, an increase of two percent from FY 2019-20.

FY 2021-22 Performance Standards and Results to Date

- Ridership: Year-to-date (through December 2021) ridership is 175 percent more than last year and 3 percent below business plan projections.
- Revenue: Year-to-date (through December 2021) revenue is 194 percent more than last year and 3 percent more than business plan projections.
- System Operating Ratio: Year-to-date (through December 2021) system operating ratio is 34 percent, 34 percent less than the FY 2021-22 standard of 52 percent.
- On-Time Performance (OTP): Year-to-date (through December 2021) End-Point OTP is 81 percent, which is lower than the 90 percent standard. Passenger OTP is 82 percent, also lower than the 90 percent standard.

FY 2022-23 and FY 2023-24 Performance Standards

Table 5-1 provides the preliminary performance standards for FY 2022-23 and FY 2023-24. The FY 2022-23 and FY 2023-24 future operating costs have been developed to conform with PRIIA Section 209 pricing policy, which stipulates that all state-financed, Amtrak-operated intercity passenger rail (IPR) routes under 750 miles shall be priced by Amtrak in a fair and equitable manner.

Table 5-1: System Performance Standards and Results

Performance Standard	FY 20-21			FY 21-22	FY 22-23	FY 23-24
	Actual	Standard	% Difference	Standard	Standard	Standard
<u>Usage</u>						
Route Ridership	354,373	388,488	-9%	792,474	1,158,000	1,384,530
Passenger Miles	24,994,057	16,410,100	+52%	35,015,800	85,446,500	92,905,800
Total Operating Cost/Passenger-Mile	\$1.86	\$2.34	-21%	\$0.98	\$0.75	\$0.70
<u>Service Quality</u>						
End-Point On-Time Performance	90%	90%	0%	90%	90%	90%
Passenger On-Time Performance	92%	90%	+2%	90%	90%	90%
Operator Delays/10K Miles	302	>325	-7%	>325	>325	>325

FY 2022-23 and FY 2023-24 Action Plan

Table 5-2 summarizes projects, ongoing and planned, over FY 2022-23 and FY 2023-24. The projects listed are new, one-time initiatives and do not reflect recurring or annual CCJPA objectives (e.g., develop annual marketing plan, update business plan, rider appreciation events, etc.). Each project shown in Table 5-2 is dynamic and can change based on circumstances beyond CCJPA’s control.

Table 5-2: FY 2022-23 and FY 2023-24 Action Plan

PROJECT	Past Fiscal Years	FY 2022-23				FY 2023-24				Future Fiscal Years
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
CAPITAL PROJECTS										
South Bay Connect										
Sacramento to Roseville Third Main Track Phase I										
SR84 Intermodal Bus Facility										
California Integrated Travel Program (Cal ITP)										
Davis Station Signal Improvements										
Agnew Siding										
Stege Signal Improvements										
California Passenger Information Display System (CalPIDS) Modernization										
Contactless Fare Payment Hardware										
Network Integration										
Surfliner Door Panel Replacement										
ANNUAL PROJECTS										
CA IPR Wi-Fi Management										
Right of Way Safety and Security										
Capitalized Maintenance										
Link21										
UPRR Special Agents										

6. Establishment of Fares

The CCJPA develops fares in conjunction with Amtrak to ensure the Capitol Corridor service is attractive and competitive with other transportation options. Fares provide a critical fund source for CCJPA operations. The pandemic has resulted in a tremendous reduction in fare revenue that has fortunately been offset by one-time Federal funding support. CCJPA has made a concerted effort to keep fares stable during the pandemic but increasing budget challenges may necessitate a review of fares during FY 2022-23. The goal is to work closely with Amtrak to more efficiently deliver service to allow for a continuation of a reasonable fare structure.

Current ticket types include standard one-way and roundtrip fares, monthly passes, and ten-ride tickets valid for 60 days. Ten-ride tickets are discounted roughly 30-35 percent as compared to one-way fares and monthly tickets are discounted roughly 50 percent from one-way fares, assuming use of 40 times per month. A six-ride ticket was introduced in summer 2019, designed for college/university students. These discounted multi-ride fares are ideal for repeat riders who use the Capitol Corridor trains as their primary means of travel along the corridor. Multi-ride tickets can be used year-round for all regularly scheduled train service. To retain flexibility and convenience for our riders, reservations are not required for any of the trains.

The CCJPA also offers targeted discount programs for leisure travelers. The “Friends and Family” year-round offer offers savings for buy-one/bring up to five others at 50 percent off. The Capitol Corridor also utilizes a variety of seasonal discounts aimed at specific target groups such as seniors, to promote off-peak and weekend ridership. In addition, Capitol Corridor offers a variety of California Everyday Discounts for seniors, children, military, disabled person, and members of select organizations in conjunction with the San Joaquins and Pacific Surfliner.

Under the Cal-ITP process, CCJPA, along with SJJPA staff, are positioned to re-cast the fare and ticketing system to simplify connections to other transportation services, reduce the costs of fare collection, allow for easier execution of potential fare offers, and greatly simplify travel for the customer. The process for this change will emerge over the period of this Business Plan and will require the development of internal capacity for CCJPA to manage revenue and customer service, much of which is handled by Amtrak at present. CCJPA will work closely with Cal-STA and Caltrans DRMT leadership to ensure that the proper staffing resources are in place to shift and then grow into a new fare and ticketing system that delivers on the objectives described.

FY 2022-2023 Fares

In 2019, CCJPA completed a multi-year series of fare increases on multi-ride tickets that followed an inflationary increase of two percent per year. To offer riders more flexibility with their multi-ride tickets, in 2020, CCJPA extended the 10-ride/45-day ticket to 60 days, recognizing that riders may not be traveling as frequently given that many employees were encouraged and continue to work from home. We will seek out more ways to offer ticket flexibility for riders as we learn more about emerging ridership patterns and prepare for a new ticketing platform.

There is currently no plan to increase fares in FY 2022-23. CCJPA has made a concerted effort to keep fares stable during the pandemic, but increasing budget challenges may necessitate a review of fares during FY 2022-23. In addition, minor adjustments between some city pairs or for specific connecting bus services may be considered.

As part of its Marketing Program (Section 8), the CCJPA will develop initiatives designed to regain ridership and build customer satisfaction. Opportunities related to fares and ticketing include:

- Perform a fare analysis to benchmark our existing fare offerings for select city-pairs and better inform future fare products
- Develop new fare products or adjust existing ones to better meet the needs of riders
- Raise awareness of the flexibility of Capitol Corridor’s unreserved ticketing and work with Amtrak on enhancing convenience to customers
- Continue to promote the college/university 6-ride ticket and “Stride On Board” loyalty program.
- Leverage the CC Rewards loyalty program to deepen relationship with members of the community with promotional offers and giveaways

- Continue to promote California’s “Everyday Discounts” and other ongoing discounts such as “Friends & Family”
- Increase utilization of Amtrak’s mobile ticketing features in the short-term, since they enable real-time validation and improve customer convenience

Together, these fare and ticketing programs for FY 2022-2023 will enhance customer convenience as we prepare for a shift to the Cal-ITP program.

FY 2023-2024 Fares

CCJPA will explore potential changes to fares for FY 2023-24 as we begin to fully implement Cal-ITP. The expectation is that Cal-ITP will allow for a nimble and customer friendly fare system with a wider range of products. Fare changes will be considered in the context of budget conditions at the time, an issue with a high degree of uncertainty given the ongoing pandemic. Other fare and ticketing opportunities include:

- Continue to expand and raise visibility of transit connectivity programs such as the Transit Transfer Program, joint ticketing, and transfer of motorcoach bus routes to parallel local transit services
- Enhance customer loyalty and referral programs to retain existing riders and attract new riders
- Integration and implementation of new ticketing platform will likely offer new fare products and expand choices for riders

7. Service Amenities, Food Services, & Equipment

Service Amenities

Accessibility

The Capitol Corridor provides complete accessibility to passengers. Accessibility features include onboard wheelchair lifts, two designated spaces per train car for passengers in wheelchairs and one wheelchair-accessible lavatory on the lower level of each train car. Mobility-impaired persons not in wheelchairs can utilize grip bars at each door, work with conductors to utilize on-train step stools, or even utilize the wheelchair lifts, if needed, to board from the platform. Passengers who require assistance may contact the conductors for assistance in boarding or detraining.

Passenger Information

Onboard train journey information is provided via the Wi-Fi landing page/portal associated with the recently upgraded Wi-Fi system. Refinements in this information as regards passenger journeys will evolve over time but remain as a consistent on-train amenity.

At the stations, there are electronic passenger information displays that provide train arrival times, delay information, and other notifications. CCJPA is leading an effort to modernize the Passenger Information Display System (PIDS) to improve system reliability and functionality. Description of the PIDS modernization project can be found in Section 4, Capital Improvement Program.

Lavatories

Lavatories in California cars feature electric hand dryers, soap dispensers, and infant diaper-changing tables. New air fresheners were added in the last fiscal year to help mitigate odors.

Wi-Fi

All cars in the fleet have complimentary Wi-Fi service that originates from the “brain” car (Café car). As described in Chapter 4, CCJPA delivered a next-generation Wi-Fi solution in 2020, a significant upgrade from the original system. CCJPA will manage the upgraded Wi-Fi system under a long-term services-based contract, thus ensuring the Wi-Fi technology on California Intercity trains is kept modernized. See details on the next-generation Wi-Fi in Chapter 9, CA IPR Supplemental Allocation for Onboard Technology (page 19).

Bicycle Access

Providing on-train and secure station bicycle storage remain important aspects of Capitol Corridor bicycle access, despite the impacts of the COVID pandemic reducing the prior trending demand for bicycle storage demand. CCJPA will monitor on-train bicycle storage capacity needs as ridership recovers and maintain adequate bicycle racks to meet demand. CCJPA will also continue to operate and maintain all existing BikeLink eLockers at stations and work with the eLocker vendor to raise awareness of secure station bike parking. As for physical bicycle access to/from stations, CCJPA will pursue opportunities to improve station access as they arise with local station owners.

Food and Beverage Services

Café Car service returned for on all trains in June 2021 with a limited menu. CCJPA will continue to monitor performance of the Café Car along with ridership to evaluate the timing for menu expansion. Menus on board the train have been redesigned as sustainable, with a QR code linking to <https://www.capitolcorridor.org/cafe-car/>, allowing for changes to be made incrementally and in response to market demand, without having to reprint menus. To help with the promotion of the Café Car, plans include placing signage at staffed stations and on seatback trays.

Equipment Acquisition, Renovation, and Upgrades

The CCJPA works closely with Caltrans and Amtrak to refine the maintenance and operations programs at the Oakland Maintenance Facility to improve the reliability, safety, and cost-effectiveness of the Northern California rail fleet, which supports both the Capitol Corridor and San Joaquin services. The fleet is a mix of California-owned equipment and leased Amtrak equipment as shown in Table 7-1. New fleet acquisitions under development will dramatically increase service capacity.

In January 2014, the State of Illinois, as lead agency for the Midwest states, California, Oregon, and Washington, announced the award of a federally funded locomotive procurement for Chargers, the cleanest diesel-electric locomotives in the world. Chargers are clean-burning and meet EPA Tier IV emissions requirements. Eight Chargers were assigned to Northern California for use on the Capitol Corridor and San Joaquin services. In 2017, Caltrans accepted ownership of the Chargers, Amtrak was contracted to operate them and CCJPA accepted to oversee the maintenance and service performance of the units. These eight Chargers were all equipped with federally mandated PTC (Positive Train Control). They now are now officially in operation on the Capitol Corridor in the lead position, further enhancing the safety of the Capitol Corridor service. CCJPA received two more Chargers in 2021, replacing two of the F59 locomotives. This change is reflected in Table 7-1.

In response to the changing demands for service due to the COVID-19 pandemic, Capitol Corridor has been working collaboratively in a fleet management task force with Caltrans and the other CA IPRs to shift the state-owned fleet to minimize the use of Amtrak leased cars. The fleet plan for FY 2021-22 is below in Table 7-1. Capitol Corridor has been operating the temporary reduced service with a fleet that generally relies on seven four-car trainsets. For the upcoming FY 2022-23, Capitol Corridor plans to return to pre-pandemic service levels which will require additional equipment. This will be possible as the “Venture Fleet” is commissioned along the SJJPA route.

Table 7-1: Northern California Equipment Fleet (Capitol Corridor and San Joaquins)

California owned rail equipment	NOTES
13 F59 Locomotives	Assigned to San Joaquin and Capitol Corridor service
2 Dash-8 Locomotives	Assigned to San Joaquin and Capitol Corridor service
10 Charger Locomotives	Assigned to San Joaquin and Capitol Corridor service
1 MP14B Yard Switcher	Assigned to San Joaquin and Capitol Corridor service
78 Bi-Level California Coach and Café Cars	Assigned to San Joaquin and Capitol Corridor service
14 Single Level Comet Cars	Assigned to San Joaquin service
Amtrak Supplemental Equipment	NOTES
4 NPCU Single Level Baggage Cars	Assigned to San Joaquin and Capitol Corridor service

Rehabilitation and Modification Programs

Using previously allocated State funds, the CCJPA, Caltrans, and Amtrak have created a multi-year program of periodic overhauls to the existing train fleet that will improve the fleet performance and maintain the valued assets of the State’s rolling stock investment, while at the same time still provide enough cars to effectively run the service until new cars start to arrive in 2021. Below are lists of both the completed and upcoming projects.

Rail Equipment Projects Completed in FY 2021-2022

- Testing of renewable diesel in the new Tier IV California Charger locomotives to be EPA certified began in mid-2019 and will last until one year’ hours of operation have been accumulated. This has been delayed due to COVID-19 service changes and is expected to be completed by Fall 2021. After successful testing, the new California Charger locomotive will be the cleanest petroleum-powered locomotive in the world and move California-owned passenger rail vehicles towards their goal of being carbon-free by 2035.
- Newly designed bike racks with more storage capacity are being tested and will be installed on all cab cars. A bike rack design for the Amtrak-leased Superliners was successfully completed and can be deployed at a future time when ridership to CCJPA returns to pre-pandemic levels.
- Two of the 15 state owned F-59 are to be decommissioned and replaced with Tier IV Chargers by 2021, with an additional five possible by 2022/23. Caltrans has negotiated with the local air districts to keep and utilize the two HEP engines and Gensets (Generators) as spares for the program. The head-end power units in the locomotives that provide power for lighting, electrical outlets, etc., that were updated to EPA Tier IV standards in 2012, will be overhauled starting in 2020.
- Upgrades to the HVAC, ducting, and thermostatic controllers will continue.
- The diner cars built in 1995/96 will undergo a rehabilitation of the upper-level galley to update the equipment with current technology standards. Modifications include installing new chillers, drainage, FDA-compliant stainless steel counter tops, lighting, internet connections and food storage units. The new design will also make the working area more ergonomic for the food service employees. The first diner car to undergo the upgrade is due back in service by summer 2021.
- For added safety and security, beginning March 2020, event recorders (black boxes) will be upgraded for better compatibility with PTC as well as trainset operation monitoring.
- Side door operator replacement on the Northern CA 6000 series Surfliner cars completed July 2020.
- Replacement of 20-year-old side door panels on the 6000 series Surfliner cars scheduled to be completed by July 2021. The State-owned Southern CA fleet will be completed by Spring 2022, with an additional 24 panels to cover both fleets.
- Clean the waste tank systems and investigate the possible reroute the venting on the 8800-series cars to help mitigate foul odors.

Rail Equipment Projects Upcoming in FY 2022-23

- Replace the destination sign LED displays by Fall 2022.
- Overhaul the hydraulic ADA boarding lifts on all cars.
- Ongoing replacement of current incandescent and fluorescent lighting with more energy efficient, brighter, longer lasting, and cooler operating LED lighting.
- Interior refresh upgrades to cabin areas and restrooms
- Overhaul of trucks and suspension for a safer, smoother ride

8. Marketing Strategies

To raise brand awareness of the Capitol Corridor service and increase ridership, the CCJPA employs a strategy of combining targeted advertising campaigns, multi-channeled cross-promotions with strategic partners, paid social media, and media outreach efforts. Primary objectives include promoting the service in key markets and attracting riders to trains. Staff will focus on rider acquisition and retention through targeted advertising and brand engagement, primarily in the digital media space. Marketing dollars and impact are maximized through joint promotions and social media sharing with key partners along the Capitol Corridor route. Ridership has been slowest to bounce back on Capitol Corridor as compared to all the other state-supported

routes nationwide. Winning back riders will require an aggressive approach to marketing that demands an increase in funds to support the planned efforts, beyond the flat budget allocation that has been provided for Marketing activities for the past twenty-plus years.

Advertising Campaigns, Brand Awareness, and Promotional Partnerships

- Advertising campaigns aim to attract leisure and business travel riders by highlighting the advantages of train travel, including amenities, value, and destinations
- Advertising efforts emphasize the Capitol Corridor image, brand, and destinations, in accordance with the CCJPA Board’s edict to create a distinct, regional brand for the Capitol Corridor and strengthen brand awareness throughout the service area.
- Promotions target specific markets designed to build ridership during off-peak hours such as midday/mid-week and weekend travel. Destination-focused promotions highlight riding the train to events at venues along the route, such as Levi’s® Stadium, creating awareness of the train as a convenient way to reach leisure destinations throughout Northern California.
- Partnership Brand Marketing: CCJPA’s Strategic Marketing Partnership program has established a marketing asset catalog to support CCJPA’s trade promotion negotiations, enabling selected partners to market their products via Capitol Corridor’s diverse marketing channels, such as interior, exterior, and station signage, social media, email, electronic station signs, and the onboard Wi-Fi landing page. The partnership program is designed to extend advertising reach, as well as increase value, ridership, and revenues by leveraging relationships with organizations that are close to Capitol Corridor stations and/or share similar target audiences to heighten Capitol Corridor’s brand visibility.
- Joint Marketing and Outreach: The CCJPA achieves cost efficiencies by working with local community partners, such as CCJPA member agencies and local Destination Management Organizations, to promote both destination and rail travel.

Customer Experience

The CCJPA views communication with passengers as the cornerstone of our customer-focused service delivery. CCJPA actively encourages passengers to provide input via our website, social media channels, and toll-free number, funneling these comments into an online platform, which allows CCJPA to better respond to the customer’s request or issue. We use this feedback to identify and prioritize service modifications, capital improvements, and desired amenities in the service.

Communications: Online Presence and Customer Engagement

The CCJPA places great importance on delivering timely and accurate passenger communications via multiple channels, and engaging customers in providing feedback. Ongoing efforts include:

- Maintaining a website that is mobile optimized and easy to navigate, with booking and trip planning tools that are easy to use, as well as timely and engaging content.
- Boosting participation in online social networking platforms, such as Facebook, Twitter, Instagram, and LinkedIn and exploring new opportunities within these rapidly evolving platforms.
- Continuing rider engagement programs such as our virtual “Corridor Conversations” webinars, bringing back onboard programs such as “Cappy Hour” discounted drink hours, and launching new benefits for riders such as our Capitol Corridor Rewards program.
- Enabling consistent and timely passenger communications via a variety of channels, including SMS/text and email service alerts, to ensure customers receive clear and up-to-date information.
- Encouraging passengers to provide input via our channels such as the website, social media, and toll-free number. We use this feedback to identify and prioritize service modifications, capital improvements, and desired amenities for the service.

Public Relations, Outreach, and Advocacy

The CCJPA's public information efforts incorporate traditional and digital media to build awareness about its service and projects. Activities include:

- Advocacy and public relations efforts that aim to increase the Capitol Corridor's visibility and recognition as a unique interagency partnership that is aligned with broader statewide goals of enhancing mobility for all and reducing greenhouse gas emissions.
- Helping communities along the route to build awareness of the service in their respective cities through local outreach campaigns, including transit connections via the Transit Transfer Program.
- Publishing an Annual Performance Report that informs the public and elected officials of the service's successes, benefits, and challenges.
- Collaborating with Operation Lifesaver, a voluntary effort by railroads, safety experts, law enforcement, public agencies, and the general public.
- Developing and sharing content that highlights key projects, staff work, partnerships, and other activities that help tell the Capitol Corridor's story and help shape its brand identity.

FY 2022-2323 Marketing Program

CCJPA's FY 2022-2323 Marketing Program will continue to focus on increasing ridership on trains with available capacity by emphasizing the convenience of modern train travel and targeting service periods with the highest growth potential.

CCJPA will continue its own independent advertising campaigns that position Capitol Corridor as a distinct regional service brand. CCJPA will evolve the Capitol Corridor brand to ensure that marketing and customer touchpoints align with the CCJPA's overall vision at present and into the future. Key elements will include:

- Developing a comprehensive marketing plan to attract and grow ridership to pre-pandemic levels, utilizing the latest information from Caltrans' Market Segmentation study and other available market research....
- Creating more digital content (videos, photos, infographics, etc.) for distribution via website, blog, and social media channels, to educate and engage riders and non-riders.
- Renewing promotions with partners to attract riders, maximize media spend, and expand market reach, as leisure events resume and destinations re-open.
- Perform deeper analysis of ridership data to identify emerging markets post-COVID, opportunities for micro-markets (single day/train offers, short-distance city pairs, etc.) and more sophisticated market segmentation.
- Conduct additional surveys of riders and non-riders to learn more about current ridership and opportunities
- Extend visibility of the brand, via train exteriors, uniforms, and other channels.
- Improve overall customer experience, seeking solutions for Contact Center communication gaps and efficiencies, planning for customer support center in preparation for integrated travel program, evaluate service hours, providing timely and relevant service alerts, etc.
- Identifying areas for marketing and customer service automation and personalization, to use our resources more efficiently.

FY 2023-2024 Marketing Program

The CCJPA will continue to strive to grow ridership and revenue in 2023, as well as increased brand awareness through the region and beyond. Marketing strategy and tactics are expected to shift once Cal-ITP debuts, bringing new challenges in effectively reaching target markets, as well as opportunities. Additionally, CCJPA will continue to align its marketing efforts with planned service amenity improvement projects, to ensure consistency of the customer experience.

9. FY 2021-22 & FY 2022-23 Annual Funding Requirement

The primary purpose of this ABP, as defined in the ITA, is to request the annual funds required by the CCJPA to operate, administer, and market the Capitol Corridor service for agreed-upon service levels as well as administer two State IPR technology programs and a megaregional rail service expansion planning effort. Previous sections in this document describe the proposed operating plan, planned service improvements, and capital improvements for FY 2022-23 and FY 2023-24. The funding request for FY 2022-23 and FY2023-24 as detailed in Table 9-1 and described below includes a reorganization of budget categories to address operational efficiency and to better respond to current needs.

Operating – Amtrak

Based on the Operating Plan and Strategies (Section 3), the CCJPA has prepared an initial forecast for the FY 2022-23 and FY 2023-24 operating expenses, ridership, and revenues. Due to the decreased ridership demand which commenced in March 2020 related to the COVID-19 global pandemic, the forecast below has an unusual level of uncertainty. The presumption is that full service will resume in the first quarter of FY 2022-23, but that assumption is dependent on a return of customer demand, available staff, available equipment and sufficient funding. As well, an improvement in operating efficiency and decrease in operating costs are required in order to return to full service. The FY 2022-23 operating costs conform pursuant to PRIIA Section 209, which was implemented in FY 2013-14 as part of a national launch of a pricing policy for all Amtrak-operated IPR services under 750 miles. Given the unusual level of uncertainty regarding operating costs and passenger revenue, future updates to the budget forecasts are expected. The CCJPA will submit any updated operating cost forecasts by June 15, 2022.

Projected operating costs are shown in Table 9-1 and include the basic train service and associated throughway bus services provided by Amtrak, the Information and Customer Support Services provided at the BART/CCJPA Contact Center, as well as CCJPA’s share of costs relating to the local transit service partnerships.



CCJPA is developing a strategy, in collaboration with the SJJPA, to implement Cal-ITP-compatible ticketing. Over a transitional period combining both CCJPA ticketing support and Amtrak ticketing support, state funding to support the CCJPA Administrative (for revenue collection support) may be required. As the CCJPA responsibility of ticketing ramps up, the

Amtrak costs for supporting ticketing will decrease which is expected to fund these new functions going forward. Overall, the Cal-ITP compatible ticketing introduction will require future interaction with Caltrans DRMT staff to give greater definition to the timing and costs. As such, CCJPA is requesting a flexible approach to funding this effort due to the unknowns at this time.

Operating – Other

As part of the budget reorganization, the non-Amtrak operating costs includes the former budget for Information/Customer Support Services in addition to other non-Amtrak operating expenditures. CCJPA has continued to take on a greater role in supporting the service with direct management of Wi-Fi, implementation of PIDS, and the coming implementation of Cal-ITP. In addition, with increased funding opportunities at the state and Federal, level, the proposed budget is intended to support the development of projects, funding strategies, and grant applications.

Marketing Expenses

The CCJPA’s marketing budget for FY 2022-23 and FY 2023-24 includes additional resources required to support marketing strategies as described in Section 8, and is part of the recategorization of budget line items for operational efficiency. This line item has remained flat since the Capitol Corridor’s inception more than twenty years ago. Bringing back passengers and increasing ridership will require an aggressive approach to marketing that demands an increase in funds to support the planned efforts. The budget estimates shown in Table 9-1 represent only

direct expenditures of the CCJPA and do not include any costs for marketing programs provided solely by Amtrak or the State.

Administrative Expenses

Table 9-1 identifies the estimate for the FY 2022-23 and FY 2023-24 budgets that support the administrative management activities of the CCJPA for the Capitol Corridor service. The administrative funding request includes additional resources which will be largely focused on securing capital project funding and advancing capital improvements as a result of anticipated federal and state grant opportunities.

Total CCJPA Funding Request

Compared to the current period (FY 2021-22), the FY 2022-23 and FY 2023-24 total proposed budgets for the CCJPA’s operating, marketing, and administrative expenses are expected to increase by eleven percent in FY 2022-23 due to the projected low ridership and significant reduction in fare revenue. There is an unusual level of uncertainty regarding operating costs and passenger revenue that will likely necessitate later updates to the budget forecasts. The historic heavy reliance on passenger fare revenue to support operations necessitates a larger funding requirement to support the Capitol Corridor Service operations due to the impacts of the pandemic. CCJPA has limited direct control over the Amtrak operating costs and must follow the Section 209 approach that establishes the cost structure for Amtrak provided services.

The Capitol Corridor service will remain a part of the State’s IPR system, and, pursuant to the ITA, the service will continue to receive annual funding appropriations from the State. To that end, the CCJPA will provide the level of service consistent with funding appropriated by the Legislature and allocated by the State. Any cost savings realized by the CCJPA or revenues exceeding business plan projections during the term of the ITA will be used by the CCJPA for service improvements.



CCJPA Supplemental Allocations

CCJPA receives additional annual supplemental allocations from Caltrans for special projects that benefit the Capitol Corridor service and are not included in the core CCJPA annual operating budget. These CCJPA Supplemental Allocations are listed in Table 9-1.

Minor Capital Projects

Minor capital projects are small projects to improve Capitol Corridor passenger rail facilities and operations that are less than \$314,000. Some recent examples of minor capital projects include the installation of signage at stations and the repair of damaged station bike eLockers.

Capitalized Maintenance

See description in Chapter 4, Railroad Infrastructure Maintenance and Improvements section.

California Intercity Passenger Rail (CA IPR) Support Supplemental Allocations

CCJPA receives additional annual supplemental allocations from Caltrans for special projects that benefit all of the CA IPRs but are led by CCJPA. These CA IPR Supplemental Allocations are listed in Table 9-1.

Onboard Technology (Wi-Fi)

In 2018, CCJPA worked with Amtrak to transfer the provision of third-party onboard Wi-Fi and its associated management expenses for the two Northern California State-supported intercity passenger rail services (Capitol Corridor and San Joaquins) to the CCJPA, with the understanding that the Southern California Pacific Surfliner would eventually join under CCJPA’s oversight. As part of this shift, CCJPA procured a Next Generation onboard Wi-Fi service provider and a Wi-Fi service oversight contractor. CCJPA commenced the transition to Next Generation Wi-Fi for the Northern California fleet in February 2020 and completed the installation by December 2020.

As well, CCJPA will oversee the Wi-Fi installation for the new Siemens “Venture Cars” fleet that will be part of the SJJPA operation, tentatively planned to be in service in Spring 2022. In 2020, CCJPA began paying the capitalized and operational service fees for these Venture Cars based on the original schedule of car delivery which has been delayed due to changes in production and delivery schedules.

The funding request for FY 2021-22 for the Onboard Wi-Fi program is listed in Table 9-1. The funding request is inclusive of the capex/open payments to the Wi-Fi service provider for the Northern California fleet comprised of bi-level and the new Siemens Venture Cars, the Wi-Fi oversight provider, cellular SIM costs, maintenance of two legacy Wi-Fi systems, and CCJPA’s estimated labor costs. CCJPA and SJJPA marketing and communications managers have also included updated costs for the Wi-Fi portal pages which are necessary for planned updates and delivered content.

Link21 (New Transbay Rail Crossing)



BART and the CCJPA have been working together to develop the Link21 Program, which includes a new Transbay Rail Crossing between Oakland and San Francisco and includes other rail improvements that would serve both BART and interregional (intercity and commuter) passengers. The Link21 program has the potential to transform rail

travel in Northern California by making rail travel faster, more frequent, more reliable, and accessible to more people in the 21-county Megaregion. Previous studies have identified the need for a new Transbay Rail crossing, including the Core Capacity Study for the Transbay Corridor (Metropolitan Transportation Commission (MTC), the Horizon Crossings Study (MTC), the New Transbay Rail Crossing (Bay Area Council Economic Institute) and the 2018 and 2022 California State Rail Plans (Caltrans).

CCJPA has supported the Link21 program development since FY 2019-20 with \$1 million annually. CCJPA is requesting an annual supplemental allocation amount of \$2.0 million per fiscal year starting FY 2022-23 for the purposes of supporting dedicated full-time staff positions plus providing financial resources for project planning and implementation strategies over the next five years.

California Integrated Travel Program (Cal-ITP)

As described in Section 4 under Service Amenity Improvements, CCJPA is managing a CalSTA and Caltrans DRMT-led, multi-agency initiative to research, develop and implement an Integrated Travel Program (Cal-ITP) that will enable California residents and visitors to plan and pay for travel across multiple modes of transportation, including bus, metro, light and intercity rail, paratransit, bike hire, and ride-hailing services in California. The Minimum Viable Products (MVP) or pilot test for California Intercity Passenger Rail system commenced for the Capitol Corridor service, and while it builds on other MVP efforts for bus and light rail transit, the passenger rail operating environment presents unique challenges to overcome for both operations and the banking system. While CCJPA will work with the State to continue supporting this effort, including receiving more funding in FY 2022-23, we are also working with CalSTA/Caltrans DRMT to explore governance options so that the fiscal oversight of Cal-ITP can eventually be handed off from CCJPA.

The funding request included in Table 9-1 to support the Cal-ITP project includes a budget for the following efforts:

- Cal-ITP MVP trial group registration platform;
- Artificial intelligence chatbot for customer support to field customer inquiries and reduce dependencies on contact center staff;
- An increase to the Cal-ITP staffing contract;
- Mobile app to support ticketing, account management, notifications, loyalty, and other customer needs; and a
- Customer Care Center that will support the Cal-ITP MVP and beyond.

Table 9-1

DRAFT CCJPA FY 2022-23 - FY 2023-24			
FUNDING REQUIREMENT & SUPPLEMENTAL ALLOCATIONS			
Capitol Corridor Service	AUTHORIZED	PROPOSED	
	FY 2021-22 Budget Reduced Service ¹	FY 2022-23 Budget Full Service Service ²	FY 2023-24 Budget Full Service
TRAIN SERVICE BY ROUTE			
Sacramento-Oakland			
Weekday	22	30	30
Weekend	18	22	22
Oakland-San Jose			
Weekday	12	14	14
Weekend	14	14	14
Sacramento-Roseville	2	2	2
Roseville-Auburn	2	2	2
RIDERSHIP	792,500	1,158,000	1,385,000
FUNDING REQUIREMENT			
Operating			
Amtrak Operating Expenses	\$ 56,202,220	\$ 67,692,000	\$ 69,737,000
Amtrak Operating Revenue	\$ (19,575,885)	\$ (28,010,000)	\$ (33,234,000)
Operating - Amtrak (Expenses less revenue)	\$ 36,626,335	\$ 39,682,000	\$ 36,503,000
Operating - Other ³	\$ 1,207,000	\$ 1,578,160	\$ 1,856,450
CCJPA Administrative Management			
Administration	\$ 2,960,000	\$ 3,652,170	\$ 3,798,000
Marketing	\$ 1,174,000	\$ 1,686,060	\$ 1,686,060
TOTAL CCJPA Funding Requirement	\$ 41,967,335	\$ 46,598,390	\$ 43,843,510
CCJPA SUPPLEMENTAL ALLOCATION			
Minor Capital	\$ 500,000	\$ 500,000	\$ 500,000
Capitalized Maintenance	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
TOTAL CCJPA Supplemental Allocation	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
CA INTERCITY PASSENGER RAIL (IPR) SUPPORT SUPPLEMENTAL ALLOCATION			
California Integrated Travel Program (CallTP)	\$ 2,500,000	\$ 6,485,000	\$ 600,000
Onboard Technology (Wi-Fi)	\$ 2,539,000	\$ 2,877,000	\$ 2,936,000
Link21 (New Transbay Rail Crossing)	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
TOTAL CA IPR Supplemental Allocation	\$ 6,539,000	\$ 10,862,000	\$ 5,036,000

¹Reduced Level of service of 22 weekday/18 weekend trains effective June 7, 2021.

²Train service is planned to be restored to pre-pandemic levels of 30 weekday/22 weekend in the first quarter of FFY 2022-23.

³Operating - Other captures operating expenses that were formerly included in the Amtrak Operating budget, such as the BART Call Center, Information/Customer Support Services, connecting bus service to South Lake Tahoe, and support for the California Information Display system (CalPIDS) in FY24. This line item also includes other operating expenses required to operate the Capitol Corridor service.

10. Separation of Funding

As identified in the Joint Exercise of Powers Agreement (JEPA) for the CCJPA, the Controller-Treasurer of the Managing Agency of the CCJPA will perform the functions of Treasurer, Auditor, and Controller of the CCJPA. San Francisco Bay Area Rapid Transit District's (BART) prior agreement with the CCJPA to serve as the CCJPA's Managing Agency was first renewed in February 2005 for a five-year term through February 2010 and subsequently renewed for another five years for the period of February 2010 through February 2015. These five-year terms are consistent with AB 1717, enacted in September 2003, which allows the CCJPA Board five years to monitor BART's performance as the Managing Agency. In November 2019, the CCJPA Board approved a five-year term with BART for the period of February 20, 2020 through February 19, 2025. This action was supported by BART's Board in December 2019.

As identified in the ITA, the State performs audits and reviews of CCJPA's Capitol Corridor service-related financial statements. In addition, the CCJPA requires that the Controller-Treasurer provide an annual independent audit of the accounts of the CCJPA within six months of the close of the State fiscal year. BART has established the appropriate accounting and financial procedures to ensure that the funds secured by the CCJPA during FY 2022-23 and FY 2023-24 to support the Capitol Corridor are solely expended to operate, administer, and market the service.

11. Consideration of Other Service Expansions and Enhancements

This section presents service expansion and enhancement opportunities beyond the CCJPA's FY 2022-23 and FY 2023-24 service plans and funding requirements. Planning for potential new services will require securing capital improvements, additional operating funds, and institutional agreements. The CCJPA CIP is fully aligned with the goals of the 2018 State Rail Plan, which includes integration of rail services (high speed rail, intercity and regional rail, and integrated express buses) and development of multimodal connection points across the State that allows for convenient and timed transfers between different transit services and modes.

The 2018 State Rail Plan was developed by CalSTA and Caltrans DRMT and envisions a larger scale passenger and freight rail network in California. The Plan incorporates not only the IPR services, but also the planning efforts for the California High Speed Rail system. The leadership by CalSTA, as expressed through the 2018 State Rail Plan, is advancing the concepts of State rail planning and has greatly influenced the funding awards CCJPA has received from Cap and Trade as well as under SB1.

Megaregional Rail Planning & Vision Plan Update

In November 2014, the CCJPA Board adopted the Vision Plan Update and in November 2016, adopted the Vision Implementation Plan that directed the CCJPA to plan the future of Capitol Corridor service in a larger Northern California megaregional context. This endeavor includes exploring cross-bay connections in San Francisco Bay Area and connections with passenger rail services in the San Joaquin Valley. In 2018, the State adopted a State Rail Plan that supported actions within the CCJPA Vision Implementation Plan and encourages cooperation among Northern California rail providers under a Northern California Megaregional context.

The long-term vision for Capitol Corridor fundamentally involves developing Capitol Corridor service as one where frequency (currently capped at 15 roundtrips between Sacramento and Oakland) is not limited by existing host railroad agreements. Instead, the vision is for a service with 15-minute frequencies in the peak hour, and one where higher-speed service (up to potentially 150 mph – electrified service) is permitted. This vision was first examined at a high-level in the Vision Plan Update where core concepts were studied, and several viable alignment alternatives were moved forward to the next step. The next step, the Vision Implementation Plan, eliminated alternatives to one alignment via a phased and detailed engineering and operations level analysis. By identifying a path to a railroad corridor in public control, the implications for layering intercity, commuter, and even high-speed rail, are all viable potential outcomes consistent with the objectives of the 2018 State Rail Plan.

Link21 (Formerly New Transbay Rail Crossing)

CCJPA is now working with BART on early planning and implementation strategies for a New Transbay Rail Crossing – an opportunity for a second crossing for BART between the East Bay and San Francisco and a first crossing of this heavily traveled corridor for interregional (intercity and commuter) passenger train services. This approach aligns with the Core Capacity Study needs identified in the Metropolitan Transportation Commission (MTC)-led study and with the CCJPA Board direction to blend a conventional rail crossing toward an expanded rail network described in the 2018 State Rail Plan. The context of the Northern California Megaregion is the backdrop for the planned incremental program development steps for this megaproject.

CCJPA is supporting initial planning for this project with a 2018 TIRCP funding grant and since FY 2019-20, annual CA IPR supplemental allocations provided to CCJPA from CalSTA. CCJPA is working with the Bay Area Council Economic Institute and the University of California Davis, Institute for Transportation Studies, on a combined economic and transportation impact study of the new crossing for the Northern California Megaregion. CCJPA will participate in a BART-led series of procured steps in development; critical program oversight, environmental and design efforts, right-of-way, and finally construction efforts that are aimed at project delivery over the next 15 to 20 years.

Rail Service Expansion Planning

Most recently revised in February 2019, the CCJPA’s Train Station Policy supports future extensions to new markets beyond the Capitol Corridor or new locations within the existing route. This policy encourages partnerships between several passenger rail services and local/regional transportation agencies. The updated CCJPA Train Station Policy presents an improved process to



consider new station viability, benefit, and integration into the Capitol Corridor route. It clarifies the process of establishing a potential new station and of developing the funding program to support the development of new stations along the route. On February 12, 2020, the CCJPA Board approved a candidate station status to the City of Hercules, pursuant to the new Train Station Policy. The City of Hercules will continue to pursue funding for station development and travel time mitigation.

APPENDICES

Appendix A

Historical Service Statistics

Fiscal Year	Daily Trains	Total Ridership	% Change Prior Year	Riders Per Day	Revenue	% Change Prior Year	Operating Expenses	% Change Prior Year	Farebox Ratio	State Costs
SFY 91/92 (a)	6	173,672	--	864	\$1,973,255	--	\$4,848,967	--	40.7%	\$1,592,907
SFY 92/93	6	238,785	--	650	\$2,970,103	--	\$8,333,093	--	35.6%	\$6,712,017
SFY 93/94	6	364,070	52.5%	1,000	\$3,598,978	21.2%	\$9,911,735	18.9%	36.3%	\$6,714,761
SFY 94/95	6	349,056	-4.1%	960	\$3,757,146	4.4%	\$9,679,401	-2.3%	38.8%	\$6,012,315
SFY 95/96 (b)	8	403,050	15.5%	1,100	\$4,805,072	27.9%	\$11,077,485	14.4%	43.4%	\$6,434,940
SFY 96/97	8	496,586	23.2%	1,360	\$5,938,072	23.6%	\$20,510,936	85.2%	29.0%	\$9,701,519
FFY 97/98 (c)	8	462,480	-6.9%	1,270	\$6,245,105	5.2%	\$20,527,997	0.1%	30.4%	\$11,404,143
FFY 98/99 (d)	10/12	543,323	17.5%	1,490	\$7,314,165	17.1%	\$23,453,325	14.3%	31.2%	\$16,022,024
FFY 99/00 (e)	12/14	767,749	41.3%	2,100	\$9,115,611	24.6%	\$25,672,749	9.5%	35.7%	\$16,440,540
FFY 00/01 (f)	14/18	1,073,419	39.8%	2,941	\$11,675,117	28.1%	\$28,696,741	11.8%	40.7%	\$17,680,477
FFY 01/02	18	1,079,779	0.6%	2,960	\$12,201,602	4.5%	\$32,842,038	14.4%	37.2%	\$20,590,919
FFY 02/03 (g)	18/20/22/24	1,142,958	5.9%	3,130	\$12,800,469	4.9%	\$36,469,383	11.0%	38.1%	\$21,540,910
FFY 03/04	24	1,165,334	2.0%	3,190	\$13,168,373	2.9%	\$35,579,266	-2.4%	37.2%	\$22,708,181
FFY 04/05	24	1,260,249	8.1%	3,450	\$15,148,333	15.0%	\$35,110,571	-1.3%	43.2%	\$19,962,238
FFY 05/06 (h)	24/32	1,273,088	1.0%	3,490	\$16,014,636	5.7%	\$35,147,033	0.1%	45.8%	\$19,132,397
FFY 06/07	32	1,450,069	13.9%	3,970	\$19,480,992	21.6%	\$40,533,332	15.3%	48.1%	\$21,052,340
FFY 07/08	32	1,693,580	16.8%	4,640	\$23,822,862	22.3%	\$43,119,290	6.4%	55.2%	\$22,265,039
FFY 08/09	32	1,599,625	-5.5%	4,383	\$23,505,602	-1.3%	\$50,159,032	16.3%	47.0%	\$25,113,642
FFY 09/10	32	1,580,619	-1.2%	4,330	\$24,372,185	3.7%	\$52,843,973	5.4%	46.0%	\$27,499,149
FFY 10/11	32	1,708,618	8.1%	4,681	\$27,176,573	11.5%	\$56,699,385	7.3%	48.0%	\$29,158,222
FFY 11/12 (i)	32/30	1,746,397	2.2%	4,785	\$29,200,000	7.4%	\$59,035,857	4.1%	50.2%	\$29,606,390
FFY 12/13	30	1,701,185	-2.6%	4,661	\$29,186,617	-0.05%	\$60,472,128	2.4%	51.0%	\$29,110,318
FFY 13/14 (j)	30	1,419,084	-16.6%	3,888	\$29,177,880	-0.03%	\$58,063,314	-4.0%	50.9%	\$28,421,000
FFY 14/15	30	1,474,873	3.9%	4,041	\$30,092,694	3.1%	\$57,586,946	-0.8%	52.0%	\$32,595,784
FFY 15/16	30	1,560,814	5.8%	4,276	\$32,187,647	7.0%	\$57,135,316	-0.8%	55.0%	\$31,745,660
FFY 16/17	30	1,607,277	3.0%	4,403	\$33,968,835	5.5%	\$58,010,359	1.5%	57.0%	\$31,729,519
FFY 17/18	30	1,706,849	6.2%	4,676	\$36,305,769	6.9%	\$61,221,333	5.5%	58.0%	\$31,000,000
FFY 18/19	30	1,777,136	4.1%	4,869	\$38,109,114	5.0%	\$62,492,832	2.1%	60.0%	\$28,689,495
FFY 19/20 (k)	30/10/16	898,007	-47.4%	2,460	\$20,364,433	-43.9%	\$48,856,227	-20.2%	35.7%	\$28,174,000
FFY 20/21 (l)	22/18	354,373	-80.1%	971	\$8,869,808	-76.7%	\$42,055,480	-32.7%	20.0%	\$25,385,000

SFY = State Fiscal Year (July 1- June 30)

FFY = Federal Fiscal Year (October 1 -September 30)

- a. Statistics available for partial year only because service began in December 1991.
- b. Increase to 8 trains began in April 1996.
- c. Statistics presented for FFY 97/98 and each subsequent FFY to conform with Performance Standards developed by BT&H.
- d. 10 trains began on October 25, 1998 and 12 trains began on February 21, 1999.
- e. 14 trains began on February 28, 2000 .
- f. 18 trains began on April 29, 2001.
- g. 20 trains began on October 27, 2002; increase to 22 trains began on January 6, 2003; increase to 24 trains began on April 28, 2003.
- h. 32 trains began on August 26, 2006 (with increase to 14 daily trains to/from San Jose).
- i. 30 trains began on August 13, 2012 (service optimization with re-opening of the Sacramento Valley Station platform).
- j. Starting in FY 2014 Amtrak adjusted ridership reports to account for the actual tickets lifted via the scanning of tickets by the conductors, which results in ridership forecasts and reports that are 15%-20% below previous forecasts and reports. Previously, multiride tickets were not directly logged into the system but the passenger counts for multiride tickets were estimated based on assumed inflated usage. Prior year % change is made using adjusted FY 12/13 ridership.
- k. Due to the COVID-19 global pandemic, train service was reduced to 16 weekday/10 weekend trains. \$8.5 m in federal CARES Act funding helped to offset State Costs and supplement revenue loss due to the drastic decline in ridership.
- l. In response to slow recovery from the COVID-19 global pandemic, train service was increased to 22 weekday/18 weekend trains. \$13.5 m in federal CRRSA funding and \$13.5 m in federal ARPA funding helped to offset State Costs and supplement revenue loss due to the decline in ridership.

Appendix B

CCJPA Capital Projects

Name	Description	Status	Funding Sources*	Secured Funds	Project Cost
South Bay Connect	Relocate Capitol Corridor service between Oakland Coliseum and Newark from Niles Subdivision to Coast Subdivision, which will decrease travel time between Oakland and San Jose and improve transbay connections to SF Peninsula.	Environmental and Design	<i>Measure BB, RM3, SRA, STIP, TIRCP</i>	\$ 190,363,000	\$ 307,002,000
Sacramento to Roseville Third Main Track Phase I	Construct first phase of third main track and layover facility improvements in order to increase service frequency between Sacramento and Roseville.	Final Design	Prop 1A, Prop 1B, SRA, TIRCP	\$ 87,700,000	\$ 174,300,000
SR84 Intermodal Bus Facility	New bus facility on SR84 that connects to the proposed Ardenwood Station from South Bay Connect and reduces travel time for transbay buses and shuttles	Environmental and Design	TIRCP	\$ 8,100,000	\$ 42,420,000
California Integrated Travel Program (Cal ITP)	Develop a governance structure and approach for a system that allows for seamless statewide travel and fare purchase across multiple agencies and modes	MVP Design	TIRCP	\$ 33,340,000	\$ 33,340,000
Davis Station Signal Improvements	Improve the railroad signal system and replace track crossovers at Davis station to improve reliability and lifespan of the railroad infrastructure.	Pre-construction	Amtrak, PTA, SRA, UPRR, Operating	\$ 11,680,000	\$ 12,400,000
Agnew Siding	Design and construct 2,000' siding in the vicinity of the Santa Clara Great America Station	Pre-construction	SRA, <i>Prop 1A</i>	\$ 3,389,932	\$ 10,600,000
Stege Signal Improvements	Improvements to the railroad signal system and crossovers in the vicinity of Richmond station which will result in improved reliability and better on-time performance.	Pre-construction	PTA, SRA, UPRR	\$ 6,470,000	\$ 6,690,000
California Passenger Information Display System (CalPIDS) Modernization	Design, test, and implement an improved passenger train arrival/alerts system all communication channels including station hardware, servers, data, and software.	Design	ACE, San Joaquins, SRA, Operating	\$ 3,266,695	\$ 3,266,695
Contactless Fare Payment Hardware	Payment hardware to support roll-out of contactless fare payments under CalITP	Procurement	Operating	\$ 2,500,000	\$ 2,500,000
Network Integration	Support for Link21 and initial Carquinez Strait Crossing Study.	Ongoing	TIRCP	\$ 2,000,000	\$ 2,000,000
Surfliner Door Panel Replacement	Procurement of door panels for Caltrans-owned Surfliner Rail Cars	Initial Procurement Completed, Additional Procurement Ongoing	PTA	\$ 575,000	\$ 575,000
Total				\$ 349,384,627	\$ 595,093,695

* Funding sources in italics require additional action

CCJPA Annual Projects

Name	Description	Status	Funding Sources	FY22-23 Funds	FY22-23 Project Cost
CA IPR Wi-Fi Management	Installation and management of a new higher-bandwidth Wi-Fi system onboard CCJPA services.	Ongoing	Operating	\$ 2,737,484	\$ 2,737,484
Right of Way Safety and Security	Annual funding to support UP in ROW clean-up including vegetation removal, clean-up and encampment relocation (three-year program).	Ongoing	SRA	\$ 2,320,000	\$ 2,320,000
Link21	CCJPA annual contribution to Link21 (Second Transbay Crossing) studies.	Ongoing	Operating	\$ 1,500,000	\$ 1,500,000
Capitalized Maintenance	Track maintenance for State of Good Repair Program to maximize on-time performance (annual program).	Ongoing	PTA, Operating	\$ 1,000,000	\$ 1,000,000
UPRR Special Agents	Special Agents will be responsible for responding to incidents along the Capitol Corridor route and providing improved safety and security services	Ongoing	SRA	\$ 500,000	\$ 500,000
Total				\$ 4,820,000	\$ 4,820,000



CCJPA Annual Business Plan FY2022-23 and FY2023-24
Public Comments and Staff Responses

January 18, 2022 through January 20, 2022

VIRTUAL WORKSHOPS	
Tuesday, January 18, 2022	
1.	<p>Q. Are you still pursuing an extension of service to Salinas to supplement Caltrain service?</p> <p>A. We are not currently pursuing an extension of the service to Salinas.</p>
2.	<p>Q. Why doesn't the Capitol Corridor Bus Connection from SF to Emeryville board on Mission Street in SF and not board on the 3rd Floor Bus Deck at the Sales Force Transit Center?</p> <p>A. We are currently pursuing a partnership with AC Transit on the bus service from Emeryville to San Francisco. If we are able to come to an agreement that would be a way to enter Sales Force Transit Center (SFTC). Without a partnership, entering the SFTC with a third-party operator is cost prohibitive.</p>
3.	<p>Q. In the future, will Capitol Corridor be electrified?</p> <p>A. We can safely say is that we will be running a Zero Emission fleet in the future. Whether its electrified or hydrogen-type fuel sourced is to be determined. We share tracks with Union Pacific so that is a difficulty in deciding what we can do in the future. We are expecting to be zero-emission by 2035 (Mandated by the State of California), right now we think that the hydrogen path is more likely than the electrification path.</p>
4.	<p>Q. Seems there is a lot of interest and possible funding for Active Transportation. You touched briefly on bikes, is there a possibility to increase the number of bikes you can accommodate?</p> <p>A. We support active transportation and access by all modes to the train. We want that to happen, and we have worked closely with our planning team and communities to do that. A lot of the design at stations involves people being comfortable using these modes, we have worked on ways to increase the use of bikes with racks on the trains. During pandemic, there has been increased use of scooters and electric bikes, so we want to balance safety and space with new use of scooters and electric bikes, etc. These help us reach a larger area of customers and we want to accommodate it on the train and with bike lockers at the stations. We will keep looking at opportunities with that. We have 12-15% of passengers get to station by bike and we want to support that. Once we get ridership back up, we will</p>

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	<p>continue looking at bike storage on trains as well. We were looking at it before the pandemic but that was put on hold since we do not have the ridership numbers to warrant more storage now.</p>
5.	<p>Q. Are you coordinating with SMART about a future connection between Novato and Suisun City?</p> <p>A. We are coordinating with SMART at the state level because they are using the state rail plan and updating the process. We are in conversations with them about that and how it might connect in Suisun city. These projects to expand service take a long time and can be costly. It is not on the surface part of the Link21 project, if we make trains more frequent on a pulse pattern then it could make it more possible to have trains connect with other lines like to Novato. With the new federal funding, we are planning on working faster with these projects.</p>
6.	<p>Q. As a follow up to the question regarding SMART to Suisun City, would that mean Capitol Corridor will need to consider enlarging Suisun City station to allow cross-platform transfers once SMART service is launched, or will it depend on Union Pacific's wishes on how to proceed with this development? this development can funnel in more passengers from Marin and Sonoma Counties to use Capitol Corridor rather than going through either Richmond, Martinez, or Emeryville to catch the train.</p> <p>A. There would need to be improvements and modifications at Suisun City that we have already identified when working with Solano Transportation Authority. The ramp currently does not meet the standards for SMART to meet at Suisun Station. Then we will have to work with Union Pacific to avoid interfering with their service and make the connection between Capitol Corridor and SMART passenger accessible. It won't be a quick project and the market for the connection needs to be looked at. This potential project is being looked at in the State Rail Plan.</p>
7.	<p>Q. Any chance of future use of Clipper Card payment on Capitol Corridor?</p> <p>A. There is not much of a chance because of the California Integrated Travel Project (Cal-ITP) that utilizes an open loop payment system. It would provide retail transactions with a card or smartphone when moving between transit services and you wouldn't need to load up a card. California is headed in this open loop payment system, modeled after other systems in the world like London. As a pilot program, Monterey Salinas transit can be taken with use of a card payment. With this project, the goal is to automate discounts as you ride more.</p>
8.	<p>Q. Maybe add another train to Auburn (leaving for SJ at 4 or 6pm; northbound train leaves San Jose at, say, 7am) to promote more reverse-commuting between the Sierra foothills and Silicon Valley?</p> <p>A. Once the Sacramento - Roseville 3rd Track projects completes phase 1 we can evaluate what times will be optimal with the added 2 roundtrips between Roseville and Sacramento.</p>

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Wednesday, January 19, 2022	
1.	<p>Q. With regards to rolling stock and equipment availability. Is it possible to gauge, at this moment with the San Joaquin Joint Powers Authority, a better timeline, when they will have their new cars in stock and in service, and therefore allowing them to transfer double decker equipment to Capitol Corridor for service re-instatement?</p> <p>A. We are working closely with San Joaquin Joint Powers Authority (SJJPA) and Caltrans on the deployment of the venture cars. SJJPA needs at least 3 full consists to begin freeing up equipment to both Capitol Corridor and Los Angeles-San Diego-San Luis Obispo Rail Corridor (LOSSAN) to utilize. The first two venture car consists are expected in the Spring 2022. Having a third venture set will likely take place late summer/fall 2022 with the current timeline.</p>
2.	<p>Q. With BART returning to 5-line service on Sundays and service closing at midnight on all days starting on Valentine's Day, how will Capitol Corridor realign the daily schedule to better connect to and from BART's upcoming expanded schedule? It will, by the way, all for 1-seat BART rides on the "red line" on all days between Richmond Amtrak and the San Francisco International Airport. Thank you.</p> <p>A. One of the things we did in our connections with the BART service at Richmond and Oakland Coliseum stations is with our March 2021 schedule change, it will provide more seamless connections with their service. We are reviewing the upcoming schedule change with BART so we will keep you updated on that.</p>
3.	<p>Q. In wake of new federal funding opportunities, can another copy of this document, in final form, be submitted to the Biden Administration for funding, in addition to the State of California?</p> <p>A. When we are applying to funding, it is usually specific to a project in our plan. For federal funding, they will look to see if your project is part of a broader plan and because our projects are part of a vision, business, and statewide rail plan, it makes it clear that the project is coming from a broader system improvement effort. The Biden administration and Federal Railroad Administration (FRA) have been looking at California as a model and the state rail plan is one of the strongest in the nation.</p>
4.	<p>Q. In aiming to return to pre-pandemic service levels, do you anticipate instituting the "pulse schedule" as well as returning to service some weeknight and weekend night service, like a 9pm departure from SJC and/or a 10pm departure from OAK (Coliseum) back to Sacramento, and vice versa to San Jose?</p> <p>A. Last year, we did go to a pulse pattern schedule to provide a predictable schedule for our riders and more seamless connections with other services. We do have an upcoming schedule change on January 24th, it is not a</p>

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	<p>change in the level of service but a reshuffling of times where we run our trains. For example, train 548 will be reactivated and will depart Oakland at 8pm in order to provide later service. We are looking to see what opportunities we have before full-service restoration on October 1st of this year. As for increased service south of Oakland, we are limited in our agreement to providing 7 roundtrips due to a single-track territory. We also found that the later night trains out of San Jose did not have the high ridership, with some as low as 10 people onboard. With our new schedule change, we targeted higher demands during the day and tried to close the gaps in our services. We do want to expand our service, as seen in our vision plan for south of Oakland and between Sacramento and Roseville.</p>
5.	<p>Q. Would you consider using the copy “Corrido’s and Corridon’ts” in on-train, physical signage? What about marketing materials? Digital assets?</p> <p>A. Corri is our newest mascot for the train and Cappy has been one over the years. You can see Corri on railgoods.com our online store, these are the fun faces of Capitol Corridor. We like the "Corri-do’s and Corri-dont’s" so stay tuned.</p>
6.	<p>Q. How would you describe your relationship with BART, on a high level? Do you proactively plan around BART, or is it the other way around? Are you all on “good terms” with BART leadership and do you collaborate on future visions, or is that more siloed?</p> <p>A. Capitol Corridor’s Board has an administrative services agreement with BART’s Board which allows us to be hosted by BART, for example our procurement services. We also share office space with them, and our relationship couldn’t be better. We operate on Union Pacific (UP) territory so our schedule and service are based on our agreements with UP so it limits our flexibility. We do coordinate and communicate closely with BART in our connections and the transfer times between our services.</p>
7.	<p>Q. To save on costs, and to be penny-wise, do you anticipate eliminating the high-cost Emeryville to San Francisco bus, while working collaboratively with BART staff to promote use of the “red line” for 1-seat rides between Richmond and San Francisco International Airport, as well as the Blue Line and Green Line between Coliseum and San Francisco Daly City? The thruway bus will eventually seem redundant and not a good use of operating and capital funds. Thank you.</p> <p>A. We do encourage Capitol Corridor riders to take BART connections at Richmond and Oakland Coliseum. Additionally, similar to a partnership we did with El Dorado Transit to provide bus service from Sacramento to South Lake Tahoe, we would like to partner with AC Transit to provide a similar service. This is more cost effective and provides mobility for our customers. The current schedule change allows for more use for transfers at Richmond to take BART into San Francisco. The pandemic has created challenges for AC transit similar to us and other transit agencies but it is something we want to do to cut down on costs.</p>

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8.	<p>Q. Could you talk about current cleaning procedures and what the new sanitation technology is that you alluded to? Do BART / other partners use the same procedures?</p> <p>A. Our operator, Amtrak, utilizes an anti-viral fogger onboard the equipment as it comes in for servicing, and wipe and sanitize surfaces. We have looked at different types of filtration technology and we are still evaluating the best way to improve the air onboard our equipment. BART is using a high efficiency filter (MERV 13) for their trains that can not be used with our rail cars due to differing HVAC specifications. Right now, Caltrans is helping with the research and engineering work for the best solutions for this.</p>
9.	<p>Q. On the Cal-ITP project, will passengers still be able to pay, the way they do today and earn Amtrak Guest Rewards points, or will that go away when using Capitol Corridor? I would hope not.</p> <p>A. We are not taking away the Amtrak ticketing so you can still get rewards through their system. However, as we move to California Integrated Travel Project (Cal-ITP) there will be its own rewards and discounting system but that will probably not count for Amtrak's guest rewards points. There will be a transitional period with these ticketing systems. If you have not already signed up for the Capitol Corridor rewards program, it is free to sign up!</p>
10.	<p>Q. Does Amtrak plan to address either the reduction of plastics in their food service on trains, by looking at compostable, or more easily recyclable (glass or aluminum) options?</p> <p>A. 2-3 years ago, Amtrak started looking into sustainability, and these came into play in California. We have made an effort into sourcing sustainable products and work with companies that have sustainable practices. We are looking at packaging to make it sustainable, for example now our beer options come in aluminum cans. Pandemic is causing us to look at this, but it is also hard with supply chain issues right now.</p>
11.	<p>Q. If you initially can get three round trips to Roseville, from one, what would the ideal departure and arrival times be in both Sacramento and Roseville?</p> <p>A. When we can provide 3 roundtrips, we would probably do a slightly earlier trip than our current 1 roundtrip and a slightly later trip. When we have more options with phase 2 of the project, then we can look at more off-peak times such as mid-day times. 2024-2025 we will start construction for this project which will probably take a few years to complete.</p>
12.	<p>Q. Has CCJPA consider contracting "social media influencers" to ride the train and encourage followers to use the Capital Corridor and highlight the benefits and aesthetic views of riding the train?</p> <p>A. We have done that before and we are currently working with our social media and advertising ourselves right now to boost ridership so it is something we are considering.</p>

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12.	<p>Q. Optimistically speaking, what is the best forecast you can give, in working with Union Pacific Railroad, to expand beyond the existing seven round trips to and from San Jose?</p> <p>A. Our first project to do that is completing the South Bay connect project. Then engage with Union Pacific (UP) about natural concrete plans for expanding that. We cannot realistically expand service until after 2030 because there is a lot of work needed before we can because it is a difficult territory to work with. The wetlands area is going to be very challenging to work through, especially with sea level rise and climate change.</p>
13.	<p>Q. How would you describe capital corridor's "brand voice" or main personality traits?</p> <p>A. We would describe it as a convenience service that really thinks about our riders and position that in everything we do. Includes how we support our customers online and activities we do, such as the rider appreciations and happy hours we offered pre-pandemic. Our branding is based on being fun, convenient, approachable, and flexible with a real sense of community.</p>
14.	<p>Q. Can the Capitol Corridor add ugly sweaters to the online store?</p> <p>A. BART did a great job with their ugly sweater. Please tune in to our CCJPA store to see all of our great merchandise.</p>
<p>Thursday, January 20, 2022</p>	
1.	<p>Q. Will the monthly cap be available to 10 ride tickets too?</p> <p>A. A lot of those questions are to going to be worked out. The more you ride the more you save so there will be some parallel programs at first. A variety of traditional tickets through Amtrak.com and as we introduce a new payment system there will be different discounts with that system. The fares will probably be restructured to adjust the prices for more frequent riders.</p>
2.	<p>Q. Will Auburn train for commuters be put back in service? Current schedule eliminated commuters for Sac/Davis due to terrible schedule.</p> <p>A. We did change the schedule and that was disruptive for a lot of people working in the Sacramento and Davis areas. We are going to be looking into the options we have. Long-term, the goal we have is once the third track completed in Sac-Roseville then we can have 2 roundtrips. With the pandemic, a lot of commuters have changed to remote work so some of the market has changed with that, which means we chose to have a longer train during the week to enable those to commute all the way down to the San Jose and back up all the way to Auburn. Continue to give us these comments and feedback as we will be evaluating how to better serve our riders.</p>
3.	<p>Q. Vacationers have luggage which can slow down people on and off the train and the bus.</p>

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	<p>A. Our busses do allow passengers to carry luggage. As we look at partnership opportunities with transit agencies, we will evaluate options that work for our partners' service and our passenger persona.</p>
	<p>Online Comments</p>
<p>1.</p>	<p>The business plan fails to address the entirely inadequate San Francisco bus terminal. Rather than negotiate for a staffed waiting room in the new Salesforce Transit Center, which would have been efficient and convenient, the solution was first an outside stop in front of the terminal and now one some blocks away. No staffing, no checked baggage, not even protection from the weather. Not the best way to market one of the top tourist destinations in the country. Despite the statement about working with AC Transit to provide service nothing seems to have been done for the last two years.</p>
<p>2.</p>	<p>I hope you will restore the pre-pandemic train schedule from and to Placer County. The previous schedule was ideal for people living in south Placer County and who worked more or less typical office hours in downtown Sacramento. I suspect that accounted for many of your Placer riders. Thank you.</p>
<p>3.</p>	<p>Governmental heavy rail in CA is forced to work with Union Pacific, not always in the direction of addressing capacity and best route issues. Considering need to replace the 1930 Benicia (Thank You SP); it seems rime to rethink the Northern Electric/Sacramento Northern route to the Bay Area market. Bridge instead of ferry at Chipps. A new double track line focused on East Bay Area/San Francisco Thru traffic, with (renewed) crossing at Dumbarton cut-off. There is much more to say as geopolitics alerts us to need for rebuilt farm district branch rail lines for Famine Hedge. That is a freight cargo issue; Union Pacific abhors branch lines, so preparations discussion must be loaned to Cal OES and others tasked with disaster scoping. One is not confident we will lift a finger in preparation for EMP/Cyberwarfare impacts to rubber tire food distribution, so this writer can only attempt to bring the subject of enhanced rail capacity and reach into the food distribution planning venue. Suggested reading is William Forstchen "ONE SECOND AFTER"</p>
<p>4.</p>	<p>I commute from SF to Davis four days a week. I understand scheduling is complicated. But it would be great to have a SF option from/to Jack London to the SF Ferry Building/Pier 39. Especially on the weekends with parents and kids. The bridge is a mess and BART is, well, BART.</p>
<p>5.</p>	<p>"I commute from SF to Davis four days week. it would be terrific if you could extend the SF stop to include the previous Hyatt Regency stop. The evening stop on Mission is close to the transit center but for us in SF the Market Street services are needed. Plus, the early morning and late evening times are not very safe on Mission.</p>

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6.	<p>Dear Sir, I live in Sacramento and I work on merchant ships as an engineer. My union hall (MEBA) is in Oakland and the ships are also in the bay area. I almost never drive to the bay area, I use the capitol corridor trains and I take my bicycle with me so that I am mobile when I get there. I always get a 10 ride. When I get day jobs on ships in the port of Oakland, I report to work on the ship at 0800. For that I use the 521 or the 523 train depending on how far I will need to travel on my bicycle in Oakland. But on the weekend if I have a day job, I have to drive my car because the 723 train arrives at Jack London at 0744 (if it is on time). That is not enough time for me to get to work on time. On the weekend can you have a train that has the same schedule as the 523 train. Now a less important subject. Before this pandemic I used to go to San Francisco to listen to Jazz music. The music played from 1700 to 2000 (5:00 - 8:00). I would ride my bicycle to Bart, get off at West Oakland, then ride to Jack London Amtrak and get on the train that left about 9:00 PM. I miss having that late night train."</p>
7.	<p>The cost for a family is way too much. A full train is better than half full-on weekend. \$200 for 4 to go from Sacramento to San Jose is way too much.</p>
8.	<p>"1) Focus more on improving "timed" Bus Connections to stations. Very frustrating to take a Bus and then wait very long time to board the train. 2) Connecting Bus from SF to Emeryville should Board on the 3rd floor bus deck of the SFTC Sales Force Transit Center. 3) Confirm there is an ACTUAL need to construct a Second Bay Crossing. If not, concentrate money and efforts to improve existing rail systems, e.g., connect ACE to BART, bring Cal Train into the SFTC, build CHSR, and extend SMART to Cloverdale"</p>
9.	<p>Hello, I used to love riding the train from Roseville to the Bay Area. Since COVID I haven't ridden the train at all because before COVID I got the flu on the train, and I haven't seen anything that leads me to believe that riding the train is safe / the air is clean. I barely see any mention of COVID (cleaning) response or improving rider confidence in your plan. No mention on how you've improved air quality (or plans to) and nothing to reach out to your riders if this work has already been done so their confidence is improved and they return to using train service. I'm sure I'm not the only one who finds clean air on the train a priority so I thought maybe you could incorporate it/rider confidence into your plan. I would love to get back on the train someday. Thanks!</p>
10.	<p>As a commuter living in Auburn and working in Sacramento, I appreciate the continued commitment to offering 1 round trip daily. That said, I would strongly urge you to adjust the current schedule. The current Auburn morning departure and returning Sacramento evening departure have made the Cap Corridor almost impossible to use. We need the option to help the region meet air quality and other traffic reduction goals and yet the</p>

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	<p>schedule change has forced many of us back into our cars as solo drivers. Keeping the daily round trip but also keeping the schedule as is will be at cross purposes given the inability of many foothills to-Sacramento commuters to actually use the train.</p>
11.	<p>Overall, an excellent document. Well done, with a clear vision. My only observation to you is that the current weekday train schedule to/from Placer County is not of much use to regular riders into and out of Sacramento. The prior schedule was developed in close consultation with the PCTPA and riders in Placer County. something you may want to consider in future schedule planning</p>
12.	<p>I think that capital corridor should bring back the transit transfer tickets. In Sacramento you have to use their app and every time I catch a AC Transit bus they have no clue what I'm talking about a free ride for showing my train ticket. It just seems more like the program has been eliminated. what would be great is if train conductors could add value or a free ticket to the transit debit cards – clipper (Bay Area) or connect (SacRT) that way passengers could ride as if a normal ticket rider.</p>
13.	<p>1) A servicer reduction between San Jose and Oakland begins January 24 going from 14 to 12 trains This should have never happened and the reduction was never part of any plan published. It needs to be corrected now and addressed to be fixed. 2) The South Bay Connect is very important to move forward with. Reducing the time on the train by using this improved routing will improve ridership on this segment and from San Jose to Sacramento. The location of the new Ardenwood Intermodal station will be great to add new riders much better than the seldom used Hayward station. A real plus for Alameda County. 3) No discussions yet on next level incremental speed increases which you need to include. Now that the line has Positive Train Control (PTC) installed, the signal system will allow a 90 MPH operation level (instead of 79 MPH) safely and easily between Benecia Drawbridge and Sacramento without any significant or capital expenditures besides checking limited grade crossing timing and putting up new speed limit signs. The JPA pays Union Pacific to maintain the tracks at Class 5 levels on this segment which allow for 90 MPH passenger and 70 MPH freight speeds. Union Pacific moves expedited freight trains at 70 MPH here. We need to take advantage of what we are paying for and get the Capitol Corridor trains run at 90 MPH in this rural segment also as the Union Pacific maintains the track at this higher level here. The Union Pacific allows these 90 MPH speeds on other similar segments (St. Louis to Chicago) and it needs to be made happen here without argument.</p>
14.	<p>I rode from Suisun Fairfield to Sacramento four to five days a week for 19 years, and like many State workers am still teleworking full time. I hope 10 ride tickets remain available (and if possible, for a longer duration). I still the the email announcements, which are depression as they seem to indicate that malfunctioning equipment failures, conflict with freight train priory,</p>

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	<p>"trespasser incidents" and those damned Martinez-Benicia bridge openings. I would hope that any additional funding for High-Speed Rail will be accompanied by recommended Capitol Corridor appointments. Current budget surpluses are made all the more important when it is predictable that Congress is not even a fair weather friend.</p>
15.	<p>Signal improvements could be done near Jack London/Colliseum as well. There is a timing conflict after the coliseum (Oakland) during 0710 that can lead to further signal issues.</p>

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LINK21

CONNECT NORTHERN CALIFORNIA

STAGE GATE 1 REPORT

DRAFT

February 2022

Prepared By:
Link21 Program Management Consultants (PMC)

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ISSUE AND REVISION RECORD

REVISION	DATE	PREPARER(S)	PMC REVIEWER(S)	APPROVER	DESCRIPTION/ NOTES
			BART/CCJPA REVIEWER(S)	BART/CCJPA APPROVER	
0	02/01/2022	Joseph Chroston-Bell, NRC	Ian Brown, NRC	Peter Gertler, HNTB	Working DRAFT submittal
	02/07/2022	---	Sadie Graham, BART; Camille Tsao, CCJPA	Sadie Graham, BART	Working DRAFT submittal review
1	02/10/2022	Joseph Chroston-Bell, NRC	Ian Brown, NRC	Peter Gertler, HNTB	DRAFT submittal
	02/XX/2022				

SHAREPOINT PATH

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1-SAPM-PH0-Stage_Gate_1_Report-DRAFT

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APPENDICES

- Appendix A. Stage Gate Review Supporting Materials
- Appendix B. Stage Gate Review Meeting Notes

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ABBREVIATION	DEFINITION
BART	San Francisco Bay Area Rapid Transit
CCJPA	Capitol Corridor Joint Powers Authority
Boards	BART and CCJPA Boards of Directors
CBO	community-based organization
CEQA	California Environmental Quality Act
EMU	electric multiple unit
NEPA	National Environmental Policy Act
PMC	Program Management Consultants
PMT	Program Management Team
SPP	Strategic Program Plan

LINK21 PROGRAM TEAM NAMES

TEAM NAME	TEAM MEMBERS
PMC	The HNTB Team
PMT	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

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1. INTRODUCTION

1.1. Purpose of Report

This *Stage Gate 1 Report* summarizes the Link21 Program (Link21) Stage Gate Process and evidence to support action by the San Francisco Bay Area Rapid Transit (BART)/Capitol Corridor Joint Powers Authority (CCJPA) Boards of Directors (Boards) to advance Link21 from Phase 0 to Phase 1. The actions requested of the Boards are to:

- Adopt the Link21 vision, goals, and objectives.
- Approve advancement of Link21 into Phase 1.

In support of these actions, the Boards will review the evidence that supports the following four statements:

1. Link21's vision, goals, and objectives are appropriate, clear, and measurable, and they provide a foundation for the Business Case.
2. Stakeholder and public engagement, with a focus on equity advancement, has informed the process and supports advancement into Phase 1.
3. A foundation of analytical work has been completed to develop and evaluate concepts in Phase 1.
4. The program has the people, processes, funding, and tools to support progress through Phase 1.

1.2. Stage Gate Process

The Stage Gate Process is an international best practice to control risk and ensure timely and cost-effective delivery using a rigorous and formalized, decision-driven process to advance projects and programs. Stage gates are applied at key milestones to memorialize decisions and ensure a project's readiness to advance.

The Stage Gate Process was adapted specifically to apply to Link21. For Stage Gate 1, it included three formal review meetings prior to consideration by the Boards. Each review increased with authority, from Peer Industry Experts to Executive Leadership, with the aim to progressively build confidence in Link21's Stage Gate 1 recommendations to the Boards.

At each review, panelists were asked to comment, identify risks, and note their concurrence in the supporting statements. See [Appendix B](#) for the review panels' notes, actions, and recommendations.

Each review consisted of a panel of attendees, a chairperson, and a vice chair. It was the panelists' role to review the presented evidence that supports the four statements and to identify any outstanding issues that need to be addressed before Link21 can advance. It was the chairperson's responsibility to consider this discussion and



feedback before making the decision to proceed to the next level of the Stage Gate hierarchy (**Figure 1-1**).

Figure 1-1. Hierarchy of Stage Gate 1 Reviews and Board Action



PEER INDUSTRY EXPERTS REVIEW

The Peer Industry Experts Review was a panel of experienced senior management professionals from the larger partner organizations of Link21’s Program Management Consultants (PMC) team. The panel was chaired by the PMC program manager and co-chaired by the PMC strategic advisory lead.

Presenters included both senior delivery managers within the PMC and their aligned managers that were appointed by BART and CCJPA. The first review considered the four statements (in Section 1.1) in detail to confirm the readiness of Link21 to proceed to the BART/CCJPA Staff Review.

[Link to the Peer Industry Experts Review summary](#)

BART/CCJPA STAFF REVIEW

The BART/CCJPA Staff Review consisted of a panel of senior leaders from BART and CCJPA that represented a diverse background from operations planning to real estate development.

This panel was chaired by BART Program Director Sadie Graham and co-chaired by CCJPA Program Manager Camille Tsao. They focused on reviewing the program’s readiness to proceed, and they engaged BART and CCJPA staff so they may brief their respective senior executive managers in advance of the Executive Review.

[Link to the BART/CCJPA Staff Review summary](#)

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EXECUTIVE REVIEW

The Executive Review was a panel of executive management representatives from BART and CCJPA’s executive committees. It was chaired by BART General Manager Robert Powers and co-chaired by CCJPA Managing Director Robert Padgett.

This review took into consideration the previous panel reviews and focused on the Link21’s readiness to proceed for the Boards’ consideration.

[Link to the Executive Review summary](#)

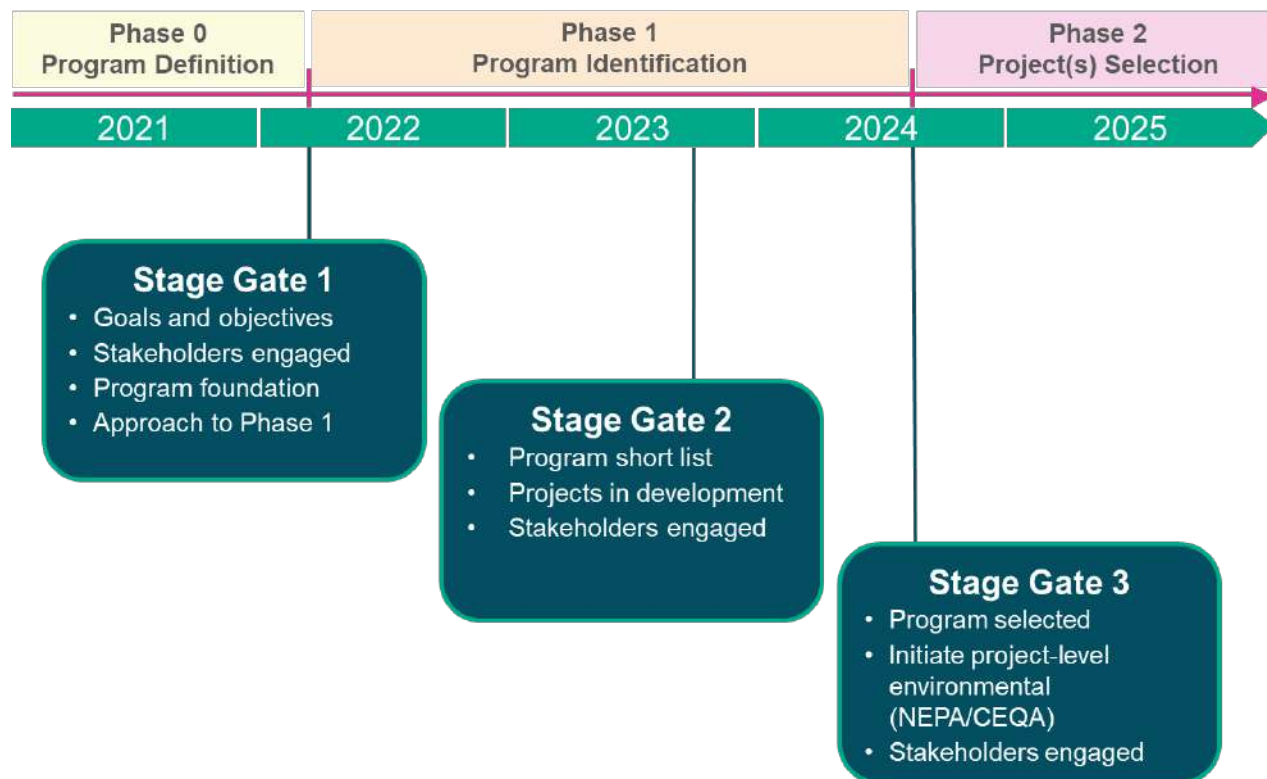
CONCURRENCES

The Peer Industry Experts, BART/CCJPA Staff, and Executive reviews all provided concurrence with the four statements listed in Section 1.1. Their actions and recommendations are noted in [Appendix B](#).

1.3. Future Stage Gates

Future stage gates have been identified, as shown in **Figure 1-2**. Stage Gate 2 is projected to occur in late 2023, and it will include a short list of program concepts. Stage Gate 3 is projected to occur by late 2024, and it will include initiation of the environmental review process. Other stage gates will be defined as Link21 progresses.

Figure 1-2. Future Stage Gates



National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA)



2. SUMMARY OF EVIDENCE

This section summarizes the evidence presented to the Peer Industry Experts, BART/CCJPA Staff, and Executive review panels to support advancing Link21 from Phase 0 to Phase 1 based on the four statements originally presented in Section 1.1:

The meeting notes, including actions and comments by each of the review panels, are provided in [Appendix B](#).

Statement 1: Link21’s vision, goals, and objectives are appropriate, clear, and measurable, and they provide a foundation for the Business Case.

The *Problem and Vision Statement & Goals and Objectives* document was prepared as part of the development of the Business Case Framework and Methodology. It was reviewed and refined to reflect additional information that became available and feedback from stakeholder/public engagement and equity advancement activities during Phase 0. More detail on engagement and equity outreach activities is provided in Statement 2.

Link21 Vision Statement (highlighted text represents the refinements/additions made during Phase 0):

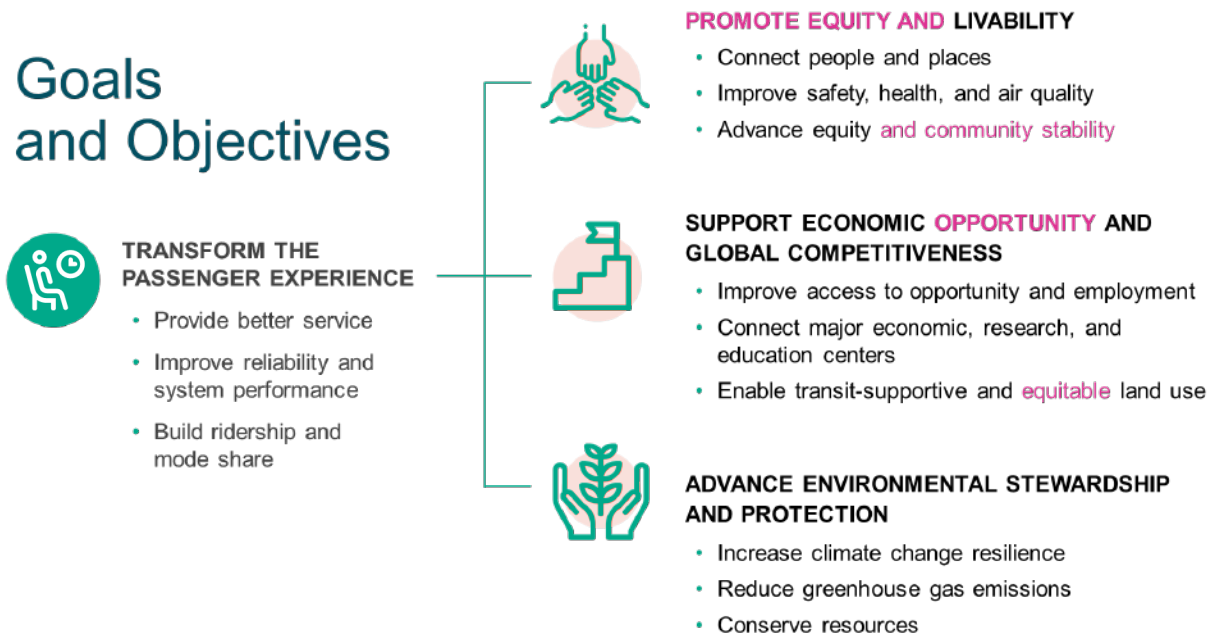
*The Link21 Program **and its partners** will transform the BART and Regional Rail (including commuter, intercity, and high-speed rail) network in the Northern California Megaregion into a faster, more integrated system that provides a safe, efficient, equitable, and affordable means of travel for all types of trips.*

*This program, including a new transbay passenger rail crossing between Oakland and San Francisco, will enhance livability, **community stability**, **economic opportunity**, and environmental quality in the Megaregion while improving the travel experience. With key investments that leverage the existing rail network and increase capacity and system reliability, rail and transit will better meet the travel needs of residents throughout the Megaregion.*

Goals and Objectives

Four goals were developed with corresponding objectives, as shown in **Figure 2-1**. Text in pink represents modifications to the goals and objectives based on feedback from stakeholders and the public.

Figure 2-1. Goals and Objectives

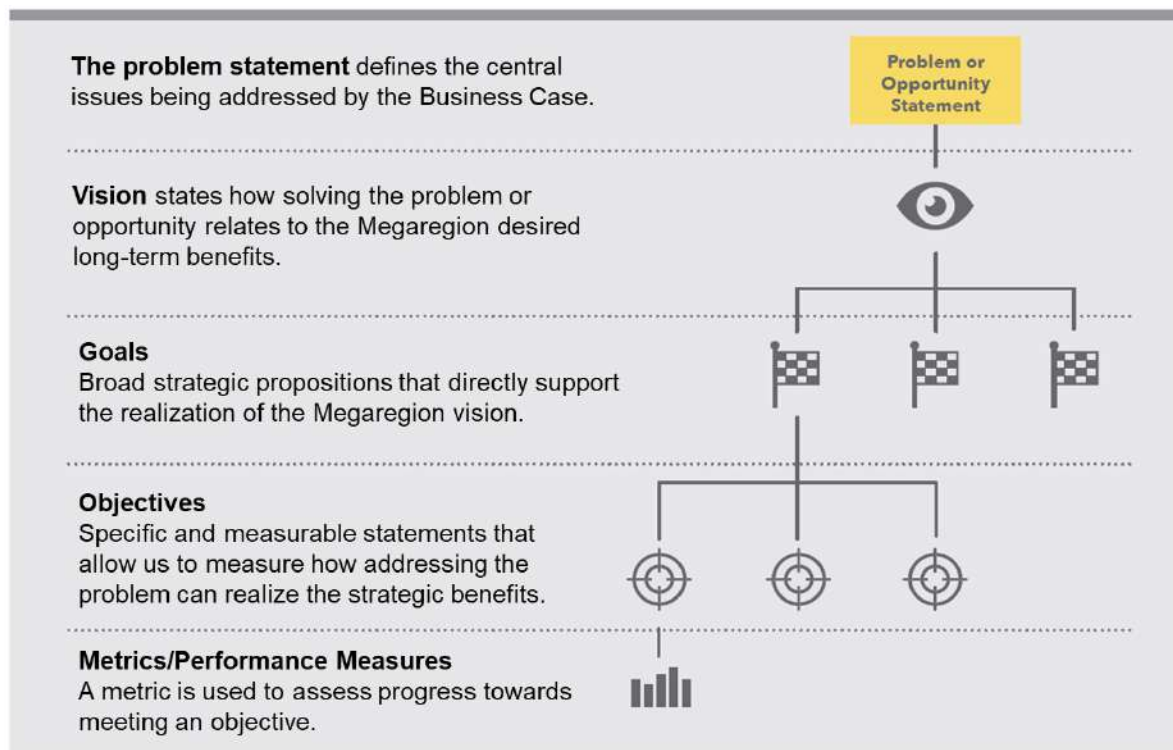


Business Case Framework and Methodology

The Link21 business case framework and methodology (see the *Strategic Program Plan [SPP] - Chapter 2: Business Case* in [Appendix A](#)) is designed to select concepts and alternatives through a transparent and evidence-based approach. To do this, the Business Case will assess the problem to be solved, define a vision, and apply the different layers of goals and objectives and metrics, as shown in Figure 2-1.



Figure 2-2. Foundation of the Evaluation Framework



The Business Case will evolve over the program's life cycle and throughout the different phases:

- Phase 0: Business Case Framework and Methodology supports program definition.
- Phase 1: Preliminary Business Case supports program identification.
- Phase 2: Intermediate Business Case supports the identification of project alternative(s) to enter into CEQA/NEPA environmental review.
- Phase 3: Final Business Case contains detailed information on the benefits, costs, and a program and project(s) delivery and implementation strategy.

The Business Case consists of four elements, which reflects the multidimensional evaluations that are required for this complex program:

1. Strategic Case outlines the rationale.
2. Economic Case appraises the costs and benefits.
3. Financial Case assesses the financial viability.
4. Deliverability and Operations Case considers the feasibility.

For Phase 0, the focus was on the Strategic Case, particularly on the vision, goals, and objectives. Future phases will increasingly focus on the other cases. Building off previous studies, findings, and continuous stakeholder/public outreach and equity advancement, the vision, goals, and objectives were derived from and refined to



communicate the rationale and focus on megaregional passenger rail improvements and benefits with a new transbay passenger rail crossing between Oakland and San Francisco.

A key element of the Business Case was stakeholder and public engagement and a commitment to advance equity. These activities informed and refined the vision, goals, and objectives during Phase 0 for clarity and continuity with stakeholder and community priorities.

A strategic priority for Link21 is its commitment to advance equity across the program life cycle from planning to operation. In support of this, the Program Management Team (PMT)¹ developed the *Equity Vision Statement* (see Statement 2), that was informed in part by the co-creation workshops, to guide the program's equity objectives in project planning, evaluation processes, and outcomes.

To support the vision, goals, and objectives as clear and measurable, metrics were developed and refined throughout Phase 0. The metrics will be used to measure the relative quantitative and qualitative benefits and costs of concepts and program alternatives at a megaregional level in future phases. Refer to the *Phase 1A Metrics* in [Appendix A](#) for a full list of the metrics developed in Phase 0.

At Stage Gate 1, the vision, goals, and objectives will be formally adopted through a Board action. The metrics developed in Phase 0 will continue to be refined, as necessary, in subsequent phases as additional program information and findings emerge and stakeholder and public engagement and equity advancement advances.

Statement 2: Stakeholder and public engagement, with a focus on equity advancement, has informed the process and supports advancement into Phase 1.

Phase 0 included extensive stakeholder and public engagement activities and made significant progress to advance equity. These activities included a multipronged approach of informing, educating, interacting, and receiving feedback on the benefits of Link21 to:

- Elected Officials
- Agencies and Stakeholders
- Freight, Rail, and Transit Operators
- Business/Industry Leaders
- Media
- General Public
- Equity Partners
- Advocacy Groups

¹ BART/CCJPA and PMC



Link21 developed an *Equity Vision Statement* to guide its approach:

An equitable Link21 Program (Link21) acknowledges the ongoing effects on access to mobility and opportunity that past infrastructure projects have had on impacted communities. It shows an understanding of how past projects have failed to adequately consider the needs of systemically marginalized community members, and it evaluates what barriers to rail access exist for low-income and Black, Indigenous, and People of Color (BIPOC) residents, as well as riders with disabilities, women, LGBTQIA+ passengers, and other historically underserved identities.

A fair and just Link21 partners with impacted communities to develop much needed transit benefits for priority populations via co-creation, a process used to integrate the knowledge and expertise community members bring from their own lived experience directly into program decisions. This allows the program to stay flexible and responsive to emerging and changing needs over time.*

Equitable transportation will give everyone the ability to travel safely, affordably, and reliably to work, school, healthcare and government services, family and friends, and other important places in their lives. It should be fast, clean, efficient, welcoming, and accessible for anyone. By following a more equitable process, Link21 will help advance more equitable transportation outcomes throughout the Northern California Megaregion (Megaregion).

A key component of equity advancement is the focus on community co-creation. Co-creation entails partnering with community-based organizations (CBO) to solicit input on important program topics from segments of the public who are often underrepresented in the transportation planning process. CBOs and participants were compensated for their contribution to co-creation process because of the level of effort required, the value they provided, and the alignment with emerging best practices. The co-creation process was developed with guidance from sources such as Justice40, a Biden Administration initiative “that aims to deliver 40% of the overall benefits of federal investments in climate and sustainable transportation to disadvantaged communities.”

Equity advancement during Phase 0 included participation from over 680 community members, 31 CBOs, and 1,500 community members from communities of color or low-income backgrounds participating in a survey. As a result, the PMT received valuable feedback on key program topics, such as the goals and objectives, travel patterns, service goals, community burdens, and general equity concerns. Feedback received and incorporated included support for Link21’s goals and the importance of other issues, such as train safety and cleanliness.

Phase 0 also developed and refined the definitions of priority populations (see the *Link21 Priority Populations Update* in [Appendix A](#)). This definition is critical for evaluating the costs and benefits of Link21 on priority populations in Phase 1.



The initial Link21 priority populations definition was based on definitions used by other state, regional, and local agencies. However, it lacked consistent methodology across the Megaregion. As a result, the PMT revised the definition to reflect community input received during Phase 0 and a burden-based approach that could be applied across the Megaregion. The burden-based approach identified census tracts that experience the highest levels of burdens when compared to neighboring communities and included burdens that were documented through research and community co-creation. This approach aligns with guidance from other agencies, such as Justice40 and BART's emerging equity framework. The definition may be iterated upon at appropriate points in the program as more information becomes available. It should be noted that priority populations are a program-specific designation that is not intended as a replacement for environmental justice or other compliance designations.

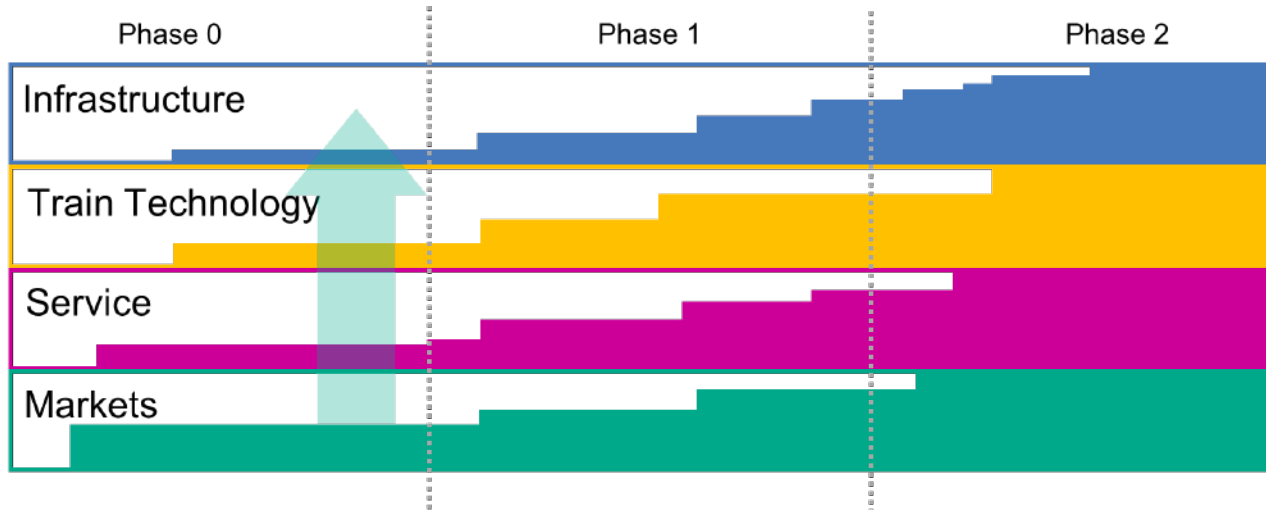
The Link21 Team² is continuing to refine its stakeholder/public engagement and equity advancement strategies and tactics to support more focused activities around concept development that will lead to a short list of program concepts in Phase 1. These activities will include a combination of virtual and physical engagement activities and will comply with all COVID-19 and other restrictions. Equity advancement will continue with community co-creation and the formation of an Equity Advisory Council to provide expert review of evaluation methods, strategies, and recommendations.

Statement 3: A foundation of analytical work has been completed to develop and evaluate concepts in Phase 1.

The analytical work prepared in Phase 0 established a framework and foundation for the development of Link21 concepts to be defined in more detail and evaluated in Phase 1. Concept development is based on four building blocks: markets served, train service provided, train technology deployed, and infrastructure capability delivered, as illustrated in **Figure 2-4**. As part of this process, concepts either not considered or not advanced to Phase 1 were also identified.

² BART/CCJPA, PMC, and Consultants supporting program identification/project selection (Consultants)

Figure 2-4. Evolution of Link21's Building Blocks of Markets, Service, Train Technology, and Infrastructure (Phases 0 to 2)



The Building Block approach is a best practice to develop projects and programs by focusing on *market* (type and volume of trips) and *service* (frequency, routes, and stopping patterns) first then by appropriate *train technology* (train performance and traction power) and required *infrastructure* (track, structures, power, etc.). As a result, focusing early in the planning process on markets and services, the “what”, will better inform the requirements for train technology and infrastructure, the “how”, as the program progresses. Further information on this process can be found in the [Reimagining Rail with Link21](#) webinar (11/18/2021) on the Link21 website.

Markets

The Business Case Team prepared a megaregional market analysis using big data and sophisticated methods to identify potential hubs of long-term, unmet demand and transbay unmet demand. The data for the market analysis was pre-COVID (post-COVID data does not exist yet). A sensitivity analysis and other methods were used to address the potential impacts of a post-COVID demand. In September 2021, the PMT presented the market analysis approach and findings to the Boards, stakeholders, and the public. The analysis informed corridor identification for rail service development in Phase 1, and it supports the megaregional strategic case for new transbay rail connectivity. The analysis also supported community co-creation input regarding “system inefficiencies,” which validated where trips are more convenient by car (e.g., between east and west Contra Costa County) or require transit-dependent communities to take extremely long journeys to travel by transit.

Additional information is provided on the [Market Analysis](#) page of the Link21 website and in the *Market Analysis Report: Executive Summary* in [Appendix A](#).



Service

The PMT prepared a review of service opportunities for frequencies and journey types across the Megaregion. They also identified critical constraints to the delivery of these opportunities, such as BART's Oakland Wye operations and trackage rights constraints with freight railroads. This information will inform the creation of service concepts, including service plans, routes, and stopping patterns that will be developed in Phase 1. Today's regional rail network generally operates on freight rail rights-of-way, and, as a result, trackage rights and shared use of infrastructure will be an area of increasing focus that will require more detailed analyses and engagement with the freight railroads.

Additional information is provided on the [Service Improvements](#) page of the Link21 website.

Train Technology

BART and regional rail technology advancements and interoperability were considered in Phase 0. It was determined that advancement in regional rail electric multiple units (EMU) train technology have performance characteristics comparable to BART, and they present an opportunity to serve a wide variety of market needs, including those traditionally served by BART. The use of EMUs or new technologies, such as hydrogen and battery powered units, could deliver comparable service while meeting the state mandate for zero emissions. Phase 1 will further review new technologies and evaluate program concepts to identify the optimal balance of BART and Regional Rail³ for program concepts to be advanced. However, Link21 aims to deliver a complementary system of upgrades to both BART and Regional Rail regardless of the identified technology for the new transbay passenger rail crossing.

Additional information is provided on the [Train Technology](#) page of the Link21 website.

Infrastructure

Phase 0 included limited consideration of infrastructure requirements. In Phase 1 and beyond, there will be an increased focus on infrastructure requirements based on the definition of the markets to be served and the service and technology requirements. During Phase 0, the PMT divided the Megaregion into logically constrained geographic corridor segments and identified high-level physical opportunities and constraints from a detailed literature review of prior studies, meetings with other agencies (e.g., rail operators, cities, and transportation agencies), and internal workshops. This information was used to build early development of potential concepts to be considered in Phase 1. Information from these sources and additional planning, engineering, travel demand, and environmental studies in Phase 1 will be used to support more detailed development and evaluation of program concepts, leading to a short list for Stage Gate 2.

Additional information is provided on the [Infrastructure](#) page of the Link21 website.

³ Could include commuter, intercity, or high-speed rail.



Concepts Not Advancing to Phase 1

Link21 did not consider an auto crossing. Previous planning studies showed that a new auto crossing between San Francisco and Oakland did not meet regional environmental goals. Voter direction in Regional Measure 3 and BART Measure RR reaffirmed this; therefore, Link21 is focused on developing and delivering a new transbay passenger rail crossing.

Concepts considered but not advancing include:

- **Technologies not interoperable with BART or standard gauge Regional Rail:** Based on voter-approved funding requirements, organizational and governance responsibilities, previous regional planning, Link21 goals and objectives and business case criteria.
- **New transbay passenger rail crossing on a bridge:** Based on maritime requirements for bridge height and shipping clearance and construction of a rail approach structure from the elevation of the bridge to underground or at-grade facilities in Oakland and San Francisco would be highly disruptive and inequitable to residents and businesses.
- **Diesel trains operating in the new crossing:** Based on a state mandate for zero-emission rail vehicles and inconsistent with environmental goals.

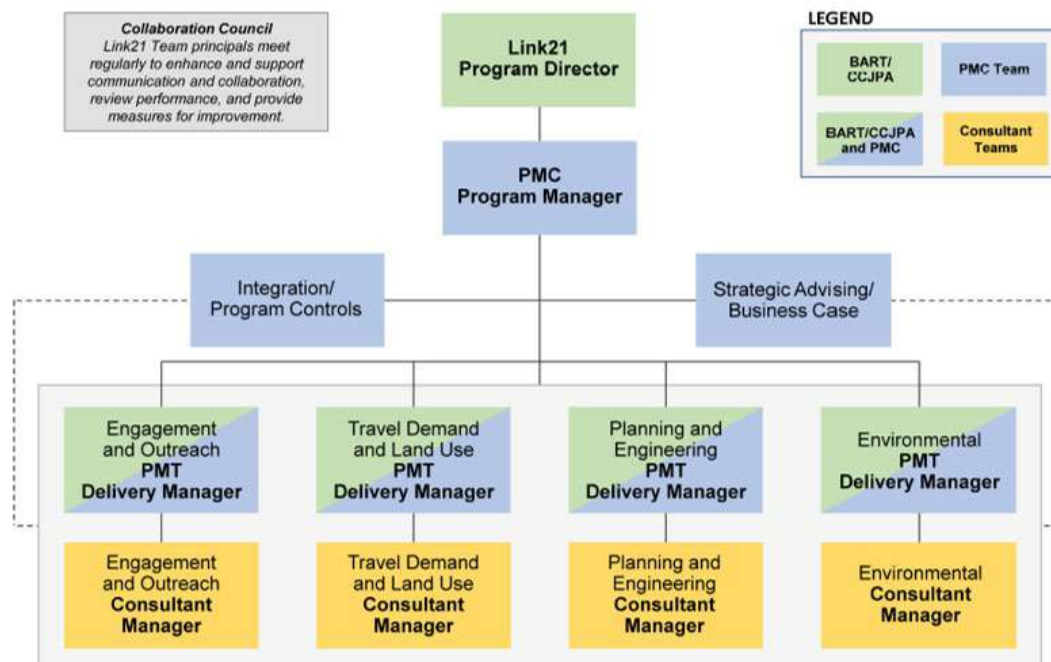
Statement 4: The program has the people, processes, funding, and tools to support progress through Phase 1.

Phase 0 included creating the PMT, systems processes, and tools to scale as the program grows and evolves from planning to design and construction and ultimately revenue service. An SPP was developed at the outset of the program. It is maintained and updated regularly as a living document to memorialize and socialize the program components of cost, schedule, budget, risk, quality, and other organizational and management strategies, methods, processes, and tools to support the efficient and effective delivery of the program (refer to *SPP Chapter 1: Introduction* in [Appendix A](#)).

The Link21 Team includes an integrated and one-team organization of BART and CCJPA and consulting staff. At the outset of Phase 0 there were about 10 dedicated staff and it is projected that by Phase 1 there will be over 100 dedicated staff. The consulting staff includes the PMC that serves as an extension of BART/CCJPA staff and that provide both strategic advising and program management services. In addition, there are four service category Consultant teams that provide technical and subject matter expertise in Planning and Engineering, Engagement and Outreach, Environmental, and Travel Demand and Land Use. BART/CCJPA is supported by the PMC in developing program strategy, direction, and decision-making, and in overseeing delivery of the Consultants' services. All key positions on the BART, CCJPA, PMC, and Consultant teams are filled, and the organization is built to be flexible and scalable as the program evolves and grows. **Figure 2-5** is an organization chart for the PMT.



Figure 2-5. Link21 Program Management Team Organization Chart



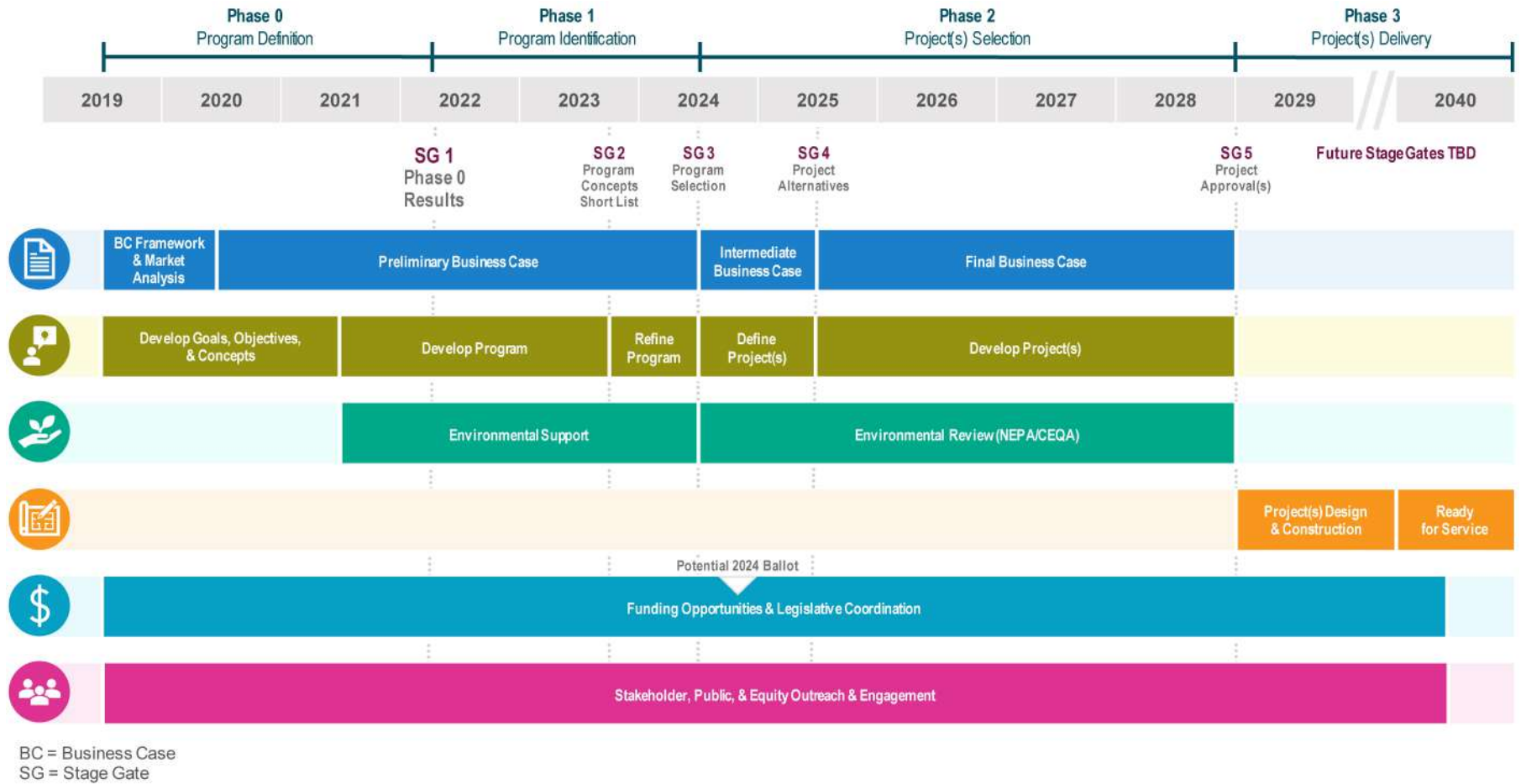
To ensure the program is being delivered effectively and efficiently, the PMT established and is maintaining systems, processes, and tools to manage the program. These include collaboration and information technology systems to support document control, cost and schedule management, geographic information system (GIS) and virtual design, and website and social media applications.

At the BART/CCJPA staff stage gate review, an action was made to update the text for Statement 4 to explicitly reference funding. The PMT agreed, noting the importance of understanding the program's financial viability through Phase 1 to inform the Boards' actions. The PMT developed a Cash Flow Model that is used to project spending rates and existing and potential funding (revenues) to manage the scope, schedule, and budget and to support the program through revenue services. Existing funding is projected to be sufficient to advance through Phase 1 (Program Identification) in 2024, and additional funding sources may be required to support the program through subsequent phases and completion of environmental review and capital funding for design and construction. The PMT developed a funding strategy and is actively pursuing new funding sources, including federal, state, and local opportunities.

The objective for Stage Gate 2, which occurs in late 2023 about midway through Phase 1, is to develop a short list of program concepts, to identify (potentially) a preferred rail technology for use in the crossing, and to provide sufficient information to position a potential project for federal, state, or regional funding opportunities by 2024. Following Stage Gate 2, the short list of program concepts will be further developed through the remainder of Phase 1 to Stage Gate 3 by mid-2024, recommending a preferred program advance to Phase 2 and the identified projects enter into environmental review (see **Figure 2-6** for the Link21 Master Program Timeline).



Figure 2-6. Link21 Master Program Timeline



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A detailed Phase 1 schedule was developed that identifies key milestones and critical paths to complete Phase 1 and Stage Gates 2 and 3. The Phase 1 schedule identified key interfaces between all tasks and deliverables to meet the project milestones dates. This information is used for work planning and scope and schedule management for BART and CCJPA, PMC, and Consultants.

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APPENDIX A. STAGE GATE REVIEW SUPPORTING MATERIALS

- Strategic Program Plan – Chapter 1: Introduction
- Strategic Program Plan – Chapter 2: Business Case
- Market Analysis Report: Executive Summary
- Monthly Stakeholder Updates
- Phase 1 Metrics
- Priority Populations Update
- Equity Vision Statement
- Fact Sheet: Rail Bridge Assessment
- Fact Sheet: Train Technology

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LINK21

CONNECT NORTHERN CALIFORNIA

STRATEGIC PROGRAM PLAN

CHAPTER 1: INTRODUCTION

February 2022

FOR INTERNAL BART/CCJPA
BOARD REVIEW ONLY

Prepared By:
Link21 Program Management Consultants (PMC)

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ISSUE AND REVISION RECORD

REVISION	DATE	PREPARER(S)	APPROVER	DESCRIPTION/NOTES
		BART/CCJPA REVIEWER(S)	BART/CCJPA APPROVER	
0	10/18/2019	Gay Knipper, HNTB	Gay Knipper, HNTB	WPA.01 Initial DRAFT submittal
	10/25/2019	Sadie Graham, Duncan Watry, BART	Sadie Graham, BART	WPA.01 Initial DRAFT submittal review
1.A	02/07/2020	Gay Knipper, HNTB	Peter Gertler, HNTB	WPA.01 DRAFT submittal
	02/13/2020, 02/29/2020	Sadie Graham, Andrew Tang, BART	Sadie Graham, BART	WPA.01 DRAFT submittal review
2.A	07/30/2020	Kara Lentz, HNTB	Gay Knipper, HNTB	WPA.02 V1 DRAFT submittal
	07/31/2020, 08/17/2020	Sadie Graham, BART; Camille Tsao, CCJPA	Sadie Graham, BART	WPA.02 V1 DRAFT submittal review
2.B	10/30/2020	Kara Lentz, HNTB	Gay Knipper, HNTB	WPA.02 V1 DRAFT FINAL submittal
				<i>No review requirement</i>
3.A	04/19/2021	Steve Lavelle, Intueor; Rebecca Mincio, HNTB	Steve Lavelle, Intueor	WPA.03 V2 Working DRAFT submittal
	05/13/2021	Sadie Graham, BART	Sadie Graham, BART	WPA.03 V2 Working DRAFT submittal review
3.B	06/04/2021	Steve Lavelle, Intueor; Rebecca Mincio, HNTB	Steve Lavelle, Intueor	WPA.03 V2 DRAFT submittal
	08/13/2021	Sadie Graham, BART	Sadie Graham, BART	WPA.03 V2 DRAFT submittal review
3.C	11/29/2021	Steve Lavelle, Intueor; Rebecca Mincio, HNTB	Steve Lavelle, Intueor	WPA.03 V2 DRAFT FINAL submittal
				<i>No review requirement</i>

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SHAREPOINT PATH

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ABBREVIATION	DEFINITION
BART	San Francisco Bay Area Rapid Transit
CCJPA	Capitol Corridor Joint Powers Authority
DBE	Disadvantaged Business Enterprise
PMC	Program Management Consultants
PMT	Program Management Team
SBE	Small Business Entity
SPP	Strategic Program Plan

LINK21 PROGRAM TEAM NAMES

TEAM NAME	TEAM MEMBERS
PMC	The HNTB Team
PMT	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

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1. INTRODUCTION

1.1. Purpose

The Northern California Megaregion (Megaregion) includes the nine-county Bay Area, the six-county greater Sacramento area, the three northernmost counties of the San Joaquin Valley, and the three counties in the Monterey Bay Area, for a total of 21 counties. The Megaregion represents 5% of the nation's gross domestic product (GDP) and the highest per capita in the country. The expanding suburban markets are now increasingly tied to an extensive and expanding rail network, including the San Francisco Bay Area Rapid Transit's (BART) System. BART's current Transbay Tube has been connecting BART between San Francisco and the East Bay for nearly 50 years, and it cannot meet the expected future travel demand. Therefore, BART and the Capitol Corridor Joint Powers Authority (CCJPA), collectively referred to as BART/CCJPA, are representing the region's rail partners in pursuing a new transbay passenger rail crossing project (Crossing Project) within the context of the larger travel demand and the megaregional rail network.

The Link21 Program (Link21) is a highly complex and long-term effort. In June 2019, BART/CCJPA selected the HNTB-led team as its Program Management Consultants (PMC) for this critical initiative. While BART/CCJPA leads and maintains control of all ultimate decisions, the PMC collaborates closely with BART/CCJPA and combined they comprise the Program Management Team (PMT). The PMC supports BART/CCJPA with necessary strategic insights and technical analyses to advance Link21 while maintaining public trust, promoting transparency, and identifying funding opportunities.

To assemble the Link21 Team (as shown in **Table 1-1**), BART/CCJPA recently procured additional Consultants (Consultants supporting program identification/project selection) for the following service categories: Engagement and Outreach, Planning and Engineering, Travel Demand and Land Use, and Environmental.

Table 1-1. Link21 Program Team Names

TEAM NAME	TEAM MEMBERS
PMC	The HNTB Team
PMT	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

The PMC will collaborate with BART/CCJPA to prepare and maintain this Strategic Program Plan (SPP) as a fundamental document that serves to memorialize and socialize program components, management strategies, and key decisions that support the goals and objectives for Link21.



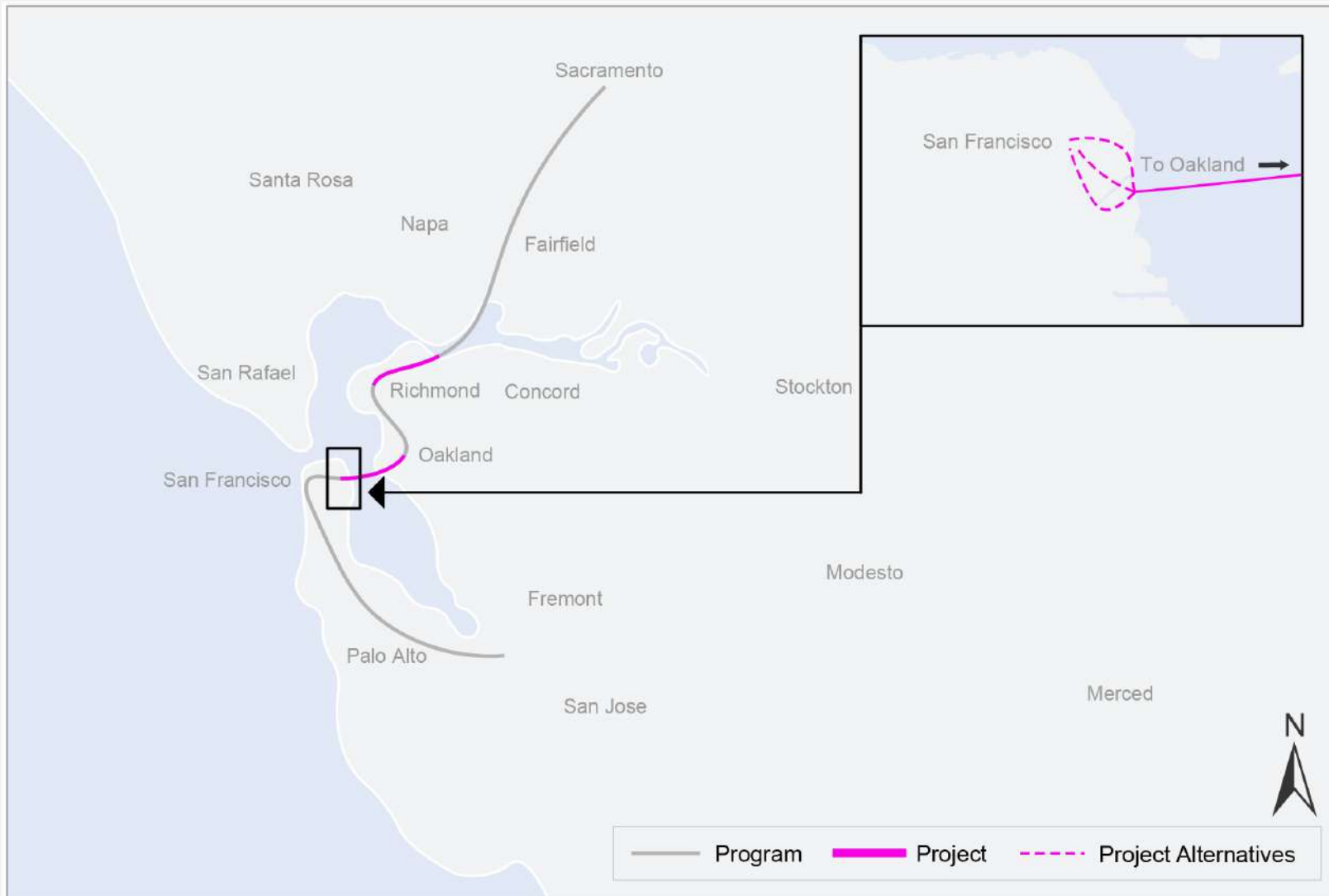
1.1.1. Program Overview

The Link21 elements within the SPP are organized by the “Program” and the “Project(s),” as shown in **Figure 1-1**. It is an illustrative example of the relationship between the Link21 Program and Project(s). The Link21 Program could include BART and Regional Rail (commuter, intercity, or high-speed rail) improvements from Sacramento to San Francisco. It also could include one or more projects that would be advanced to delivery and revenue service. It is likely that at least one of the projects will be a transbay crossing between Oakland and San Francisco and may include other projects to be identified and progressed. Please note, Figure 1-1 is only illustrative and is not an actual representation of a proposed program or project that will be identified and selected as part of Link21.

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Figure 1-1. Illustrative Example of a Program versus a Project



Note: This graphic was developed to visualize program terminology. It does not reflect defined alternatives, components, projects, or design options.

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1.2. Strategy

1.2.1. Guiding Principles

The PMT will consider the following three overarching principles as a guide to the planning and delivery of Link21.

GOVERNANCE

While the individual members of the PMT continue to lead specific efforts, BART/CCJPA, as the program owner, makes the final decisions related to the delivery of Link21, including, but not limited to, decisions about Link21's scope, budget, schedule, commitments, policies, and quality. Additionally, BART/CCJPA will report to the BART and the CCJPA boards, who will have the overall decision authority at each stage gate, which is a critical decision point in the program and captures the foundational actions that determine Link21's direction.

RESOURCES PLANNING

Throughout the Link21 life cycle, BART/CCJPA will collaborate and leverage PMC and Consultants' resources as needed. The PMT will use its strategic, technical, and program management expertise and procurement experience to successfully deliver Link21.

INNOVATION

The PMT will establish and foster an innovative culture to provide knowledge management and transfer while achieving Link21's goals and objectives. The Link21 Team will build upon BART/CCJPA's institutional knowledge, collective best practices, and lessons drawn from global experience on similar complex capital programs.

1.2.2. Strategy Development

With a program of Link21's magnitude, pressure will mount to demonstrate progress and return on investment. Therefore, it is essential to the overall strategy to carefully plan, execute, deliver, and mitigate risk. The PMT's approach to strategy development and program management is through visionary and collaborative leadership from initiation through operations. This approach will be supported by skilled advice, program management expertise, and technical insights from subject matter experts, managers, owner-operators, and agency executives on relevant megaprojects in the Bay Area as well as nationally and globally.

The PMT will develop appropriate options and conduct robust analyses to make sure decision-makers and stakeholders are continuously engaged and informed. Throughout Link21, the PMC and the Consultants will assist BART/CCJPA in developing options and recommendations through alignment analysis, environmental clearance,



engineering, and construction. Once BART/CCJPA determines the best path forward, the PMT will work together to provide successful planning and delivery of program and project activities.

The list of strategic issues, as shown in **Figure 1-2**, forms the initial basis for this SPP. The PMT will continually monitor these and other emerging issues to proactively manage Link21 efficiently and effectively.

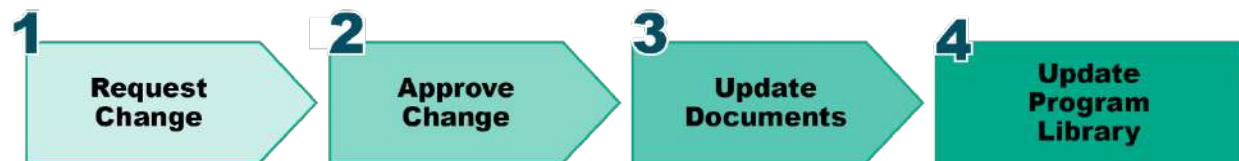
Figure 1-2. Strategic Issues



1.2.3. Foundational Documents

The PMT has integrated foundational documents throughout the SPP to promote consistency in the messaging and communications across Link21. The documents are guiding principles for Link21; therefore, they require strict version control. The PMC has developed a process for managing, tracking changes, and updating the foundational documents; promoting accuracy of the content; and maintaining the integrity of the files. As shown in **Figure 1-3**, all change requests will be submitted and approved prior to the documents being updated.

Figure 1-3. Foundational Document Control Process Overview



The PMC is facilitating all change requests and approvals using the Foundational Document Control Log. Links to the document and a detailed workflow for facilitating the Foundational Document Control Process are on the Link21 SharePoint Collaboration Site (SharePoint) in the PMT Collaboration subsite.



1.2.4. Strategic Program Plan Purpose and Structure

This SPP establishes, memorializes, and socializes key strategies, policies, and protocols to guide the Link21 Team as they define, oversee, manage, and deliver Link21. The SPP is organized into 14 chapters with supporting appendices. **Table 1-2** provides the SPP Quick Guide that includes a brief description of each chapter.

Table 1-2. SPP Quick Guide

CHAPTER	DESCRIPTION
1. Introduction	Background information, guiding principles, and SPP's purpose with quick reference links to Foundational Documents
2. Business Case	Overview of the key principles of the Business Case Framework, Process, and Methodology; Problem and Vision Statement & Goals and Objectives; and Strategic Evaluation Framework
3. Organization, Communication, and Governance	Approach to develop and update the organization, roles, and responsibilities and authorities for the various entities engaged in program delivery. Advisory and oversight structure may include various groups such as executive leaders of transit planning and funding agencies, elected officials, business oversight committees, nongovernmental agencies, communities of interest, technical experts, and others to be determined
4. Stage Gate Process	Process to minimize and mitigate the risks associated with delivering capital projects, and to enable appropriate governance and control of projects as they progress through development and onto delivery and completion
5. Program Controls	Goals and objectives, roles and responsibilities, and processes for the key functional areas of program management and program controls
6. Planning and Engineering	Approach for systematic assessments to enable efficient and effective program delivery grouped by technical discipline, including planning, environmental, etc.
7. Program Operations Management	Key activities, guidelines, procedures, and workflows for successful program delivery
8. Quality	Programmatic approach to provide quality products and services for program delivery
9. SBE¹ and DBE² Programs	Plan to achieve BART's SBE/DBE goals for Link21

¹ Small Business Entity

² Disadvantaged Business Enterprise



CHAPTER	DESCRIPTION
10. Engagement and Outreach	Programmatic approach for efficient and strategic engagement and communications among Link21 Team members. By establishing guidelines for these activities, project sponsors, partners, stakeholders, and audiences will understand the need for and benefits of Link21
11. Environmental	Approach to the development and implementation of the Link21 environmental compliance strategy
12. Travel Demand and Land Use	Will be included in the next revision of the SPP
13. Equity	Will be included in the next revision of the SPP
14. Program Integration	Approach to identifying, managing, and documenting interfaces between the four service categories, and to providing proactive support of and coordination with the PMC delivery managers

1.2.5. Development Timeline and Deployment Strategy

The SPP is a living document. The PMC will update the SPP at least annually and provide more frequent updates as necessary and appropriate to meet the needs of Link21. The PMC plans to update the SPP through informed collaboration among the PMT and the Consultants, the evolution and progression of program and project definition, and by lessons learned through the PQP's continuous improvement and innovative processes. The PMC program manager will review and approve each update of the SPP, including references to foundational documents for BART/CCJPA's review, comment, and final approval.

Taking into consideration the level of effort over time and the number of delivery participants, the PMC will engage and communicate SPP updates to the Link21 Team through:

1. Secure online access link to the SPP and to the reference and foundational documents listed in Table 1-1
2. Onboarding information (under development)
3. User guides and training materials

The PMC will continuously capture lessons learned, incorporate improvement strategies, and advance innovative practices throughout program delivery.

LINK21

CONNECT NORTHERN CALIFORNIA

STRATEGIC PROGRAM PLAN

CHAPTER 2: BUSINESS CASE

February 2022

FOR INTERNAL BART/CCJPA
BOARD REVIEW ONLY

Prepared By:
Link21 Program Management Consultants (PMC)

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ABBREVIATION	DEFINITION
BART	San Francisco Bay Area Rapid Transit
CCJPA	Capitol Corridor Joint Powers Authority
FBC	Final Business Case
IBC	Intermediate Business Case
PBC	Preliminary Business Case
WP	Work Plan

LINK21 PROGRAM TEAM NAMES

TEAM NAME	TEAM MEMBERS
Program Management Consultants (PMC)	The HNTB Team
Program Management Team (PMT)	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

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2. BUSINESS CASE

2.1. Purpose

To advance the Link21 Program (Link21) from high-level strategic planning to delivery, the San Francisco Bay Area Rapid Transit (BART)/Capitol Corridor Joint Powers Authority (CCJPA) have adopted a business case process. The Business Case will support decision-makers, planners, analysts, and designers in the planning and ultimate delivery of a new transbay passenger rail crossing alternative that will maximize benefits to the Northern California Megaregion (Megaregion).¹ It is the central workstream for Link21, providing a comprehensive framework to identify, evaluate, and compare potential alternative project investments that may be selected to make up the program.

Figure 2-1. Northern California Megaregion



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¹ The Northern California Megaregion is defined as the area covering the regions of the Bay Area, Sacramento Area, northern San Joaquin Valley, and Monterey Bay Area that is comprised of 21 counties (shown in **Figure 2-1**).



Chapter 2 provides a high-level overview of the Business Case Process and its key deliverables according to the following structure.

- **Business Case Process and Methodology:** Presents the rationale for using the Business Case as a decision-making tool, as well as the various workstreams and methodologies that comprise the Business Case Process.
- **Business Case Deliverables:** Describes the documents associated with the Business Case, including the Business Case Framework and three progressively detailed Business Cases themselves.
- **Business Case Supporting Analysis:** Includes supporting analysis to inform the development of the Business Case (e.g., Market Analysis).

This chapter and its appendices may evolve over the course of the Business Case Process as the development of Link21 progresses.

2.2. Strategy

2.2.1. Business Case Methodology

This section describes the rationale for using the Business Case as a decision-making tool and introduces the workstreams and methodologies behind the overall Business Case Process. It is organized as follows:

- Introduction to Link21 and the Business Case Process
- Business Case structure
- Phase-specific workflows

INTRODUCTION TO THE PROGRAM AND BUSINESS CASE PROCESS

As introduced in Section 2.1, the Link21 Business Case Process is the central workstream in advancing Link21 from high-level strategic planning through to delivery, providing a comprehensive framework to identify, evaluate, and compare program concepts for investments and potential projects. It ultimately seeks to produce a Business Case: a comprehensive, organized collection of evidence and analyses that sets out the rationale for why a problem or opportunity should be addressed and makes the case for doing so in the form of one or more investments. The rationale for adopting a Business Case Process for Link21 and other large infrastructure projects includes:

- Identifies benefits, costs, and risks throughout Link21's life cycle, and how the program is connected to the benefits stakeholders seek to realize.
- Makes efficient use of limited resources to plan, design, and deliver a new investment by developing a staged approach that screens out low-performing program concepts during the early phases of Link21, prior to the program progressing to environmental review.



- Evaluates program concepts and projects in a transparent, consistent, and evidence-based manner, against a predefined set of goals and objectives, for the public, stakeholders, and decision-makers to understand.
- Helps program designers to optimize program concepts by providing evidence on the potential benefits and outcomes of each program concept.
- Documents the key impacts of the program concepts and provides an audit trail of the rationale for decision-making throughout Link21's life cycle.

The Link21 Business Case Process is organized into a series of phases, defined by milestones and activities by which program concepts and projects are developed and evaluated in increasing levels of detail over the Link21 life cycle. The four phases and their corresponding milestones are listed here and are illustrated in **Figure 2-2**.

- **Phase 0: Program Definition** sets out foundational elements of Link21, including the structure, steps, and timeline for the Business Case Process, and key elements of the Business Case Framework. The latter consists of the problem and vision statements, a set of program goals and objectives, and the key assumptions to be used in subsequent evaluation steps.
- **Phase 1: Program Identification** develops program concepts and conducts additional evaluation. The goals of this phase are twofold: 1) select a single program concept based on completion of the Preliminary Business Case; and 2) within the program concept, identify a priority project consisting of a crossing between San Francisco and Oakland and related infrastructure to serve as the basis of a request for funding.
- **Phase 2: Project Selection** identifies and evaluates alternatives for one or more discrete projects within the program selected in Phase 1. A reasonable range of feasible alternatives for each project would be advanced for environmental review under the National Environmental Policy Act (NEPA) and/or California Environmental Quality Act (CEQA). The Intermediate Business Case (IBC) and Final Business Case (FBC) processes identify and select the project alternative(s). The selected alternative(s) by the business case should correspond to the selected alternative(s) in the Record of Decision (NEPA) and Notice of Determination (CEQA).
- **Phase 3: Project Delivery** focuses on implementing the project alternative(s) using design and construction packages. The final milestone is initiation of revenue service.

**Figure 2-2. Phases of the Business Case Process**

The Business Case consists of several chapters, which are developed in progressively increasing levels of detail over the Link21 life cycle, from the PBC (Phase 1) to the IBC and FBC (Phase 2). **Table 2-1** describes the content of each Business Case chapter, while **Table 2-2** presents the evolution of the Business Case over the Link21 life cycle.

Table 2-1. Business Case Document Structure

ELEMENT	DESCRIPTION
Chapter 1: Introduction	<i>Provides an overview of the Business Case. Summarizes previous stages of the Business Case Process and defines why the Business Case Process was initiated.</i>
Chapter 2: Business Case Framework	<i>Defines the rationale to invest in transportation (a problem or opportunity statement). This section is a solution-agnostic summary of the key motivators for the Business Case and the key benefits that can be realized if the investment is successful. Defines the evaluation framework for the concepts and/or alternatives based on the key benefits desired.</i>
Chapter 3: Alternatives	<i>Sets out concepts and/or alternatives that can potentially address the rationale for investment. Details a range of mutually exclusive and meaningfully different alternatives, including capital projects, service patterns, policies, or changes to the customer experience that can respond reasonably to the rationale for investment.</i>



ELEMENT	DESCRIPTION
Chapter 4: Strategic Case	<i>Evaluates the extent to which concepts and/or alternatives contribute to strategic benefits.</i> Discusses how and to what extent each alternative realizes Link21’s target benefits and discusses them qualitatively and quantitatively.
Chapter 5: Economic Case	<i>Evaluates the value of the concepts and/or alternatives to society as a whole with a socioeconomic benefit-cost analysis.</i> Assesses the program’s benefits in monetized terms relative to the delivery costs. This analysis indicates the overall economic value of achieving strategic benefits.
Chapter 6: Financial Case	<i>Assesses the financial impacts of the concepts and/or alternatives and the funding/financing tools that can deliver them.</i> Considers revenue impacts and costs to develop a net financial impact or level of required subsidy. Identifies the opportunity costs of not delivering Link21, including alternative investments required or triggered. Provides recommendations on a funding and financing strategy based on the total capital costs, operating costs, and required subsidy.
Chapter 7: Deliverability and Operations Case	<i>Assesses the technical and organizational/governance delivery and operational requirements.</i> Reviews the unique requirements and risks for each alternative and assesses the extent to which the alternatives can be delivered and operated and how the key risks can be mitigated or managed.
Chapter 8: Conclusions and Recommendations	<i>Makes clear recommendations for decision-makers</i> on the alternatives that should either move forward or be removed from further consideration.

Table 2-2. Key Stages of Business Case Development

BUSINESS CASE STAGE	LINK21 PHASE	KEY OUTCOMES
Business Case Framework	Phase 0	<ul style="list-style-type: none"> ▫ Description of the problem statement, vision statement, goals, and objectives ▫ Methodology for evaluation of concepts and/or alternatives
PBC	Phase 1	<ul style="list-style-type: none"> ▫ Evaluation of program concepts ▫ Selection of a single program concept for implementation ▫ Identification of a priority project that is centered on a San Francisco – Oakland crossing within program concept

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BUSINESS CASE STAGE	LINK21 PHASE	KEY OUTCOMES
IBC	Phase 2 (initial)	<ul style="list-style-type: none"> ▫ Development and evaluation of alternatives for one or more projects included in the identified program ▫ Selection of one alternative for each project studied
FBC	Phase 2 (later)	<ul style="list-style-type: none"> ▫ Case to proceed with the project alternative(s) (refinement of IBC)

PHASE-SPECIFIC WORKFLOWS

Table 2-3 summarizes the major goals, activities, and milestones for each phase of the Business Case Process.

Table 2-3. Key Goals, Activities, and Milestones by Phase

PHASE	GOALS	KEY ACTIVITIES AND MILESTONES
0	<ul style="list-style-type: none"> ▫ Define the Business Case Process and Framework ▫ Identify potential program concepts for further consideration 	<ul style="list-style-type: none"> ▫ Prepare Business Case Framework, including the problem statement, vision statement, goals, and objectives, as well as the methodology for the development and evaluation of concepts and/or alternatives. ▫ Identify preliminary program concepts from a variety of internal and external sources.
1	<ul style="list-style-type: none"> ▫ Refine and potentially bundle program concepts ▫ Identify a single program concept for investment 	<ul style="list-style-type: none"> ▫ Refine program concepts by defining individual components and screening against Link21's goals and objectives. ▫ Develop PBC, including conceptual engineering; ridership, land use, and benefits forecasting; and evaluation against strategic, economic, financial, and operational/deliverability criteria. ▫ Identify a single program concept by engaging stakeholders for input on the tradeoffs between the program concepts, as identified in the PBC, and making a final recommendation to BART and CCJPA boards. ▫ Within the selected program concept, identify a priority project candidate consisting of a crossing between San Francisco and Oakland and related infrastructure to serve as the basis of a request for funding.

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PHASE	GOALS	KEY ACTIVITIES AND MILESTONES
2	<ul style="list-style-type: none"> ▫ Identify project alternative(s) ▫ Obtain environmental clearance for the project alternative(s) ▫ Develop FBC and Implementation Strategy for the project alternative(s) 	<ul style="list-style-type: none"> ▫ Develop IBC, building on the PBC and making the case to proceed with one or more projects within the program alternative. ▫ Following engagement with and input from stakeholders, select a single alternative for each project studied and make a final recommendation to the BART and CCJPA boards. ▫ Develop FBC that summarizes all work to date and establishes the case to proceed with the selected program alternative and, within that, the selected project alternative(s). ▫ Prepare draft environmental clearance documents.
3	<ul style="list-style-type: none"> ▫ Implement project alternative(s) 	<ul style="list-style-type: none"> ▫ Implement project alternative(s), including procurement, design, and construction. ▫ Prepare for operational readiness and commencement of revenue service.

2.2.2. Business Case Deliverables

This section describes major deliverables that are produced throughout the Business Case Process, including:

1. Business Case Framework
2. Preliminary Business Case (PBC)
3. Intermediate Business Case (IBC)
4. Final Business Case (FBC)

The three Business Cases are typically organized into several chapters. The structure and contents are summarized in **Table 2-1**.

BUSINESS CASE FRAMEWORK

The Business Case Framework sets out foundational items for the entire Business Case Process and Link21 life cycle, including:

- Strategic Case Framework, including the Problem and Vision Statement & Goals and Objectives
- Business Case assumptions, including program boundaries, baseline scenario(s) for future projects, and key analysis years
- Business Case methodology for developing and evaluating concepts and/or alternatives

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PRELIMINARY BUSINESS CASE

The PBC, completed at the end of Phase 1, summarizes the evaluation of the program concepts, and it will provide a recommendation for the selection and implementation of a program concept. It is developed through the following activities:

- Develop conceptual engineering (up to a nominal 10%) of the short-listed program concepts to determine their engineering feasibility, deliverability, engineering risks, and capital and operating expenditure requirements.
- Forecast travel demand, ridership, land use, and benefit outputs for the short-listed program concepts using estimation tools developed in Phase 0 and earlier portions of Phase 1.
- Use these outputs to evaluate the short-listed program concepts against strategic, economic, financial, and operations/deliverability criteria, including environmental considerations.

INTERMEDIATE BUSINESS CASE

The IBC is completed at the start of Phase 2. It summarizes the evaluation of various projects within the program concept and will provide a recommendation for one or more project alternative(s). It is developed through the following activities:

- Build on the conceptual engineering work from Phase 1 by developing the design and deliverability aspects of the project alternative(s) at a relatively high level and provide a list for initial screening.
- Refine the models from Phase 1 for estimating travel demand, ridership, and operations to enable screening and evaluation of the project alternative(s).
- Screen the high-level project alternative(s) and select a short list.
- Develop the short list of project alternative(s) to a level enabling more detailed evaluation.
- Evaluate the short list of project alternative(s) against strategic, economic, financial, and operations/deliverability criteria, including environmental considerations.

FINAL BUSINESS CASE

The FBC, published at the end of Phase 2, summarizes all the project alternatives development and evaluation work completed over the Business Case Process to date, including the environmental impacts evaluation in the environmental document(s). It sets out the case to proceed with the program concept and, within that, one or more project alternative(s) as identified in the IBC. It refines the IBC, supported by additional engineering and modeling work for the project alternative(s), further financial and benefit-cost analysis, funding and financing plans, governance approaches, understanding of environmental impacts, and risk mitigation measures.



2.2.3. Business Case Supporting Analysis

This section describes supporting information and analysis that has been developed to inform the Business Case.

MARKET ANALYSIS

The purpose of the Market Analysis is to provide insight into the distribution of travel demand and land use within the Megaregion and to identify corridors that can be served by Link21. These outputs will be used to inform the development and initial screening of program concepts.

This includes an understanding of:

- Existing and future levels of travel within the region, including exploring how trip rates could change under varying levels of socioeconomic growth, land use and job distribution, and policy regulation, such as auto ownership rates.
- How trip rates could change under different development scenarios, for instance, variations in land use patterns, spatial and sectoral distribution of employment, technology change towards new mobility modes such as clean air vehicles (CAV), or attitude changes towards flextime and teleworking.
- Markets that could best be served by a new transbay rail crossing that will require analyzing barriers to transit usage, whether physical (i.e., capacity constraints onboard trains and at station parking capacities) or psychological (e.g., lack of awareness of transit options).
- How patterns in travel demand could change from today's estimates should land use patterns evolve as a result of Link21. This will include "future-proofing" the analysis by considering potential changes.
- How different rail technologies capture demand for different types of markets.
- How future travel demand growth could impact the transportation network, forming a basis of the problem statement in the Strategic Case Framework, namely the potential transportation network consequences should Link21 not be undertaken.

OTHER DISCIPLINES

The other disciplines that inform the Business Case (Planning and Engineering, Engagement and Outreach, Environmental, and Travel Demand and Land Use) are described in Chapters 6, 10, 11, and 12, respectively.

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LINK21

CONNECT NORTHERN CALIFORNIA

MARKET ANALYSIS SUMMARY REPORT

DRAFT

February 2022

Prepared By:
Link21 Program Management Consultants (PMC)

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	XX/XX/XXXX	---	Name, Agency	Name, Agency	
2	XX/XX/XXXX	Name, Firm	Name, Firm	Name, Firm	
	XX/XX/XXXX	---	Name, Agency	Name, Agency	

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ACRONYMS AND ABBREVIATIONS

ACRONYM/ABBREVIATION	DEFINITION
BART	San Francisco Bay Area Rapid Transit
CCJPA	Capitol Corridor Joint Powers Authority
ACE	Altamont Corridor Express
BIPOC	Black, Indigenous, and People of Color
CAGR	compound annual growth rate
Caltrain	Peninsula Corridor Joint Powers Authority
GRP	gross regional product
MAST	Market Analysis Spreadsheet Tool
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
OD	origin-destination
PBA	Plan Bay Area
PMC	Program Management Consultants
tph	trains per hour
U.S.	United States

LINK21 PROGRAM TEAM NAMES

TEAM NAME	TEAM MEMBERS
PMC	The HNTB Team
Program Management Team (PMT)	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

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INTRODUCTION

This *Market Analysis Summary Report* presents a high-level summary of the market analysis work that was performed in support of the Link21 Program (Link21). Detailed results are presented in the main *Market Analysis Report*.

Link21 and its partners will transform the San Francisco Bay Area Rapid Transit (BART) and Regional Rail (including commuter, intercity, and high-speed rail) network in the Northern California Megaregion (Megaregion) into a **faster**, more **integrated** system that provides a **safe, efficient, equitable**, and **affordable** means of travel for all types of trips.

This program, including a new transbay passenger rail crossing between Oakland and San Francisco, will enhance **livability, community stability, economic opportunity, and environmental quality** in the Megaregion while improving the **travel experience**. With key investments that leverage the existing rail network and increase capacity and system reliability, rail and transit will better meet the travel needs of residents throughout the Megaregion. Advancing equity is central to Link21, it is a both a specific goal of Link21 and a lens through which to assess the achievement of all Link21 goals and objectives.

The geographic scope of Link21 spans the 21-county Megaregion, which includes counties within the San Francisco Bay Area, the Sacramento Area, the Northern San Joaquin Valley, and the Monterey Bay Area.

BART and the Capitol Corridor Joint Powers Authority (CCJPA) have partnered to advance Link21.

Purpose of the Market Analysis Summary Report

The key goals of the *Market Analysis Summary Report* are to:

- Provide insight into the existing and future distribution of travel demand, population, and employment within the Megaregion.
- Provide an evidence base for the Link21 problem statement and support the development of program concepts.
- Identify market opportunities and corridors with high ridership potential that could be served by Link21.

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Approach and Report Structure

To achieve these goals, the market analysis work focused on three key areas, which are reflected in the structure of the *Market Analysis Summary Report*, as follows:

1. **Existing Conditions:** An investigation of the historical socioeconomic, equity, and transportation conditions of the Megaregion, providing an understanding of existing travel patterns.
2. **Future Conditions:** An overview of forecast megaregional population and employment growth and future travel demand patterns and transportation investments for the Megaregion.
3. **Link21 Market and Corridor Potential:** The identification of specific markets with high rail ridership potential, in particular unmet rail potential, and of corridors with high market potential for new or enhanced rail service. The outputs from these analyses were tested for robustness against various future scenarios using an alternative analysis approach (emergent network).

Key Findings

The key findings from the market analysis are as follows:

- While the Megaregion has experienced above average growth in its population and economy, the distribution of this growth has been geographically uneven. This unevenness of growth is expected to continue with a greater concentration of employment growth in the Bay Area, generally, and in specific counties within the Bay Area.
- Growth in the Megaregion has also been inequitable with evidence of increasing inequality in household income and an increasing housing and transportation cost burden for lower income households. This increasing inequality constrains where residents can live and work, impacting their travel patterns and transportation decisions. Advancing equity has been identified as a goal of Link21, and a priority populations definition was developed to allow specific groups to receive additional focus in the development and evaluation of Link21 concepts.
- There is insufficient capacity to accommodate growing travel demand across the Megaregion, particularly in the Transbay Corridor between San Francisco and Oakland. Further substantial growth in travel, including Transbay Corridor travel, is expected in the future. This is likely to further strain the already overcrowded and congested crossings, even when accounting for planned capacity increases to both the BART Transbay Tube and the San Francisco–Oakland Bay Bridge (Bay Bridge), underscoring the need for substantial investment in a new crossing to serve the entirety of projected demand growth.



- Markets, corridors, and segments in the Megaregion were evaluated in terms of their equity-weighted unmet rail potential.¹ This analysis revealed that the greatest potential for attracting new transbay rail riders is at the core of the Megaregion, closest to the Transbay Corridor – particularly in and around San Francisco and Oakland and to/from locations between Richmond and Bay Fair in the East Bay.
- Some segments further from the Transbay Corridor have medium equity-weighted unmet transbay rail potential, particularly those including markets without existing high quality transbay service, such as Hercules, Vallejo, Fairfield, San Ramon, Millbrae, and Palo Alto. Other segments have high non-transbay potential, particularly in San Mateo and Santa Clara counties, indicating potential benefits from investments beyond the crossing.
- Uncertainty analysis (examining alternative scenarios) indicates the findings from the market and corridor rail potential analyses are very robust.
- The findings from the market and corridor rail potential analyses are also corroborated by alternative emergent network analysis, which is further explained in the Robustness Testing section.

EXISTING CONDITIONS

The first market analysis task was to investigate the historical socioeconomic, equity, and transportation conditions of the Megaregion and to understand existing travel patterns by analyzing:

- Population and employment
- Equity, in terms of racial, social, and geographic distribution of outcomes
- Megaregional travel

Population and Employment

An analysis of the geographic distribution of population and employment across the Megaregion is important to understanding interregional travel demand patterns. The market analysis examines the current population and employment and also the extent and distribution of growth in the Megaregion.

The majority of the Megaregion’s population and employment are based in the Bay Area with the share of jobs in the Bay Area being greater than the population share.

- According to California state figures, the Megaregion was home to over 12.7 million residents and 6.2 million jobs in 2019.

¹ Equity weighting of unmet rail potential is achieved by double counting trips made by priority populations, reflecting the importance of serving areas with high priority populations shares and totals and counteracting the historic tendency to depress or undercount priority populations ridership potential.



- Most of the high-density population areas in the Megaregion are located in the Bay Area and certain parts of the Sacramento Area.
- There are high concentrations of both housing and employment in downtown San Francisco, Oakland, and San Jose.

The Megaregion has experienced above average growth in its population and economy. Between 1990 and 2019, the megaregional population increased by 37% compared to national growth of 32%.

Despite three economic crises between 1990 and 2019, the overall Megaregion's gross regional product (GRP) increased at a compound annual growth rate (CAGR) of 3.6% (**Figure 1**), outperforming national and statewide growth. Over 73% of the Megaregion's GRP in that period was generated in the Bay Area.

Figure 1. Percent of CAGR (1990-2019)

Historical socioeconomic growth in the Megaregion is strong compared to national and statewide benchmarks.

Region	Population	Employment	GDP/GRP
Megaregion	+1.1%	+1.0%	+3.6%
California	+1.0%	+0.9%	+2.8%
United States	+1.0%	+1.1%	+2.6%

Source: Program Management Consultants (PMC) analysis of California Department of Finance, California Employment Development Department, and the U.S. Bureau of Labor Statistics data

However, the distribution of this growth has been uneven.

Within the Megaregion, the Sacramento Area and the Northern San Joaquin Valley experienced the fastest growth rates in population and in employment.

While growth in the Bay Area has been slower, the existing size of population and employment there means that most of the Megaregion's growth in absolute terms has been concentrated within the Bay Area.

Moreover, the Bay Area's share of employment growth has been higher than its corresponding share of population growth (**Figure 2**).



Figure 2. Percent of Megaregion Share of Growth

The Bay Area experienced a higher share of employment growth than population growth from 1990 to 2019, especially over the last nine years.

Bay Area	1990-2019	2010-2019
Population	1.8M - 52%	0.6M - 61%
Employment	0.9M - 57%	0.7M - 71%

Source: PMC analysis of data from the California Department of Finance and the California Employment Development Department

Within the Bay Area, the West Bay (including San Francisco) has had a much higher share of employment growth than of population growth:

Since 2010, San Francisco has observed a 128,000 increase in number of jobs, which is 13% of the total Megaregion’s growth, while population has only increased by 86,000, just 5% of the Megaregion’s total population growth.

This uneven distribution of population and employment growth, both at a macro level across the Megaregion, and at a micro level between Bay Area counties has implications for travel demand within the Megaregion, and specifically increased travel demand within the Transbay Corridor.

Equity

Promoting equity (along with livability) has been identified as one of Link21’s goals, and it is also a lens through which to analyze metrics that underpin Link21’s objectives.

To facilitate the evaluation of Link21’s benefits and impacts on equity, a program-specific geographic designation of equity has been defined. The priority populations definition was developed to support Link21’s efforts to address inequities across the Megaregion; all other Megaregion areas are referred to as the general population. This definition will be used in the Business Case Evaluation to review the distribution of program benefits and negative impacts. In the market analysis, it is used to explore disparities and disadvantages experienced by priority populations in livability, affordability, and accessibility compared to general populations. An initial definition of priority populations based on state and regional geographic metrics related to equity was used for the market analysis. An updated version of this definition, based on the most impactful burdens felt by Megaregion residents, will be used for future work.

Link21’s *Draft Equity Commitment* includes a focus on partnering with priority populations to create needed benefits and to minimize harms to those who need it most, including:

- Transit-dependent riders
- Those harmed by past transportation projects

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- Those with limited access to important resources, such as housing or job opportunities

To assess how Link21 advances equity, the program must first understand how current conditions across the Megaregion are distributed both geographically and demographically. The data points used for this analysis are summarized in **Figure 3** and are not an exhaustive list of equity considerations for the program.

Figure 3. Equity Metrics

Assessing equity in the Megaregion involves many different metrics, but rail accessibility and vehicle ownership are key variables that are directly related to Link21.

Metrics	Measurement	Impact to Link21	
 Household Income: How much a household earns in a year	Median household income	Income is directly related to livability and affordability and is influenced by access to jobs	Variables that have non-transportation impacts to the Link21 Program
 Housing Cost Burden: Used as a measure of affordability, aligned with definition used by HUD ^A	Households who spend over 30% of their income on housing costs	According to HUD, people who are housing cost burdened may have difficulty affording necessities, such as food, clothing, transportation, and medical care	
 Ethnicity: Related to physical traits and cultural identification	Households by ethnic group	Inequity in the Bay Area is not only related to socioeconomic status, includes racial inequity	
 Regional Rail Accessibility: The proportion of the Megaregion's population and jobs that are close to rail services	Population or jobs within one, five, and ten miles of rail	Priority populations can benefit from rail proximity	Variables that have transportation impacts to the Link21 Program
 Vehicle Ownership: Households without access to a vehicle	Zero-vehicle households	These households are more likely to be transit-reliant	

Source: PMC

^A U.S. Department of Housing and Urban Development

While the Megaregion's GRP increased at a rate well above national and statewide averages, the distribution of this growth suggests that this has been inequitable across the Megaregion, leading to disparities and disadvantages for specific population groups.

The Bay Area leads the Megaregion in household income and in income inequality:

- According to U.S. Census data, over 67% of the Megaregion's households with incomes between \$100,000 and \$200,000 live within the Bay Area; for households with incomes exceeding \$200,000, this is even higher at an estimated 82%.
- Bay Area counties Marin, San Francisco, and San Mateo have among the highest degrees of income inequality as measured by the Gini Index in 2019.

There is evidence of increasing inequality in household income in the Megaregion, especially in the Bay Area.



- The Megaregion has seen the greatest growth from 1990-2019 in the highest income bracket — households earning over \$150,000. In halo counties,² every income bracket has experienced growth from 1990-2019, but in the Bay Area only the highest income brackets (over \$100,000) and the lowest income brackets (less than \$30,000) have experienced growth.

Moreover, as home values and rents have increased in the Megaregion, lower-income households face an increasing housing cost burden:

- Based on an analysis of U.S. Census data, an estimated 43% of the Megaregion's priority populations households are housing cost burdened, meaning they spend 30% or more of their income on housing costs, leaving less disposable income for other necessities.
- Since 2010, among households earning below \$75k annually, the proportion that are housing-cost burdened has increased.

Black, Indigenous, and People of Color (BIPOC) make up a large and growing proportion of the Megaregion's population, and they are disproportionately likely to have low incomes:

- The BIPOC proportion of population in the Megaregion's four areas ranges from 47% in the Sacramento Area to 65% in the Northern San Joaquin Valley.
- Between 1990 and 2019, the number of BIPOC households in the Megaregion increased at a CAGR of 2.6%, whereas White, Non-Hispanic households have declined.
- Across the Megaregion between 2015 and 2019, a higher proportion of Black (Non-Hispanic), American Indian/Alaska Native, and Hispanic/Latino residents earned less than \$30k a year compared to residents of other races/ethnicities.

Equity issues are particularly apparent in transportation. High housing costs are pushing low-income households, including many BIPOC households, further from the transbay core, potentially further away from employment opportunities and areas with more frequent rail service. Therefore, access to transit is a critical issue for priority populations, especially the 12% of priority populations who do not have access to a vehicle at home.

- While 64% of priority populations live within 5 miles of a rail station, this accessibility to rail is not universal throughout the Megaregion, particularly in the outer halo counties.
- Priority populations already residing within close proximity to rail (21% live within 1 mile) would benefit from improved service levels and improved connectivity to key destinations.

² Counties within the Monterey Bay Area, the Sacramento Area, and the Northern San Joaquin Valley are referred to as the halo counties.



Having access to more affordable, high-quality rail has the potential to improve livability for priority populations by allowing households to reduce transportation costs and improve access to affordable housing and living-wage jobs. To deliver program benefits to priority populations, it will be important to:

- Maintain access to Link21 for priority populations in the Bay Area by mitigating displacement.
- Connect priority populations and improve quality of service throughout the Megaregion.

Megaregional Travel

The market analysis analyzed travel demand across the Megaregion and in the Transbay Corridor in terms of trips made by auto, rail, and other non-rail transit.

In 2015, travelers within the Megaregion made a combined total of 32.2 million average weekday trips. Of these trips, 19.9 million (62%) occurred within the Bay Area, particularly to/from the East Bay, San Francisco, San Mateo, and Santa Clara counties. As shown in **Figure 4**, 675,000 people crossed the San Francisco Bay using one of four crossings (three bridges and the BART Transbay Tube).

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Figure 4. Trips within the Megaregion (2015)



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Source: PMC analysis of StreetLight and other travel pattern data



In 2015, auto was the dominant mode of travel in the Megaregion with over 95% of total daily trips. Among the relatively small number of non-auto trips, only 28% were made by rail (heavy/regional rail and subway/metro services) with the remainder made by other forms of transit such as bus, ferry, or street-running light rail. However, rail was much more prominent for transbay trips with BART capturing a 32% daily share (38% during the peak). In the key San Francisco – East Bay (Alameda and Contra Costa counties) market, BART’s share was 49% throughout the day and 56% during the peak.

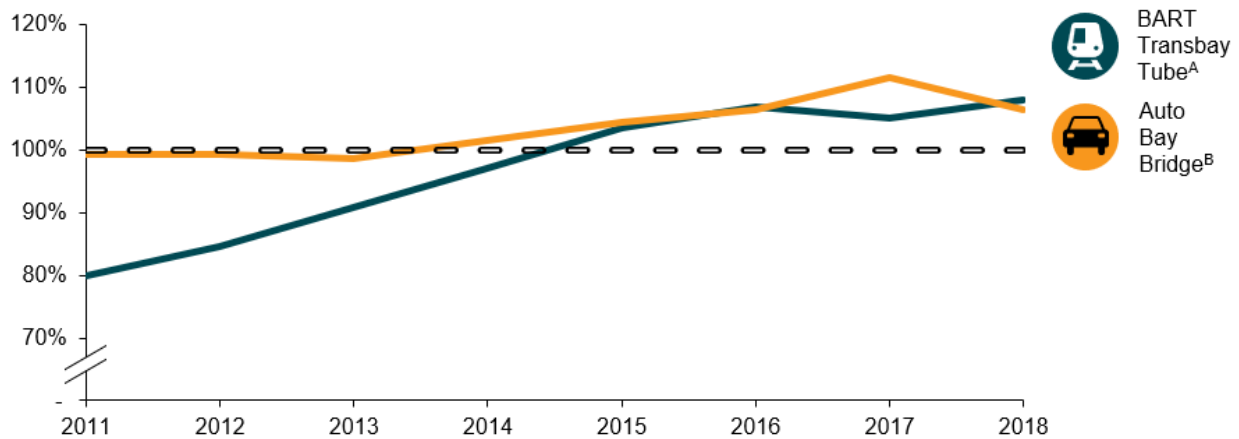
The majority of rail services in the Megaregion are provided by BART, Capitol Corridor, Caltrain, Altamont Corridor Express (ACE), and San Joaquins. All five recorded at least 10% growth in demand between 2010 and 2019, including an approximate doubling of ACE and Caltrain ridership. While BART has observed more modest ridership growth in percentage terms and even a slight decline since 2017, it still carries a large majority of megaregional rail demand, and peak volumes have steadily increased on the Transbay Tube.

Inaccessibility of rail stations, combined with limited parking facilities at stations, likely serves as a deterrent to greater rail usage. In 2015 only 30% of trips started within 1 mile of a rail station, and 27% of trips started more than 5 miles from a station. Inaccessibility of stations is particularly noticeable in several areas of the Megaregion associated with high-trip volumes, such as western San Francisco, parts of Santa Clara County, most of the Monterey Bay Area, and most of the Sacramento Area, forcing most travelers to drive or in some cases use other public transit to make their trip.

There is insufficient capacity to accommodate growing travel demand across the Megaregion, particularly in the Transbay Corridor. Fueled by sustained population and employment growth in the Megaregion and the geographic concentration of this growth as described previously, demand for travel has grown to approach or exceed the capacity of key links and infrastructure. Since 2015, both the Bay Bridge and Transbay Tube have been operating consistently above their planned capacities during peak periods, as summarized in **Figure 5**.

Figure 5. Percent Peak Demand Volume Over Capacity

Both Transbay Crossings have been over capacity since 2015



Source: PMC analysis of BART peak loadings and California Department of Transportation (Caltrans) Census Traffic Program data

^A BART capacity assumed to be 25,300 passengers per hour per direction

^B Bay Bridge Capacity assumed to be at 9,250 vehicles per hour per direction

Furthermore, while the majority of BART travelers currently drive to access stations, demand for BART parking facilities at stations exceeds available capacity.

Elsewhere in the Megaregion, key highways and rail links are also operating close to or above their planned capacity, including highway approaches to the various bridges crossing the San Francisco Bay and Caltrain links between San Francisco and San Jose. Therefore, many travelers in the Megaregion face congested highways and crowded trains.

These and other factors are having a detrimental impact on travel experiences in the Megaregion. Long commutes have become increasingly prevalent.

In 2019:

- An estimated 14% of trips were longer than one hour, up from 10% in 2010.
- Five percent of trips were over 90 minutes, up from 3% in 2010.

The upward shift in commute times may be partially attributed to the capacity issue described above; another likely contributing factor is rising housing costs and housing cost burdens causing segments of the population, notably priority populations, to live further from their workplaces.

Uncompetitive rail travel times (compared to auto) are a barrier to rail travel in the Megaregion:

- Rail trip times exceeded auto times for over 99% of origin-destination (OD) pairs analyzed.



- An estimated 66% of transbay OD pairs had a rail trip at least 30 minutes longer (including average access and egress to and from stations) than the corresponding auto trip.

The disparity in times may be attributed to a variety of factors — including long access and egress times to and from rail stations, slow and infrequent trains, and long transfers — that result from historical underinvestment in rail service and infrastructure relative to highways. Rail operators’ difficulty in meeting their on-time performance targets further undermines confidence in the service. In addition, long-distance rail trips spanning different regions within the Megaregion typically require transfers between different operators, each with uncoordinated schedules and/or infrequent service.

The resulting long and unpredictable rail travel times cause many travelers to choose auto, while others may not travel at all. An improved rail network could encourage new trips and grow new markets.

Link21 represents a clear opportunity to add additional rail capacity to relieve the bottlenecks in the Transbay Corridor and beyond, while also improving other elements of the rail passenger experience, such as travel time, frequency, less need for transfers, and coordination between rail operators. As such, the foundational goal of the program is to transform the passenger experience, which enables the achievement of the three other program goals: promote equity and livability, support economic opportunity and global competitiveness, and advance environmental stewardship and protection.

FUTURE CONDITIONS

Building on the existing conditions analysis, the next stage of the market analysis is to provide an overview of:

- Future population and employment growth
- Future megaregional travel (including travel demand patterns and transportation investments)

Future Population and Employment Growth

The 2040 adopted regional transportation plans of the Megaregion’s Metropolitan Planning Organizations (MPO) serve as the baseline scenario for Link21, including for the Metropolitan Transportation Commission’s (MTC) Plan Bay Area (PBA) 2040. Since the adoption of PBA 2040, MTC has developed three alternative Horizon Futures 2050 forecasts for the Bay Area, which are used to inform Link21’s uncertainty analysis described later in this report.³ A base year of 2015 was selected for Link21, aligning with most of the adopted MPO plans.

³ While this document was being finalized, MTC and the Association of Bay Area Governments (ABAG) adopted PBA 2050, an updated plan for the Bay Area which builds on PBA 2040 and incorporates the results of the Horizon Futures 2050 forecasting work.



Note that the MPO forecasts used by Link21 were developed well before the COVID-19 pandemic, when there has been an unprecedented decrease in travel demand across the Megaregion and in cities across the world. The impact of COVID-19 on population and employment growth along with travel demand has been examined as part of the Link21 uncertainty analysis.

Based on the adopted plans, between 2015 and 2040 the Megaregion's population is forecast to increase to over 15.3 million at a CAGR of 1.0% with employment growing to 7.1 million at a slightly slower CAGR of 0.9%.

While the Northern San Joaquin Valley is forecast to remain the fastest growing area by both population and employment, the Bay Area is forecast to have the highest population and employment growth in absolute terms.

- The Bay Area's population is forecast to increase by 2.0 million out of the 3.3 million increase for the Megaregion.
- The Bay Area accounts for 1.0 million of the 1.5 million increase in jobs forecast.

The historically uneven distribution of population and employment growth is expected to continue with a greater concentration of employment growth in the Bay Area generally and in specific counties within the Bay Area.

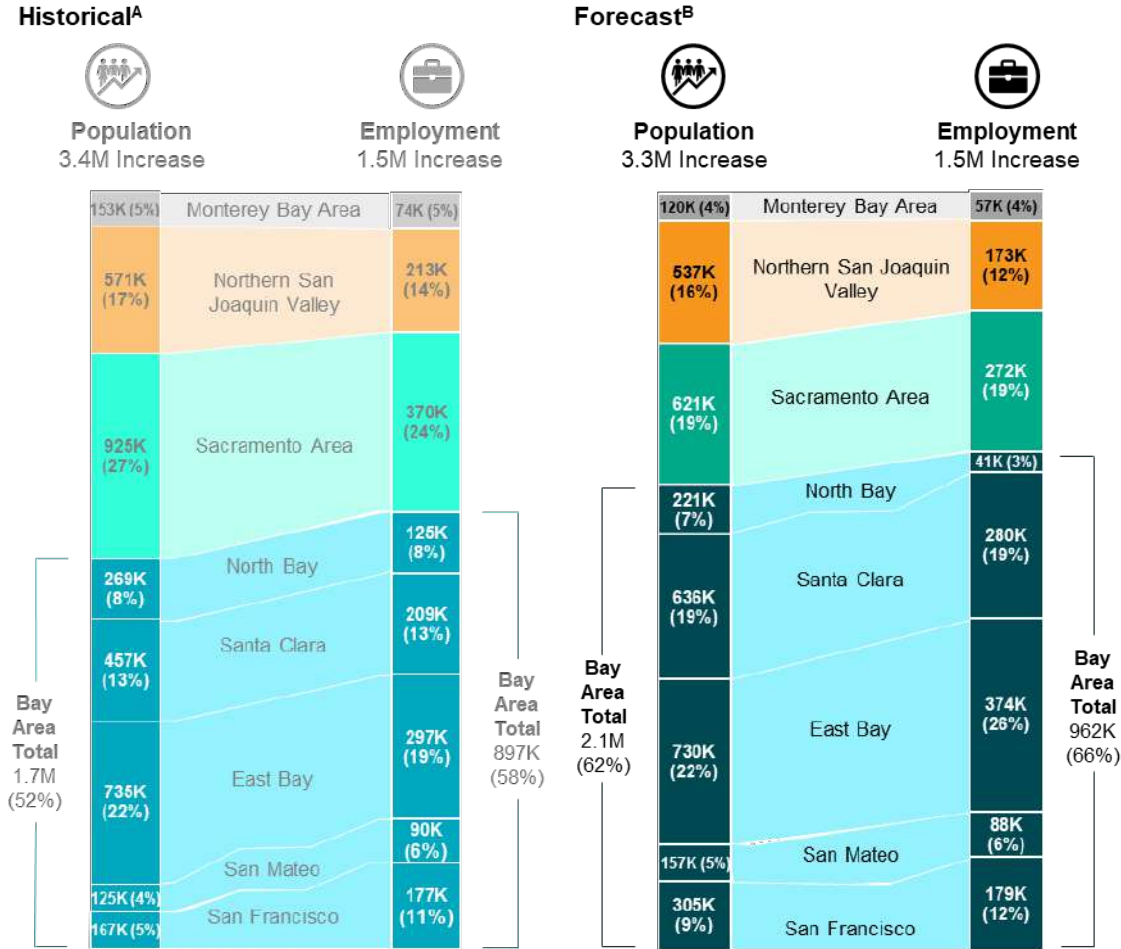
- The Bay Area is forecast to have a 62% share of the increase in megaregional population but 66% of the increase in employment.
- The East Bay is forecast to have a 22% share of the population growth but 26% of the increase in employment. Similarly, San Francisco and San Mateo counties are forecast to have a combined 14% share of population growth but 18% of the jobs increase.

This continuing imbalance in the distribution of population and employment, illustrated in **Figure 6**, may lead to further increased travel demand on already congested transbay road and rail infrastructure.



Figure 6. Historical Growth and Baseline Forecasts for Population and Employment

The baseline forecasts the Bay Area to have a large proportion of the growth in the Megaregion, continuing the uneven distribution of population and employment growth trends, particularly in San Francisco.



Source: PMC analysis of data from the California Department of Finance, Employment Development Department, state of California, and MPOs (MTC, Association of Monterey Bay Area Governments [AMBAG], Sacramento Area Council of Governments [SACOG], Stanislaus Council of Governments [StanCOG], and Merced County Association of Governments [MCAG])

^A Historical growth rates are from 1990 to 2019.

^B Future forecast growth rates are from 2015 to 2040.

Following the adoption of PBA 2040, MTC undertook an initiative named Horizon that attempted to incorporate the uncertainty of external forces into the early stages of its 2050 regional planning process. MTC’s *Horizon Futures 2050* forecasts were still in development at the time of writing this report; it applies only to the Bay Area counties.

There are three different forecast scenarios, illustrated in **Table 1**: Back to the Future, Clean and Green, and Rising Tides, Falling Fortunes. These scenarios present divergent patterns of change impacting the lives of Bay Area residents based on various

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political, technological, economic, and environmental challenges and the responses to these challenges.

Table 1. Three Forecast Scenarios from Horizon Futures 2050

SCENARIO	DESCRIPTION
<p>Back to the Future</p>	<ul style="list-style-type: none"> ▫ Defined by a thriving national economy supported by increased public investment in infrastructure, as well as immigration reform that increases the national population and workforce growth rate significantly. ▫ In the Bay Area, the technology sector thrives, leading to broad adoption of low-cost driverless vehicles. <ul style="list-style-type: none"> — As a result, coastal metropolitan areas see a new wave of growth as technologies enable residents to commute longer distances to thriving urban job centers. ▫ Silicon Valley technologies remain dominant worldwide in everything from cars to e-commerce. Yet booming growth poses challenges for communities and their aging infrastructure that are absorbing that growth.
<p>Clean and Green</p>	<ul style="list-style-type: none"> ▫ Defined by an aggressive federal carbon tax to curb carbon dioxide emissions. ▫ Assumes that the policy is implemented in the early 2020s and results in similar commitments worldwide. Consequently, clean technologies thrive. ▫ Driverless electric vehicles become nearly universal with consumers preferring to share rides more frequently. Virtual reality enables more telecommuting and distributed workplace locations, particularly for higher income individuals. ▫ Federal infrastructure investment allows for the completion of high-speed rail lines across the country, including California High-Speed Rail. ▫ Yet with high taxes and new regulations, jobs are assumed to be increasingly automated, which boosts productivity but results in fewer openings for workers without college degrees.
<p>Rising Tides, Falling Fortunes</p>	<ul style="list-style-type: none"> ▫ Defined by relaxed federal regulations and the elimination of federal programs from social services to infrastructure. ▫ The federal government implements costly tariff policies as well as tight immigration restrictions. <ul style="list-style-type: none"> — As a result, an era of slow growth begins across the United States with particularly significant impacts in areas like the Bay Area. ▫ Labor constraints mean that innovation rates slow and driverless, electric vehicles fail to live up to the hype. Finally, a lack of international leadership means that worst-case sea level rise predictions come true (three feet of sea level rise by 2050).

Source: PMC analysis of Horizon Futures Final Report

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Population and employment growth projections vary widely between the baseline and the *Horizon Futures* scenarios. For example:

- Compared to the baseline forecast, the Back to the Future scenario projects much higher population and employment growth in the Bay Area (1.7% CAGR vs. 1.0% for population, 1.8% vs. 0.9% for employment).
- By contrast, population and employment growth in the Bay Area in the Rising Tides, Falling Fortunes scenario is much lower than in the baseline with a decline in population in the East Bay and declines in employment in San Mateo and North Bay counties.
- All three Horizon Futures project significantly higher employment growth in San Francisco than PBA 2040. Furthermore, San Francisco's share of Bay Area employment growth is vastly greater than its share of population growth for the Back to the Future and Clean and Green scenarios, making the potential imbalance between population and employment even more marked.

These wide variations in growth projections for population and employment will also impact transbay travel demand, as discussed in the following sections.

Future Megaregional Travel

In Link21's baseline forecast, the Megaregion is projected to experience substantial growth in travel. By 2040, 8.8 million additional average weekday trips are forecast, representing a 27% increase over 2015 volumes. This growing demand for travel can be attributed to the projected size and distribution of population and employment growth across the Megaregion.

Projected growth rates vary across the Megaregion, as illustrated in **Table 2** and **Table 3**.

- Among interregional trips, growth is projected to be fastest for trips between outer regions (such as the Sacramento Area and the Northern San Joaquin Valley) and the Bay Area with some region pairs recording growth rates above 150% over the 25-year span. Such fast growth is likely driven, at least in part, by imbalanced population and employment growth. The outer regions are projected to accommodate a relatively large share of population growth, while the Bay Area is projected to accommodate a similarly large share of employment growth, which will lead to an increased need for travel between the two.
- On the other hand, the largest absolute growth in travel is expected to occur entirely within the Bay Area, particularly on the core regions of San Francisco, San Mateo County, Santa Clara County, and the East Bay. In particular, demand for travel through the Transbay Corridor is projected to grow by 35% between 2015 and 2040, again driven by an increasing geographic imbalance of population and employment growth.



The projected growth in megaregional travel is accompanied by changes in residents' mode choice. In the Transbay Corridor, the number of rail trips in the key San Francisco-East Bay market is projected to grow by 16%, although this represents a slight decrease in rail mode share. Other region pairs, including San Francisco to Santa Clara County and the Northern San Joaquin Valley to San Francisco, are forecast to have high increases in rail mode share, which will likely be driven by new or enhanced rail service in these corridors.

Little change is forecast in the accessibility of rail across the Megaregion:

Even with planned investments to the rail network, only 31% of projected trips in 2040 originate within 1 mile of a rail station, only a one-point improvement from 2015.

Table 2. Percent Growth in Average Weekday Megaregional Trips 2015-2040, Both Directions

Halo counties in the outer regions are projected to experience the fastest trip growth rates, but the Bay Area is expected to accommodate the largest absolute growth in travel, particularly in the East Bay and San Mateo and Santa Clara counties.

DESTINATION/ ORIGIN	EAST BAY	SAN FRANCISCO	SAN MATEO COUNTY	SANTA CLARA COUNTY	NORTH BAY	SACRAMENTO AREA	MONTEREY BAY AREA	NORTHERN SAN JOAQUIN VALLEY
East Bay	26%							
San Francisco	22%	28%						
San Mateo County	74%	28%	14%					
Santa Clara County	68%	-36%	43%	31%				
North Bay	87%	39%	172%	879%	15%			
Sacramento Area	57%	117%	75%	135%	55%	25%		
Monterey Bay Area	38%	64%	32%	55%	6%	51%	16%	
Northern San Joaquin Valley	66%	152%	60%	99%	26%	79%	33%	24%

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Table 3. Absolute Growth in Average Weekday Megaregional Trips (Thousands) 2015-2040, Both Directions

DESTINATION/ ORIGIN	EAST BAY	SAN FRANCISCO	SAN MATEO COUNTY	SANTA CLARA COUNTY	NORTH BAY	SACRAMENTO AREA	MONTEREY BAY AREA	NORTHERN SAN JOAQUIN VALLEY
East Bay	1,832							
San Francisco	98	614						
San Mateo County	174	150	238					
Santa Clara County	273	-24	178	1,493				
North Bay	175	41	37	58	269			
Sacramento Area	69	9	3	9	7	1,829		
Monterey Bay Area	4	2	3	67	0	1	306	
Northern San Joaquin Valley	90	10	6	29	1	79	2	626

Source: PMC analysis of StreetLight and other travel pattern data

The significant growth in Transbay Corridor travel will likely strain the already overcrowded and congested crossings further, even when accounting for planned capacity increases to the Transbay Tube and the Bay Bridge.

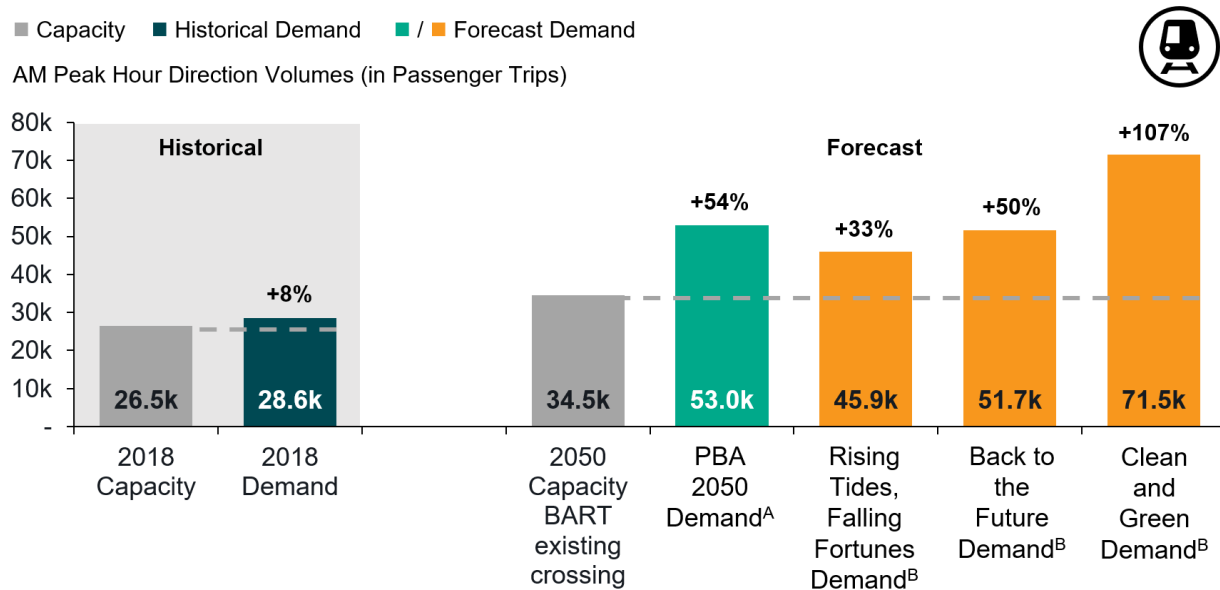
Figure 7 illustrates that, while the BART Core Capacity project will enable an additional six trains per hour (tph) to travel through the Transbay Tube (from 22 to 28 tph in each direction), this is insufficient to meet projected demand under the baseline forecast or any of the three scenarios generated using *Horizon Futures 2050*. Travel demand is projected to exceed planned capacity by the early 2030s at the latest, and under the most aggressive (Clean and Green) growth forecast, the system could be 107% over capacity by 2050.

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Figure 7. AM Peak Hour Peak Direction Volumes vs Capacity for Transbay Tube (in Passenger Trips)

While the Core Capacity project will increase capacity on the Transbay Tube, unconstrained demand is still forecast to exceed available capacity even in the most conservative baseline forecast.



Source: PMC analysis of MTC travel model data

^A Includes the Link21 Program

^B Excludes PBA 2050 projects

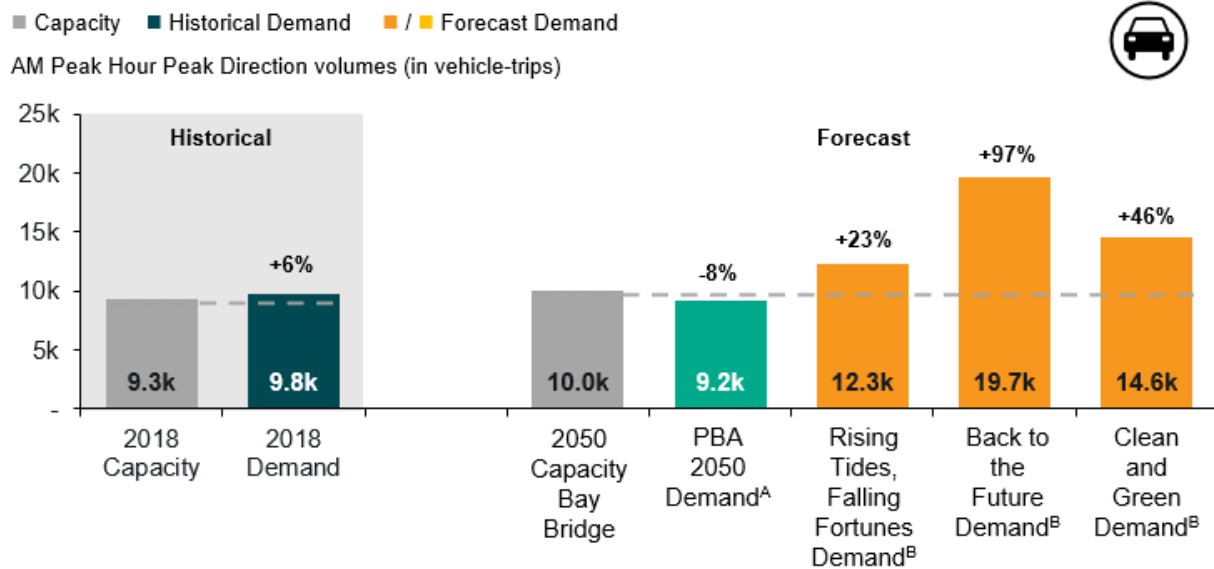
For the Bay Bridge, the implementation of all-electronic tolling has provided a slight boost to vehicle capacity. However, **Figure 8** shows that this is insufficient to meet future demand in any of the scenarios analyzed. Even in the most conservative auto demand growth forecast (Rising Tides, Falling Fortunes) projected 2050 demand exceeds capacity by 23%, while the Back to the Future forecast projects demand 97% above available capacity.

Despite these investments, travel demand is projected to exceed planned capacity. Of the range of demand growth scenarios analyzed, the most aggressive one could result in the Transbay Tube operating at 107% above its planned capacity by 2050, and the Bay Bridge at 97% above its planned capacity. Conversely, the most conservative growth scenario could result in the planned BART and Bay Bridge capacities exceeded by 33% and 23%, respectively.

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Figure 8. AM Peak Hour Peak Direction Volumes vs Capacity for Bay Bridge (in Vehicle Trips)

With demand already exceeding capacity, transbay auto demand is expected to continue to grow, further straining the Bay Bridge.



Source: PMC analysis of MTC travel model data

^A Includes the Link21 Program

^B Excludes PBA 2050 projects

The large disparity between unconstrained demand and available capacity for both road and rail crossings underscores the need for substantial investment in a new crossing to serve the entirety of projected demand growth.

LINK21 MARKET AND CORRIDOR POTENTIAL

This third and final phase of the Market Analysis builds on the analysis of existing and future conditions and investigates the potential for enhancement of rail in the Megaregion.

Link21's market analysis approach goes beyond a typical market analysis, which only considers existing and future travel patterns in the light of socioeconomic and demographic trends. Instead, it focuses on identifying markets and corridors that might be best served by rail, deploying a regression model and custom spreadsheet tool to estimate the unmet rail potential for a given market or corridor. This unmet rail potential is subsequently used to inform the development of program concepts.

Equity is central to all aspects of Link21 work, including the market analysis. Trips made by priority populations are double counted when estimating unmet rail potential, reflecting the importance of serving areas with high priority populations shares and



totals, and counteracting the historic tendency to depress or undercount priority populations ridership potential.

Given the inherent uncertainties in the inputs and assumptions used in the market analysis (compounded by the impacts of the COVID-19 pandemic), uncertainty analysis is an important component of the overall approach. It allows us to test the robustness of the analysis by considering how travel demand patterns could change from today's estimates as land use patterns, mobility trends, and rail competitiveness evolve.

Rail potential is assessed under the following three headings:

- **Market rail potential analysis:** identifying specific markets with high, unmet ridership potential.
- **Corridor rail potential analysis:** bundling high-potential, geographically proximate markets into high-potential rail corridors.
- **Robustness testing:** performing an uncertainty analysis under various scenarios and verifying findings using alternative approaches.

Market Rail Potential Analysis

The purpose of the market rail potential analysis is to identify markets with the highest ridership potential for Link21 by focusing on trips using the Transbay Corridor between San Francisco and Oakland.

Markets are defined as individual neighborhoods or entire municipalities that may be served by rail. They are represented by clusters, which are the main geographic unit of analysis for the market analysis, and cluster pairs. Clusters are a group of multiple hexcells, which are uniform hexagonal areas that are 0.5 miles in diameter and that collectively cover the entire Megaregion; each cluster has a hub at its center. The market rail potential analysis identifies clusters and cluster pairs with the greatest unmet rail potential, while prioritizing equity by double counting trips made by priority populations (in accordance with Federal Transit Administration [FTA] guidance on equity analysis).

Rail potential is estimated using a regression model, custom specified to identify conditions that enable high rail ridership in the Megaregion. This model estimates rail potential as a function of key factors, including socioeconomic characteristics of clusters (such as population and employment density) and rail level of service characteristics (such as travel time, cost, frequency, and transfers).

The regression model is then applied in the Market Analysis Spreadsheet Tool (MAST), a spreadsheet developed by Link21 to calculate the good service rail potential and unmet rail potential for all cluster pairs in the Megaregion. Unmet rail potential is defined as follows:

- **Unmet rail potential** is the difference between good service rail potential and baseline ridership.



- **Baseline ridership** represents future rail demand, including the impact of population and employment growth and also the land use and project assumptions that are included in adopted MPO plans. The impact of crowding is modeled using a capacity constraint curve, whereby the proportion of travelers prepared to use rail gradually decreases as load factors increase towards and beyond 100%.
- **Good service rail potential** represents rail demand under an ideal network with (potentially unrealistic) good rail service and no capacity constraints between all cluster pairs in the Megaregion. Good service is defined as fast, frequent, cheap, direct, and with plenty of available seats.

The results of this analysis are shown in **Figure 9** that maps the locations of the greatest unmet transbay rail potential. These are the markets where service improvements have the greatest potential to increase transbay rail ridership.

The core of the Megaregion has the highest potential for attracting new transbay riders. Forty-five percent of all equity-weighted unmet rail potential in the Megaregion involves a trip through the Transbay Corridor.⁴ The majority of this unmet rail potential can be found in San Francisco and in inner East Bay locations between Richmond and Bay Fair. These high potential markets exist in several categories:

- New markets without existing rail service, such as western San Francisco and the Grand Lake District in central Oakland
- Markets with poor transbay rail service, such as Emeryville and the Bayshore District in San Francisco
- Markets with large capacity constraints, such as the existing BART corridor along Market Street in San Francisco

Beyond the core of the Megaregion, sizeable unmet transbay rail potential exists in markets further from the Transbay Corridor. These markets include Hercules, Vallejo, San Ramon, Southern Alameda County, and Central and Southern San Mateo County.

Markets with more limited potential stand to benefit from Link21 in other ways:

- All clusters benefit when “good transbay rail service” is provided with MAST results suggesting that the largest benefits come from improved journey times and the elimination of transfers (increasing peak trips by 22% and 16%, respectively).
- Markets located a long distance from the Transbay Corridor, such as Sacramento and Stockton, have relatively modest unmet transbay rail potential in terms of trips, but they involve longer trip distances and, therefore, higher passenger miles potential. This could translate into commensurately larger mileage-related benefits from a new transbay passenger rail crossing and other infrastructure at the core of

⁴ Here, and throughout the market analysis, note that only those trips longer than 3 miles have been analyzed because shorter trips are not thought suitable for rail.



the Megaregion, such as travel time savings, air quality improvements, and greenhouse gas emissions reductions.

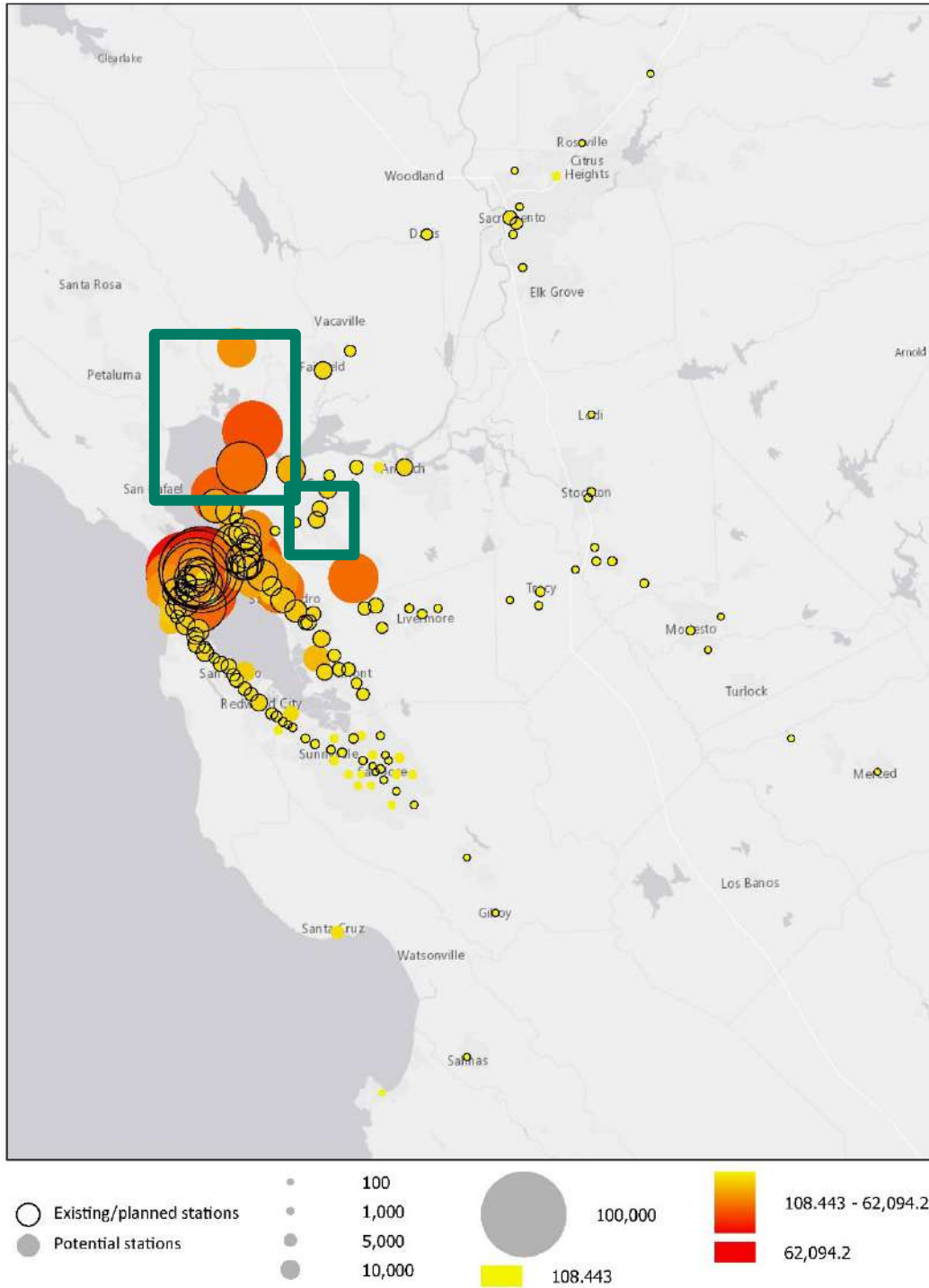
- The benefits of Link21 could extend beyond transbay trips, particularly for Santa Clara County. For example, a new transbay passenger rail crossing that connects San Francisco to Oakland with improvements to San Jose could attract new, non-transbay riders between San Jose and Oakland.

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Figure 9. Transbay Equity-weighted Unmet Rail Potential (number of potential trips), 2040⁵

Forty-five percent of total unmet rail potential involves a trip in the Transbay Corridor.



Source: PMC rail potential analysis

⁵ Analysis is based on trips longer than 3 miles.

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Corridor Rail Potential Analysis

Corridor rail potential analysis builds on previous market rail potential analysis by connecting geographically proximate high-potential markets. Once individual high-potential markets have been identified, they can be connected to form segments, which in turn can be grouped to form corridors. These corridors are a useful geographic unit of analysis to inform subsequent program concept development, as they are high-level representations of potential rail alignments. Note that at this point, these corridors reflect market potential only and do not yet take into account engineering, operational, cost, or other factors that need to be considered in the design of transit corridors.

The corridor rail potential analysis seeks to identify corridors and segments with high unmet rail potential, using similar approaches and tools to the preceding market rail potential analysis. Similarly, the analysis emphasizes equity by doubling the importance of potential trips made by priority populations, reflecting the central role that equity plays in Link21 and the tendency of trips by priority populations to be underrepresented in modeling.

The high-potential corridors and segments identified in this analysis subsequently inform the development of program concepts alongside other sources, such as public studies/plans and stakeholder engagement.

Most of the clusters analyzed in the market rail potential analysis fall naturally into one or more of 12 geographically organized corridors: nine in the East Bay and three in the West Bay, as illustrated in **Figure 10** and **Figure 11**.



Figure 10. East Corridor Corridors

East Bay corridors are approximate linear groupings of markets originating in Alameda/Oakland and extending to Sacramento, San Jose, Stockton, and Modesto.

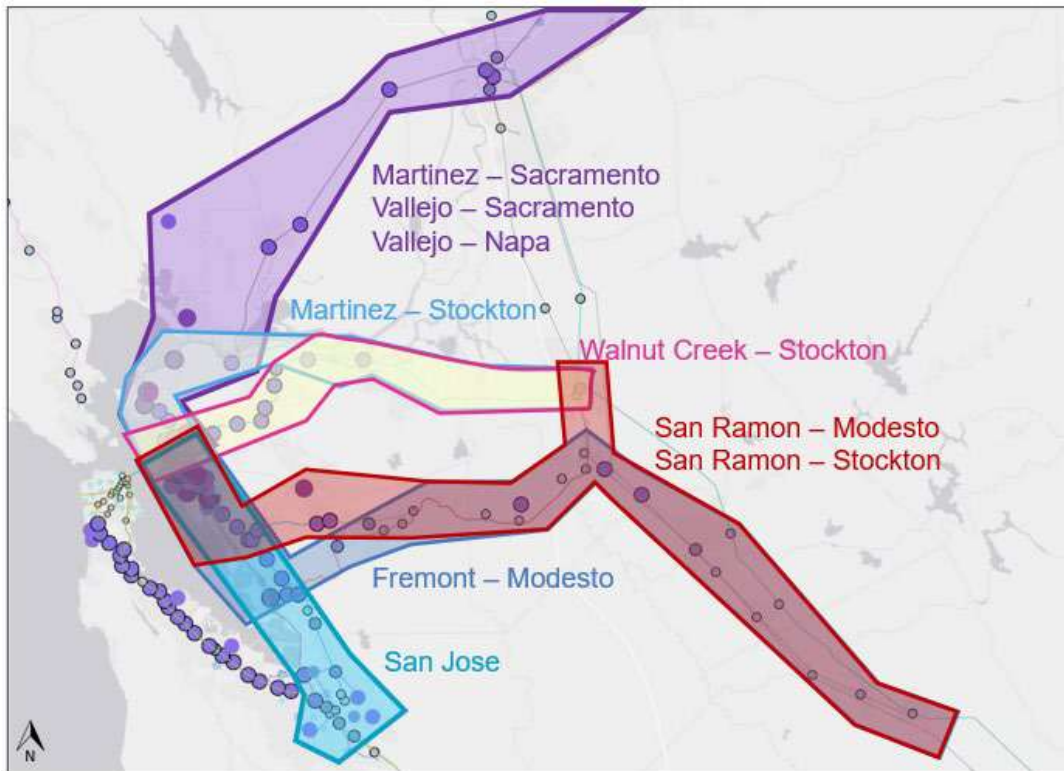
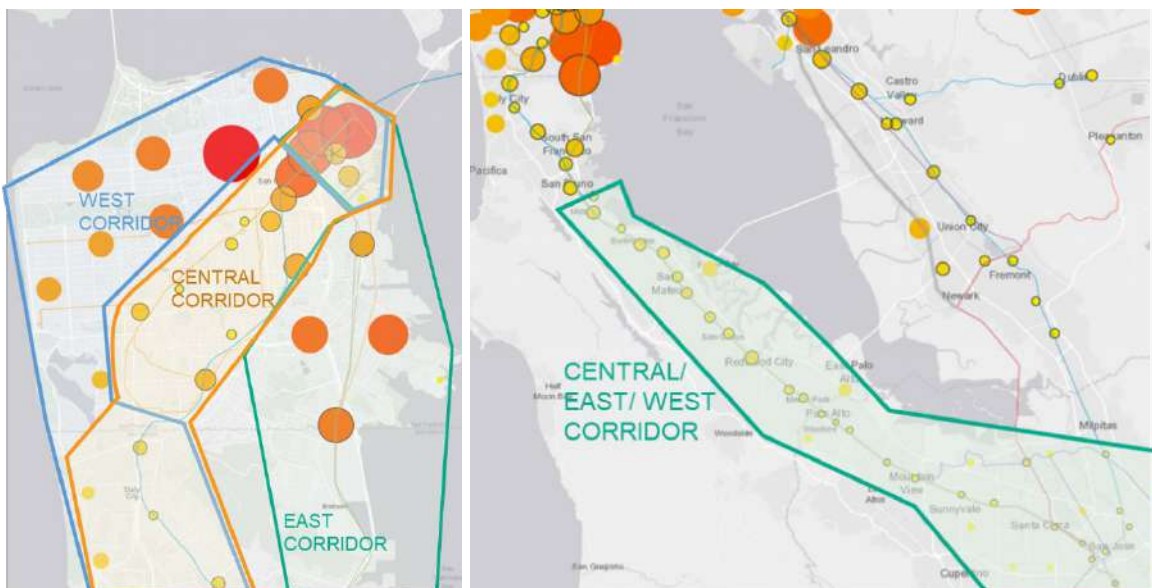


Figure 11. West Bay Corridors

West Bay corridors originate in San Francisco and take three different paths before converging on one main segment that follows existing rail service through San Mateo and Santa Clara counties.



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The unmet rail potential for each corridor was estimated using the following steps:

- Split the corridors into segments with logical breakpoints based on large markets or infrastructure barriers.

For each segment, identify market concepts by connecting high-potential markets.

Evaluate the transbay equity-weighted unmet potential of each market concept by connecting all its markets with existing and planned stations on the other side of the San Francisco Bay.

- For each segment, identify the market concept with the highest transbay equity-weighted unmet potential.
- For each corridor, incrementally identify segments with the highest combined potential.

A key finding across all corridors studied is that the greatest potential for attracting new transbay rail riders is at the core of the Megaregion, closest to the Transbay Corridor.

The analysis results are shown in **Figure 12** and **Figure 13**, which displays the unmet rail potential by segment. The segments with the greatest unmet rail potential are in and around San Francisco and Oakland, and to/from locations between Richmond and Bay Fair in the East Bay.

The top five segments for transbay unmet potential are connected directly to either end of the Transbay Corridor.



Figure 12. Total Equity-weighted Unmet Rail Potential (number of potential trips) for Segments in East Bay Corridors, 2040

Top five segments for transbay unmet potential are connected directly to either end of the Transbay Corridor.⁶

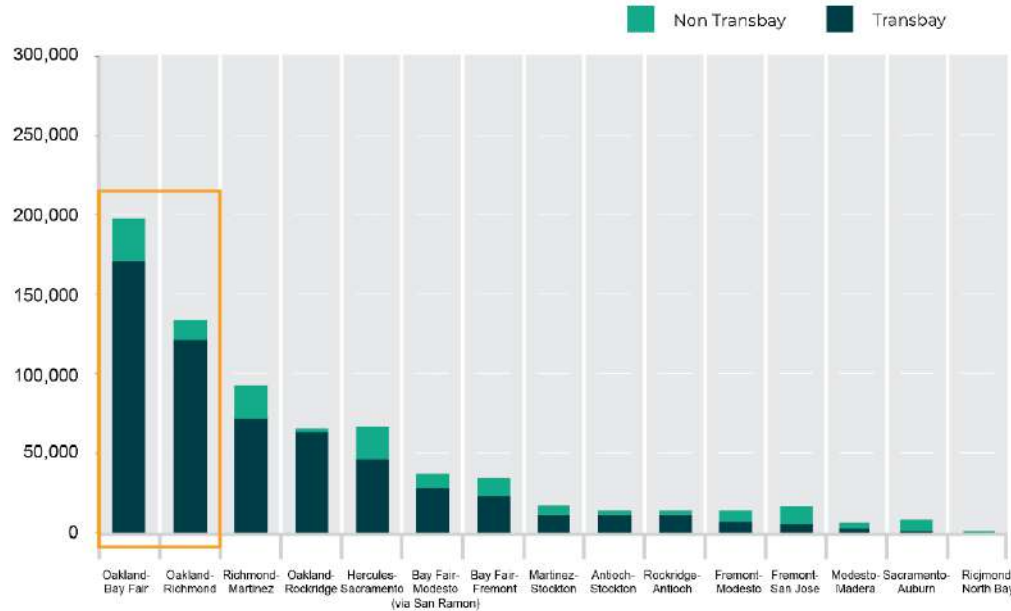
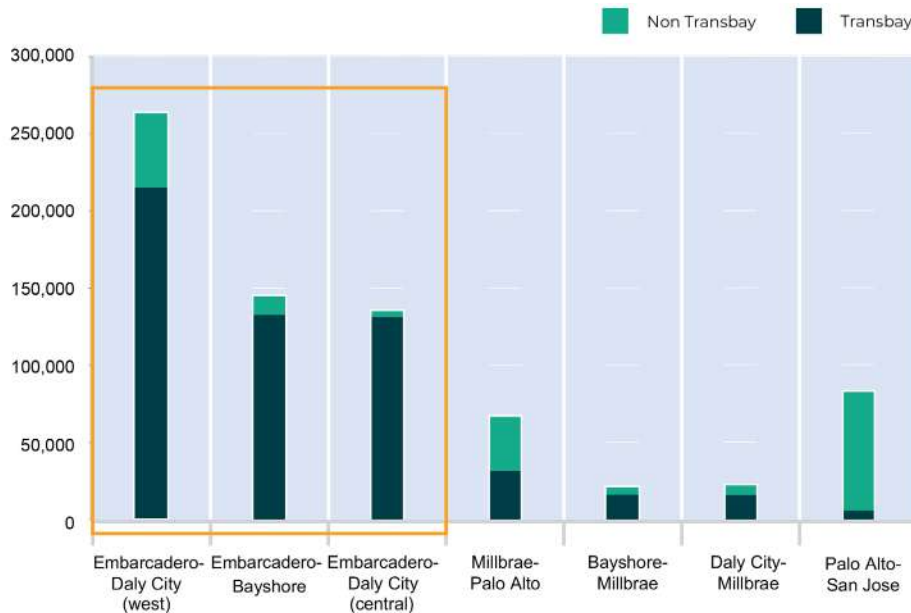


Figure 13. Total Equity-weighted Unmet Rail Potential (number of potential trips) for Segments in West Bay Corridors, 2040



Source: PMC rail potential analysis

⁶ Note that the segment labels in the figures, and mentioned elsewhere in this section, refer to geographic areas and not trips between location pairs. For example, Oakland-Bay Fair refers to a geographic area encompassing all locations between Oakland and Bay Fair, it does not mean trips between Oakland and Bay Fair.

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For East Bay corridors, the greatest unmet rail potential is driven by new markets without existing service, particularly Alameda, central and eastern Oakland, and Emeryville. The Richmond-Martinez segment also shows high potential among Sacramento- and Stockton-bound corridors, owing to new markets in that segment. However, unmet potential in the Oakland – Rockridge segment (within the Walnut Creek/Stockton corridor in Figure 10) is substantially lower than for other core segments as this segment is already well served by BART.

By contrast, on the three West Bay corridors, the high unmet potential in San Francisco can be attributed not only to new markets in western San Francisco (e.g., Pacific Heights, Richmond District, and Sunset District) but also to crowded trains on existing BART transbay rail service through downtown San Francisco. In particular the Embarcadero – Daly City (Central) segment is highly capacity constrained, and new rail service could unlock demand that is unable to or unwilling to use the existing service.

Other findings from the corridor rail potential analysis includes the following:

- Several segments located a medium distance from (but not adjacent to) the Transbay Corridor mostly have medium transbay unmet potential. Most of this potential is due to new markets without existing transbay rail service, including Hercules, Vallejo, San Ramon, and from Millbrae in San Mateo County to Palo Alto in Santa Clara County.
- Segments further from the Transbay Corridor have relatively low unmet rail potential. The low market potential, identified previously, of markets such as Sacramento, Stockton, and Modesto translates into low unmet potential for segments connecting these markets, such as Modesto – Merced or Suisun – Sacramento.

Some segments have high non-transbay unmet potential compared to their transbay unmet potential, particularly in San Mateo and northern Santa Clara counties (e.g., for the Millbrae – Palo Alto, Palo Alto – San Jose, and Fremont – San Jose segments). This suggests there may be ridership and other associated benefits to be realized from investments beyond the crossing.

Robustness Testing

Given the critical importance of Link21 to the Megaregion, and the uncertainty regarding the future of travel and transportation there, it is vital to test the robustness of the market analysis methods and outputs. This testing has taken two forms:

- **Uncertainty analysis:** tests the impacts of changes to key parameters.
- **Emergent network modeling:** uses an alternative approach to verify and to add to the findings of the main market analysis approach.

The **uncertainty analysis** enables the prioritization of corridors and segments that perform well under a variety of possible future scenarios and makes sure the team can

future-proof the analysis by considering how travel demand patterns could change from today's estimates as land use patterns, mobility trends, and technologies evolve.

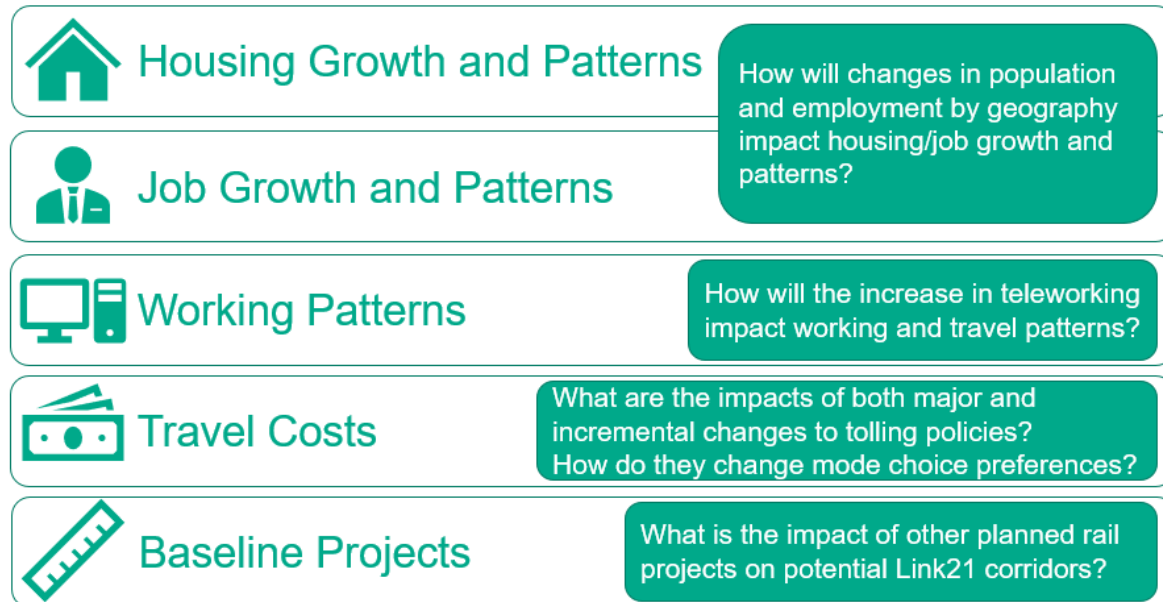
The uncertainty analysis tested up to five scenarios within each of the following five categories: housing growth and patterns, job growth and patterns, working patterns, travel costs, and baseline projects (**Figure 14**). Each set of scenarios is intended to represent a broad range of possible futures — some correspond to high or low values of a parameter while others correspond to specific potential developments, such as implementation of a congestion pricing zone.

The uncertainty scenarios were tested using the MAST. Under each scenario, corridors and segments were ranked for their equity-weighted unmet rail potential, and the rankings were compared to those from the baseline scenario. Any significant changes in ranking needed to be considered carefully in order to avoid:

- Overrating concepts that perform well in the baseline scenario but poorly across several sensitivity scenarios.
- Underrating concepts that perform poorly in the baseline scenario but well across several sensitivity scenarios.

Figure 14. Future Scenarios

Five sets of future scenarios captured a wide range of possible future conditions that might impact travel demand patterns.



The key finding from the uncertainty analysis was that while the absolute performance of the various corridors and segments changed considerably under many of the uncertainty scenarios, there were no significant impacts on relative performance.

Across all the uncertainty scenarios, there were only two unique pairs of corridors and one unique pair of segments that saw changes in relative rankings. None of the



corridors or segments tested increased by more than one rank in terms of equity-weighted unmet rail potential, and all cases where rankings did change were largely a result of two corridors or segments having similar potential in the baseline scenario.

This reinforces the main market analysis findings, in terms of identifying corridors and segments with high equity-weighted unmet rail potential.

The uncertainty analysis indicates the findings from the market and corridor rail potential analyses are very robust.

Emergent network modeling was used to identify high-potential rail corridors in the nine-county Bay Area. The Emergent Network Modeling Framework is a methodology used by the San Francisco County Transportation Authority (SFCTA) to assess rail transit market potential in promising but yet-to-be-studied corridors. The emergent network features an abstract transit network of seamless/ubiquitous rail/transit services covering the study area. Examining the ridership results from providing seamless/ubiquitous rail transit throughout a study area provides an indication of which rail corridors travelers might use if good rail service were provided.

The analysis found significant potential in core markets radiating from Oakland in the East Bay and San Francisco in the West Bay. In the East Bay, these markets span from Richmond in the north to Antioch in the northeast to Fremont in the south to Dublin in the southeast. In the West Bay, they span from Daly City in the southwest to Millbrae in the south to the Richmond and Sunset districts of San Francisco in the west.

The unmet transbay rail potential is likely to be most significant in corridors and markets where there is poor or no existing or planned transbay rail service. These include the Oakland – Richmond – Vallejo corridor, the Alameda – Bay Fair corridor, and several markets in western San Francisco.

The findings from the emergent network analysis corroborate the findings from the market and corridor rail potential analyses.

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LINK21

CONNECT NORTHERN CALIFORNIA

Link21 Program Monthly Stakeholder Update

The Link21 Team continues to make significant progress on the Business Case and in developing program concepts. The start of 2021 has also seen the ramp up of engagement work. Link21 and its partner agencies aim to integrate urban and intercity rail throughout the Northern California Megaregion, as envisioned by the California State Rail Plan. The Link21 Team will provide regular updates on engagement and key activities moving forward.

Value Capture

The Link21 Team continues to identify effective and practical approaches and actions for Link21 to support value capture (revenues from increased property values as a result of infrastructure investments). Tailored value capture strategies for the Crossing Project (transbay rail crossing between San Francisco and Oakland) could contribute to short- and long-term funding streams for the program and support objectives, such as advancing equity and providing other broader economic and social benefits.

Link21 Website Launch

We launched the program website link21program.org at the end of January. BART and Capitol Corridor's communications staff helped publicize the launch, which generated attention on social media, radio, print, and television outlets. The website is the digital home for Link21, and it has already received:

- More than 2,000 site visitors
- Almost 800 responses to the Goals and Objectives survey

Media

The Link21 Program has attracted considerable media attention. Link21 Team staff have conducted numerous interviews, including:

- [San Francisco Business Times](#)
- [San Francisco Examiner](#)
- [Overhead Wire Podcast](#)
- [Trains Magazine](#)

Bay Area Council Economic Institute Webinar

A week after the website's launch, the [Bay Area Council Economic Institute \(BACEI\)](#) hosted a [webinar](#) on Link21 that was attended by over 300 people. *(continued on page 2)*



BART's General Manager Bob Powers and Capitol Corridor's Managing Director Rob Padgette joined Bay Area Council CEO Jim Wunderman, California State Transportation Agency (CalSTA) Secretary David Kim, and other leaders to discuss the importance of Link21 to Northern California.

Equity Activities

With Link21, BART and Capitol Corridor are looking to set a new standard for how megaprojects advance equity. The Link21 Team is preparing an Equity Blueprint with the Office of Civil Rights and has recently completed over 20 interviews with BART, Capitol Corridor, and other stakeholders regarding equity issues and concerns. The Link21 Team has also completed the first round of *co-creation focus groups*, which are a key component of this effort. In co-creation, we are partnering with community-based organizations (CBOs) throughout the Northern California Megaregion to host two-hour focus groups with minority, low-income, and other historically disenfranchised groups that are often excluded in planning processes.

During the first round, the team held 23 events, co-hosted by 20 CBOs reaching 340 people. The second round is scheduled for later this year. This early engagement helps us to understand the needs of *priority populations* from the outset, allowing us to proactively craft an equitable program.

We are excited to pilot the compensation of CBOs and focus group participants in this work. The work that the equity team is performing incorporates concepts from the Government Alliance on Race and Equity (GARE) Link 21 Acting Director Sadie Graham participated in.

In addition to the co-creation work with CBOs, the

team will place advertising in ethnic publications and develop a targeted social media ad campaign to inform priority populations about the Program and upcoming public meetings.

Outreach and Engagement Accomplishments

The Link21 Team has been busy introducing the program to various stakeholders including:

- **Link21 Program Development Team (PDT) and Other Peer Agencies:** A growing group of rail operators and transportation planning agencies including California State Transportation Agency, Caltrain, Altamont Corridor Express, and the California High-Speed Rail Authority
- **Link21 Jurisdiction Working Group (JWG):** A growing group of city partners
- **Business groups:** Bay Area Council, East Bay Leadership Council, Oakland Chamber of Commerce, Kaiser Permanente, East Bay Economic Development Alliance, Conference of Minority Transportation Officials, and Bay Area Regional Building and Construction Trades Council
- **Elected officials:** Engagement continues with a variety of elected officials, including the Northern California congressional caucus and state and local representatives
- **BART groups:** Accessibility Task Force, Business Advisory Council, Limited English Proficiency, and Title VI/Environmental Justice Advisory Committees

Connecting with Link21

www.Link21program.org | info@Link21program.org | 855-905-LINK (5465)

Look Ahead

Our current work is building toward a significant milestone in early 2022 – a list of program concepts for further pre-environmental evaluation. Over the next month, our primary purpose is continuing to introduce the program to stakeholders throughout the Megaregion. Planned activities include:

- Conducting second round of co-creation focus groups

- Hosting informative, virtual public workshops in partnership with local agencies
- Presenting to more agency boards, city staff, business groups, and elected officials
- Completing the Market Analysis in mid-2021
- Exploring federal funding opportunities

Recent/Upcoming Events

MAY 21



WTS INTERNATIONAL CONFERENCE

Session: **Building Equity into Megaproject Development, Inside and Out**

Speakers: Sadie Graham, BART; Emily Alter, BART; Carolyn Flowers, InfraStrategies; Brooke Staton, Reflex Design Collective; and Kyle Morales and Kimberly Sims, HNTB

MAY 14, 2021

JUNE 21



UPCOMING VIRTUAL PUBLIC WORKSHOPS*

JUNE 17 - CITY OF RICHMOND/CONTRA COSTA COUNTY

JUNE 22 - CITY OF OAKLAND/ALAMEDA COUNTY

JUNE 28 - SAN FRANCISCO CITY AND COUNTY

JUNE 29 - SOLANO COUNTY

JULY 21



RECENT & UPCOMING MEETINGS & PRESENTATIONS

JULY 2021 - STAFF PDT MTG

JULY 2021 - JWG MTG

JULY 2021 - EXEC PDT MTG

*Dates are tentative. Additional workshops are being added. Visit [Link21program.org](https://link21program.org) to view the most current list of workshops.

LINK21

CONNECT NORTHERN CALIFORNIA

Link21 Program Monthly Stakeholder Update

The Link21 Team continues to make significant progress on the Business Case, the financial feasibility for the Link21 Program, and in developing program concepts. The start of 2021 has also seen the ramp up of engagement work. The Link21 Team will provide the BART and CCJPA boards with regular updates on engagement and key activities moving forward.

New BART Engagement Manager Named



Nicole Franklin has been selected as the new BART Link21 engagement manager. Nicole is a public engagement and land use professional with more than 20 years of experience working with government agencies, permitting,

funding, and on construction phases of private development and public infrastructure projects.

Nicole previously served as a principal property development officer for BART. She will oversee the Engagement and Outreach contract and consultants for the Link21 Program.

Federal Funding

The Link21 Team is actively seeking funding opportunities to support the program. With equity being the foundation of the program, the Team has

prepared an application for a U.S. Department of Transportation RAISE planning grant (Rebuilding American Infrastructure and Sustainability Equity), formerly known as the BUILD and TIGER grants. These grants focus on safety and environmental protection generating equitable economic opportunity. If selected, the Link21 Program will use these funds to further its equity work and support additional community co-creation workshops.

Preparing the Future - Link 21 Interns

This year, the Link21 Program, partnering with BART, has made a commitment to prioritize mentoring youth and young adults entering the workforce through BART's



paid internship program. Capitalizing on BART's holistic approach, Link21 plans to build momentum with our interns on the front lines of equity. The internship program is designed to show future transit professionals the importance of equity from the very start of their careers. Through research, they will develop a youth engagement and outreach strategy using project-based learning. Interns will be exposed to the public agency and consultant worlds and the many facets of transportation planning. The Link21 Team will empower young people to speak their minds and contribute to planning processes that will

Public Workshops in Full Swing

With 21 counties and more than 160 cities, the Engagement and Outreach Team has its work cut out for them – and they are ready! Over the summer, the Link21 Team will host several virtual public workshops across the Northern California Megaregion (Megaregion) to educate, engage, and solicit feedback from the public. Workshops have been held for West Contra Costa and Contra Costa County, the City of Oakland and Alameda County, San Francisco and the surrounding areas, and Solano County.

The workshops are interactive, focus on different areas of the Megaregion, and are co-hosted by transportation agencies and other Link21 partner agencies. The input from these meetings will be used to help shape the program during the early planning phase.

Mark your calendar for the next public workshop. A full listing of past events and future meetings can be found at [Link21program.org/events](https://www.link21program.org/events).

In addition to hosting public workshops, Link21 Team members have been speaking nationally about the program. Camille Tsao (CCJPA project manager) and Peter Gertler (HNTB program manager) served on different panels during the American Public Transportation Association (APTA) Rail Conference held in June.

UPCOMING VIRTUAL PUBLIC WORKSHOPS

JULY 15 - PLACER, SACRAMENTO, AND YOLO COUNTIES, 5:30 PM

UPCOMING WORKING GROUP MEETINGS

JULY 19 - JURISDICTIONAL WORKING GROUP

JULY 26 - STAFF LEVEL PROJECT DEVELOPMENT TEAM

AUG 5 - EXECUTIVE LEVEL PROJECT DEVELOPMENT TEAM

Look Ahead

The BART Board of Directors authorized four contracts for Planning and Engineering (ARUP/WSP Joint Venture), Engagement and Outreach (HDR), Travel Demand and Land Use (Cambridge Systematics), and Environmental (ICF) professional services to support the further development of Link21. These consultant teams represent a mix of international, national, and local firms with over 80 Small Business Entity/Disadvantaged Business Enterprise firms expected to begin work later this summer. These firms have extensive experience working in the 21-county Megaregion.

We are continuing our work to introduce the program to stakeholders throughout the Megaregion. Planned activities include:

- Presenting the Market Analysis
- Developing the Preliminary Program Concepts
- Presenting findings of the first round of community co-creation workshops

Equity Update

The Link21 Team has completed its initial synthesis of input received during Round 1 of community co-creation workshops. Feedback from the 350 participants will help shape Link21's approach to equity, including technical work. This summer, the Link21 Team will begin the second round of community co-creation with community-based organizations (CBO) and participants to share back key insights and to update them on Link21's progress.

In this outreach, we are contacting additional CBOs to expand the reach of our engagement work. The second round of community co-creation workshops will help inform the update of Link21's priority populations definition.

Connecting with Link21

Website: www.Link21program.org

Email: info@link21program.org

Phone: 855-905-LINK (9045)

LINK21

CONNECT NORTHERN CALIFORNIA

Link21 Program Monthly Stakeholder Update

First Public Workshop Series in the Books



This summer, the Link21 Team launched a series of virtual public workshops to introduce the public to Link21. For many, this introduction gave a glimpse of what the program could mean for their commutes and communities. In addition to

the workshops, the team hosted Office Hours events in July for those who had additional questions or wanted to further discuss topics surrounding Link21, including equity, environmental, the market analysis, and List of Concepts development.

The feedback received during the workshops and Office Hours events provided the team with invaluable insight, including desired destinations, travel challenges, and service aspirations. For example, participants listed Monterey, Tahoe, Sacramento, Napa, and San Francisco as top destinations in the region. Another poll identified traffic, congestion, frequency, and time as some of the greatest travel challenges. Finally, participants cited reliability, convenience, speed, and longer hours as things they would like to see in service improvements. This information and comments received through the website, email, phone calls, and the goals and objectives survey is being shared

with the technical team as they develop the Program Concepts.

Several agencies partnered to co-host the events, including the City of Oakland, West Contra Costa Technical Advisory Committee, San Francisco Municipal Transportation Agency, San Francisco County Transportation Authority, City of Sacramento, and Placer, Solano, and Yolo counties.

As the team moves closer to developing a List of Program Alternatives, stakeholders will see a more targeted approach to outreach based on the market analysis and Program Concepts.

Program Receives Funding Letter of Support

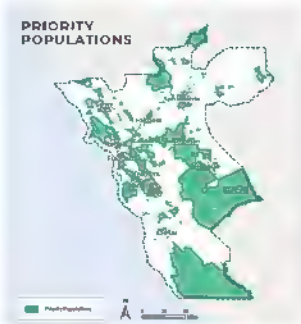
Seven California Congress members signed a letter to support Link21's RAISE planning grant application. The Link21 Team plans submitted a \$1.5 million request to support additional equity efforts throughout the Northern California Megaregion (Megaregion). Supporters include Congress members Mark DeSaulnier, Barbara Lee, Jackie Spier, Zoe Lofgren, Eric Swalwell, John Garamendi, and Ro Khanna. Congressman Swalwell's office was instrumental in drafting and championing the letter of support.

Link21 equity work is in line with President Biden's Justice 40 Initiative, a commitment to deliver at

least 40% of the benefits from federal investments to climate and clean energy in priority population communities. Through the RAISE planning grant, Link21 hopes to further its equity work to ensure past harms are not repeated to the Megaregion's most vulnerable communities.

Link21 continues to look for additional funding through federal, state, and local resources to support ongoing planning efforts.

Equity Update



Over the past few months, the Link21 Team has synthesized and integrated findings from the first round of community co-creation. Some notable takeaways that emerged across workshops included:

- High support for the goals and objectives, particularly transforming the passenger experience and enhancing community and livability
- Current issues such as safety, cleanliness, displacement, COVID service cutbacks, and fare cost make it difficult for many to think about rail in the future
- Significant interest in using rail for reasons beyond commuting

Throughout August, the team will conduct its second round of community co-creation. In addition to partnering with community-based organizations (CBOs) to host workshops, the team will work with CBOs to distribute a survey to community members. This new approach should further lower barriers for participation, allowing the Link21 Team to hear from more groups. In addition, feedback from the second round will inform the fall update of Link21's priority populations definition, which will give the Link21 Team a community vetted geographic designation of equity.

Consultants

Earlier this year, the BART Board of Directors approved four contracts to support Link21: Engagement and Outreach, Environmental, Planning and Engineering, and Travel Demand and Land Use. Contracts with HDR, WSP, Cambridge Systematics, and ICF are being finalized and the firms will receive a Notice to Proceed shortly afterward. The addition of these consultants will support and advance technical work. The Program Management Team is currently working with BART and these consultants to finalize their first work plan.

Look Ahead

With the loosening of COVID restrictions, the Engagement and Outreach Team will focus more on boots-on-the-ground outreach to further educate and engage the general public. There will also be a greater emphasis on identifying and cultivating program champions

The Equity Team will continue to lay the groundwork for the Equity Council and begin to understand who should make up the Council and what decisions they will provide input on.

The Environmental Team will continue the activities related to strategy, management, and consultant on-boarding.

UPCOMING MEETINGS AND PRESENTATIONS

- AUG 2 - TAMC RAIL POLICY COMMITTEE**
- SEP 9 - BART BOARD OF DIRECTORS**
- SEP 15 - CCJPA BOARD OF DIRECTORS**
- FALL 2021 - PUBLIC WORKSHOPS SERIES 2**
- FALL 2021 - PROJECT DEVELOPMENT TEAM STAFF AND EXECUTIVES**
- FALL 2021 - JURISDICTIONAL WORKING GROUP**

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Link21 Program Monthly Stakeholder Update

Market Analysis: Identifying Unmet Rail Potential

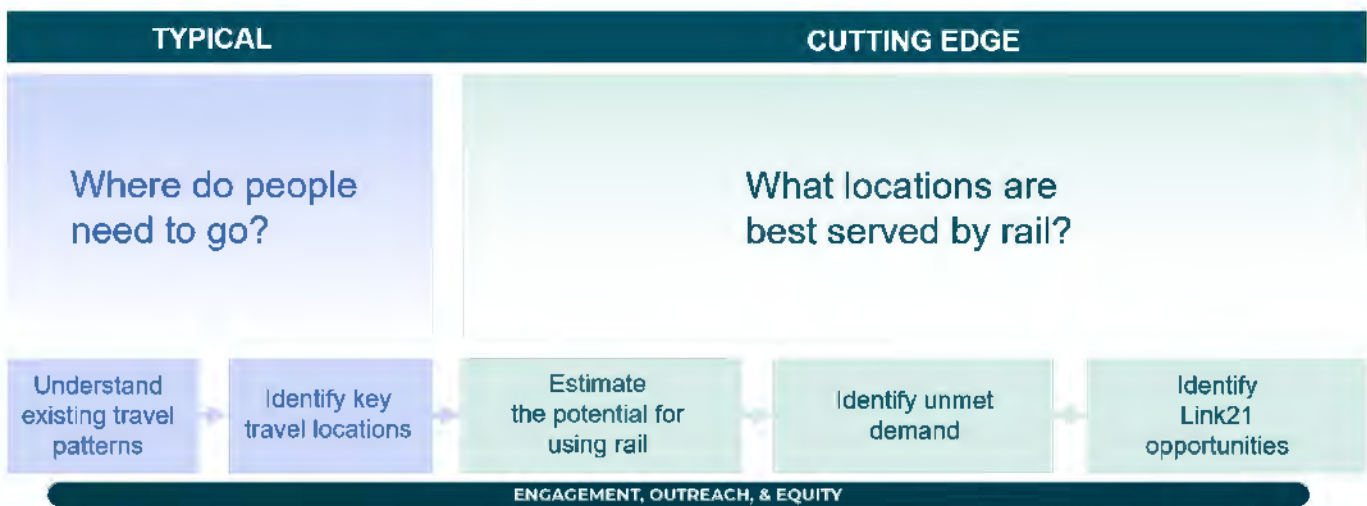
In order for future Link21 projects to offer the highest value to the Northern California Megaregion (Megaregion), the Link21 Team conducted a market analysis to help understand which areas in Northern California have the greatest potential for Oakland–San Francisco transbay corridor passenger rail ridership.

The market analysis covers all 21 counties of the Megaregion and uses traditional and cutting-edge methods to understand where people need to go and what locations might be served by passenger rail. Traditional methods of market analysis focus on understanding where people would like to go by using pre-pandemic travel patterns and identifying key travel locations.

Innovative modeling techniques that incorporate demographic information and traveler surveys were used to analyze:

- Pre-pandemic travel patterns by passenger rail, transit, car, and other modes of travel
- Key travel markets, such as major employment centers, residential communities, shopping, entertainment, and other hubs
- Potential that travel would be conducted by passenger rail if passenger rail were convenient and affordable
- Unmet demand for passenger rail service, including future projections

Priority population neighborhoods are located in underserved areas that Link21 aims to prioritize as part of the program. In order to improve the equity outcomes of



(continued on page 2)

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BART interns Samantha Tay (left) and Taylor Yiu (right) during their mentoring session with BART intern alumnae Monet Boyd (inset).

The interns reviewed the results of community co-creation round 1 youth workshops to develop and enhance youth-oriented outreach materials.

Through project-based learning, the interns were exposed to the public agency and consultant worlds, and the many facets of transportation planning. Tay and Yiu's plan will help Link21 empower young people to speak their minds and contribute to planning processes that will affect them well into the future.

As one of their final activities, the two interns met with Monet Boyd, a BART alumnae intern, for a virtual mentoring session. At this meeting, they discussed their experiences as interns and how BART and Link21 can continue to promote youth and equity in the future.

Both interns said they had a great experience during their time on the program and learned not only technical skills, but important soft skills needed to be successful.

"Being open to communication is key," explained Tay. "Clear up confusion and ask questions early on." Yiu learned the value of networking saying, "Having connections with people is important."

At the end of the program, they presented the youth engagement strategy to the Link21 Team and were awarded a Certificate of Accomplishment on behalf of the BART Planning and Development Department.

Link21 Featured at Conference on Advancing Transportation Equity

Emily Alter with BART's Office of Civil Rights and Mydria Clark with HNTB gave participants of the Transportation Research Board's (TRB) inaugural Conference on

Advancing Transportation Equity (CATE) a glimpse into the Link21 Equity Program.

According to the TRB website, CATE features "all areas of transportation practice and research, including those that address links between transportation and housing, telecommunications, health, policing, or economic development."

Presentations at the conference featured those who are working on the front lines of transportation equity and justice within community-based and non-profit organizations. Participants represented a wide range of lived experiences and discussed how diverse perspectives are included in policy development, project selection, and mitigation to advance transportation equity.

Through an informative interview for the conference's video series, Alter answered questions posed by Clark on the Equity program, particularly on community co-creation strategies and how public input is being integrated in Link21's technical work.

Looking Ahead

- Fall outreach will begin in October and focus on the market analysis and an update on technical work being performed. This will also be a key opportunity for the public to provide the Link21 Team with valuable input on the market analysis and service aspirations.
- Onboarding of the Engagement and Outreach consultants is anticipated in late September.
- Round 3 of community co-creation is tentatively scheduled for late 2021/early 2022.

UPCOMING MEETINGS AND PRESENTATIONS

- SEP 15 - CCJPA BOARD OF DIRECTORS**
- OCT 14 - BART BOARD OF DIRECTORS**
- FALL 2021 - PROJECT DEVELOPMENT TEAM (PDT) STAFF AND EXECUTIVE MEETINGS**
- FALL 2021 - JURISDICTIONAL WORKING GROUP (JWG) MEETING**
- Q4 2021 - PUBLIC WEBINAR SERIES**

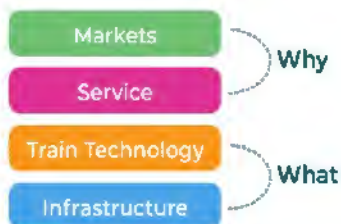
LINK21

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Link21 Program Monthly Stakeholder Update

Building Better Service

The overarching goal of the Link21 program is to transform the passenger rail experience by improving service. Key projects, such as a new passenger rail crossing between Oakland and San Francisco, will enable improved rail service, connectivity, and mobility for many people around the Megaregion. The Link21 team is coordinating with the State Rail Planning team and other transportation agencies on what future rail service in the Megaregion will look like.



Building blocks of service.

Understanding markets, designing service, identifying train technology (type of train car), and designing infrastructure improvements are the four “building blocks” of

defining the “why” and “what” of the Link21 Program.

The Link21 Team will first evaluate potential markets, then develop potential service plans that serve those markets. A detailed market analysis and stakeholder input will be used to inform our thinking around markets and service, as well as land use and equity considerations.

Through an upcoming survey, the Link21 Team will ask the public about their service aspirations—what good service looks like to them— shorter travel times, longer service hours, more frequent trains, better connectivity, system resiliency, better station access - and others.

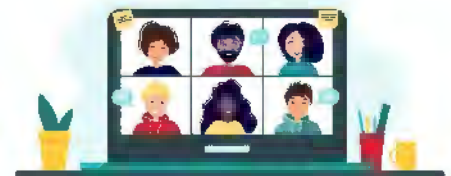
The Team use use this feedback to develop service plans to present for additional stakeholder and public feedback in early 2022. Following service planning, the team will then be

able to determine which train technology and infrastructure are needed to support the type(s) of service that is envisioned. This will come later in the Program.

Creating New Definitions

Last month, the Link21 Team completed its second round of co-creation workshops and distributed a survey to help increase input opportunities for priority population communities. Nearly 200 community members participated in workshops co-hosted with 11 community-based organizations (CBOs).

The Link21 Team partnered with additional CBOs and a research firm to conduct a survey and poll that reached more than 1,000 additional stakeholders.



Feedback from these workshops and surveys will be used to develop a new priority population definition for use in Link21 technical work. This new definition will reflect feedback regarding burdens, concerns, and desired outcomes. The new definition will move Link21 forward by focusing on design solutions and outcomes that emphasize those who need improved rail service the most.

More broadly, input from both rounds of community co-creation is being considered throughout program work, including the efforts to identify desirable service aspirations of priority populations.

Positioning for Success

As the Link21 Team looks for ways to fund this generational program, it is important to identify opportunities early. The team is working to submit an application for the Sustainable



Communities Grant opportunity, sponsored by Caltrans, to support additional engagement and outreach efforts.

The agency has a little over \$29 million available “to encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission.” Awards are expected to be announced in spring 2022.

Link21 has also applied for a Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant through the U.S. Department of Transportation. Awards will be announced in November 2021.

Fall Outreach - A Deep Dive into the Community

The Engagement and Outreach Team will take Link21 on the road in November through a three-pronged approach (grassroots outreach, webinars and live Q&A, and partner agency and advocacy group meetings) that is designed to reach more stakeholders, meet people where they are, receive feedback that can be shared with the Link21 technical teams, and continue to cultivate relationships with partner agencies and advocacy groups.

The Link21 Team plans to do this through a robust grassroots outreach effort that includes partnering at tabling events with BART’s Government and Community Relations team, visiting major fairs and festivals, and conducting outreach onboard various BART and Capitol Corridor routes and at stations with high ridership (based on pre-pandemic numbers).

Stakeholders reached through these methods will be provided with information on the upcoming webinars and live question and answer sessions scheduled for mid-November and will be encouraged to take a survey that will

help Link21 better understand the service aspirations of travelers. Information gleaned from these surveys will help the technical teams with service plan development.

In addition to grassroots outreach, Link21 will host webinars that provide an update on what the team has been working on, our findings so far, the market analysis, next steps, and how the public can help us get there.

Four live question and answer sessions will be held on November 13, 16, 17, and 18 with subject matter experts from the Link21 team.

The third prong of this approach includes meeting with partner agencies and advocacy groups to provide an update on Link21 and to encourage these agencies to share information about the fall outreach series and the survey.

Upcoming Events*

FALL 2021	IN STATION AND ON TRAIN OUTREACH
NOV 13	FALL OUTREACH LIVE Q & A
NOV 16	FALL OUTREACH LIVE Q & A
NOV 17	FALL OUTREACH LIVE Q & A
NOV 18	FALL OUTREACH LIVE Q & A
1Q 2022	PROJECT DEVELOPMENT TEAM EXECUTIVE AND STAFF LEVEL MEETINGS
1Q 2022	JURISDICTIONAL WORKING GROUP MEETING

*For more information about dates, times, and locations of outreach activities, visit www.Link21program.org/events.

Connecting with Link21

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LINK21

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Link21 Program Monthly Stakeholder Update

Updating Priority Populations Definition to Meet Program Goals

In November 2021, the Link21 Team updated its priority populations definition. Link21's priority populations were initially defined based on the state's existing definition of disadvantaged and low-income communities and the Metropolitan Transportation Commission's (MTC) and counties' Communities of Concern (now called Equity Priority Communities).

The updated Link21 priority populations definition is program-specific and identifies areas with significant low-income, non-white, or transportation-cost-burdened populations that also experience disproportionate economic, mobility, community, and health and safety burdens. The definition was created with the input of 330 community members through the second round of community co-creation and a megaregional poll with 1,500 respondents. Input from these community members informed how factors like housing-cost burden, displacement, internet access, employment benefits, and others were incorporated into the definition. Conversations with partner agencies and subject matter experts and research into other geographic metrics also guided this update.

The updated definition will be used in Phase 1 work. It is a living definition, and the Link21 Team is identifying other points in the program schedule where the

definition could be further updated, if needed. The team plans to provide more detailed information about the development of the updated definition in the February stakeholder report and on the [Link21 website](#). BART and CCJPA board members will have the opportunity to learn more and provide feedback as part of the Stage Gate review process.

Community members will be given an opportunity to ask questions and provide comments on the updated definition in the coming months.

Link21 Wraps Up Fall Engagement Series

The Link21 Team continued its robust engagement campaign in early November by hosting four webinars with live Q&A sessions, launching the service improvements survey, and performing outreach at various BART and Capitol Corridor stations, on board several Capitol Corridor trains, and event/festival tabling.

Approximately 150 people attended the webinars, which included a program update, a review of the recently concluded market analysis, and a discussion of the building blocks of service (markets, service, train technology, and infrastructure), and how they will play into the eventual development of program concepts. As the program is currently focused on evaluating the first two building blocks — market and service — the online and paper survey dives deep into what

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passengers feel constitutes “good service”, how they use rail, and their current and future travel patterns. This information will be used to help design the service plans that will support the proposed concepts. To date, more than 400 surveys have been received (paper and online versions). You can access the survey by clicking [here](#). The survey closes January 31, 2022.

In the grassroots efforts, the Engagement and Outreach Team tabled at 46 events, festivals, and stations throughout the Megaregion with over 500 community touches.



The Link21 Team in Manteca at the Christmas in the Promenade event.

Service Improvements Survey Extended

The deadline for completing the service improvements survey has been extended to January 31, 2022. The survey can be accessed by visiting: www.Link21program.org/survey.

Please feel free to share the survey link as the team works to learn more about passenger travel patterns and what good service means to them.

Link21 - Future Funding

Link21 appears to be well-positioned for potential funding through several of the existing and new rail federal programs. As the program requirements are being developed at the federal level, the Link21 Team will work with BART, CCJPA, and partner agencies' staff to advocate for grant funding that is complementary to and not competing against agency needs.

Currently, the Link21 Team is considering advancing another proposal through the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program.

At the state level, the team worked closely with the region's transit operators and MTC on advocating for a significant portion of the state's budget surplus to be directed to transportation programs and projects. We will continue working with our partners on the regional distribution of these funds.

BART Taking Steps to Update System Expansion Policy

For several decades, BART's service plans focused on extending service to areas within and beyond its core service area. In 1999, BART adopted its first *System Expansion Policy* to provide policy guidance to the BART board, staff, and local jurisdictions on the conditions necessary to consider service expansion. The policy is a framework that focuses on broad goals and objectives, system expansion criteria, and metrics for staff recommendations.

During the November 18th BART Board of Directors meeting, staff outlined a plan to update the current policy to better align with BART's Strategic Plan goals and objectives, and to strengthen the policy's commitments to equity, sustainability, and transit-supportive land use while providing flexibility to use appropriate rail technology and ensuring fiscal responsibility by recognizing potential impacts on the operations and maintenance of BART's current service.

The updated policy will help shape Link21, particularly the crossing between Oakland and San Francisco, and it will aid the consideration of potential new stations, including infill stations. BART will begin stakeholder outreach in early 2022 with Board adoption of recommendations slated for summer 2022.

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Upcoming Board Presentations and Working Group Meetings

JAN 24, 9 AM	PROGRAM DEVELOPMENT TEAM (PDT) STAFF LEVEL
FEB 1, 1 PM	PDT MEETING – EXECUTIVE LEVEL
FEB 2, 3 PM	JURISDICTIONAL WORKING GROUP
FEB 16, 10 AM	CCJPA BOARD (STAGE GATE 1)
FEB 24, 9 AM	BART BOARD (STAGE GATE 1)
MARCH 10, 9 AM	BART BOARD
APRIL 20, 10 AM	CCJPA BOARD

Upcoming Industry Presentations

MARCH 31	APTA CONNECTING CITIES CONFERENCE
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BART Releases Strategic Advising and Program Management RFP – Round 2

On November 12, 2021, BART advertised a Request for Proposals (RFP) to provide Strategic Advising and Program Management services for the Link21 Program. The new contract will be for a period of up to four years with an option to extend an additional six years.



The selected consultant will support BART and CCJPA staff with the delivery of the Link21 Program by providing the following professional services:

- Strategic advising support
- Stakeholder coordination
- Funding and programming plan development
- Program Management, including management of scope, schedule, risk, quality (etc.)
- Oversight of consultants providing planning and engineering, environmental review, travel demand and land use, and engagement and outreach support

Proposals were due January 11, 2022. Consultant selection is expected to be made by spring 2022.

Stage Gate

The Link21 Stage Gate process is a rigorous and formalized, decision-driven process to control risk and ensure timely and cost-effective project delivery.

It has been designed based upon U.S. and international best practices. Stage gates are key program milestones in the program life cycle and BART/CCJPA executives and Board of Directors are asked to review Link21's progress, memorialize decisions, and confirm the program's readiness to advance. Stage gates document and formalize Link21's findings, direction, and approach at key milestones throughout the program's life cycle.

The Stage Gate Process is a series of hierarchical reviews with expert panels that will inform the subsequent panels of their recommendations, culminating in a recommendation to the Board of Directors by BART/CCJPA executive leadership. The review process starts with a detailed and intensive technical review within the Link21 Team, by industry subject matter experts, followed by BART/CCJPA staff and executive management review.

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Each review includes documentation of the work that has been done, identification of program risks and mitigations, an overview of the plan of work for the next stage gate, and the opportunities for the review panel to identify and document any concerns or recommendations.

For the upcoming Stage Gate 1, Link21 will be confirming readiness to advance from Phase 0 (Program Definition) to Phase 1 (Program Identification) by providing evidence supporting the following key statements:

1. Link21's vision, goals, and objectives are appropriate, clear, and measurable, and they provide a foundation for the Business Case.

2. Stakeholder and public engagement, with a focus on equity advancement, has informed the process and supports advancement to Phase 1 (Program Identification).
3. A foundation of analytical work has been completed to develop and evaluate concepts in Phase 1.
4. The program has the people, processes, funding, and tools to support progress through Phase 1.

Link21 Team members will present the recommendation to the BART/CCJPA boards (on February 24th and 16th, respectively) and return to the Boards for action at the BART Board meeting on March 10th and the CCJPA Board meeting on April 20th.

Stage Gate Timeline Review Hierarchy



Connecting with Link21

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Business Case Methodology Phase 1A Metrics

Draft for discussion

DRAFT-DELIBERATIVE



Link21 Metrics

Metrics have been developed to evaluate the **performance** of Link21 program concepts against the **goals and objectives**.



PROMOTE EQUITY AND LIVABILITY

- Connect people and places
- Improve safety, health and air quality
- Advance equity and community stability

Metrics identified for each objective, e.g.:

POTENTIAL METRICS

- Availability of rail options near people's homes
- Additional jobs accessible from people's homes
- Additional non-work destinations accessible from people's homes



Phase 1 Metrics

Strategic Case Metrics: Goal A - Passenger Experience

OBJECTIVE	METRIC
A1: Provide better service	In-vehicle travel times
	Total transit travel times
	Service frequency
	Service Hours
	Crowding
	Network integration
A2: Improve reliability and system performance of existing and planned infrastructure	Reliability
	Expected recovery times from incidents
	Ability to maintain existing and new infrastructure
	Flexibility to meet future growth
	Viability in the event of seismic events and other emergencies
A3: Build ridership and mode share	Ridership
	Mode shares
	VMT reduction

Strategic Case Metrics: Goal B - Enhance community and livability

OBJECTIVE	METRIC
B1: Enhance connectivity	Jobs accessible from people's homes
	Work trips on network
	Non-work destinations accessible from people's homes
	Non-work trips on network
	Availability/accessibility of rail options
B2: Improve safety, health, and air quality	Potential to improve safety, health, and air quality (proxy)
	Megaregional pollutant levels
	Auto-involved crashes
	Active mode (walking, biking, etc.) access to rail
	Coverage of Areas of Health Concern

Note: VMT reduction can be used as a proxy for objective B2.

Strategic Case Metrics: Goal C - Support economic growth and global competitiveness

OBJECTIVE	METRIC
C1: Improve access to opportunity and employment	Jobs accessible to new service
	Business access to potential employees
	Business access to potential markets
	Work trips on network
C2: Connect major economic, research, and education centers	Travel times between major employment centers
	Trips between major employment centres
	Travel times between major centers and transportation hubs (e.g. airports and main rail stations)
C3: Enable transit-supportive land use	Local land use policies consistent with Link21 Land Use strategy
	Potential for future land uses within station catchment areas



Strategic Case Metrics: Goal D - Advance environmental stewardship and protection

OBJECTIVE	METRIC
D1: Increase climate change resilience	Viability under different sea level rise inundation scenarios
D2: Reduce greenhouse gas emissions	Greenhouse gas emissions
D3: Conserve resources	Energy consumption for transportation

Note: VMT reduction can be used as a proxy for objectives D2 and D3.

Economic Case Metrics

METRIC
Travel time savings for new and existing transit users
Travel time savings for vehicles (i.e., decongestion)
Travel cost reductions
Reduced criteria air pollutants
Reduced greenhouse gas emissions
Decreased auto collisions resulting in death or injury
Reduced travel times between economic centers
Increased access to labor supply
Benefit to Cost Ratio



LINK21 PRIORITY POPULATIONS UPDATE

Overview

Equity is a central principle for Link21, and the Program has a stated goal to *promote equity and livability*. A key tool for evaluating how equitably Link21 benefits and burdens could be distributed is the Program’s priority populations (PPs) designation. Link21 defines PPs as underserved census tracts experiencing inequitable outcomes. PPs will receive emphasis throughout program development.

PPs is a Program-specific tool that is not a replacement for Environmental Justice populations, Title VI communities, or any other compliance designations. It is important to note that PPs are **just one tool** that the Link21 Team will use to advance equity.

Need for an Update

Link21’s preliminary PP definition combined designations used by the State of California, Metropolitan Transportation Commission, and local counties, but it did not include a consistent methodology across the Megaregion and did not include program-specific community input. The preliminary definition also proved to be less useful for making informed equity decisions, as it identified nearly half of the Megaregion’s census tracts as PPs.

BART and other agencies at all levels of government are increasingly adopting approaches to equity based on the distribution of benefits and burdens. This update better aligns Link21’s priority populations definition with this burdens-based approach.

Updated Definition

The updated definition considers PPs to be the geographic areas where people are most impacted by negative economic, mobility, community, and health and safety outcomes. This approach is consistent with emerging guidance such as Justice40. The following table introduces the three-step process used to identify and validate PPs.

QUALIFY	EVALUATE	VALIDATE
<p>Determine the census tracts with higher proportions of low-income, transportation cost burdened, or non-white populations.</p> <p>Those tracts are evaluated in the next step.</p>	<p>Determine the census tracts where people experience the highest levels of economic, mobility, community, and health and safety <u>burdens</u>.</p> <p>Those tracts are considered PPs.</p>	<p>Conduct a demographic analysis of the PP tracts defined in <i>Evaluate</i> to validate the definition correlates with identities that have historically been burdened: race/ethnicity, gender, disability, limited English proficiency, foreign born, single parent household, and veteran status.</p>

Guided by Community Input

Communities were key in shaping the updated definition. Primary sources of input were:

- Community co-creation: 330 participants through 22 community-based organizations
- Megaregion poll: 1,505 non-white and/or low-income respondents

Community feedback supported the identification, validation, and weighting of burdens. This process resulted in the inclusion of burdens such as working multiple jobs and lack of access to the internet into the updated definition. Public input also allowed the updated definition to reflect which burdens were most impactful to different communities within the Megaregion through weighting.

Figure 1: Burdens in the Updated PP Definition

Economic	Mobility	Community	Health & Safety
Income	Transportation cost burden	Disconnected youth	Medically underserved areas
Unemployment	0 car households	Miles of highway	Asthma rate
Low wages	Car to worker mismatch	Access to parks	Heart disease deaths
Family size	Commute length	Access to groceries	Air quality
Multiple jobs	Access to transit	Low educational attainment	Collisions
Housing cost burden		Displacement	Overcrowded homes
		Older adults	Low employment benefits
		Internet access	

Next Steps

In upcoming Phase 1 work, Link21’s Business Case framework will be used to evaluate Program concepts against the Goals and Objectives. Each of the 12 Objectives is underpinned by metrics that measure the extent to which a given concept can provide desired outcomes. Some metrics will be measured by what portion of the projected benefits would accrue to PPs, in addition to the general population. The number and level of detail of metrics will increase as the Link21 program progresses.

For example, *enhance connectivity* is an Objective under the *promote equity and livability* Goal. There are five metrics under *enhance connectivity*, including availability/accessibility of rail options. In addition to assessing overall how many people could access rail under a concept, the Business Case will also determine what portion of those benefitting are from PPs.

PPs will also be considered in the creation of Program concepts, among other work.

The Link21 Team will revisit the PP definition at appropriate points in the Program schedule to see if additional community feedback, emerging practices, or newly available data should be incorporated.

Equity Vision Statement

An equitable Link21 Program (Link21) acknowledges the ongoing effects on access to mobility and opportunity that past infrastructure projects have had on impacted communities. It shows an understanding of how past projects have failed to adequately consider the needs of systemically marginalized community members, and it evaluates what barriers to rail access exist for low-income and Black, Indigenous, and People of Color (BIPOC) residents, as well as riders with disabilities, women, LGBTQIA+ passengers, and other historically underserved identities.

A fair and just Link21 partners with impacted communities to develop much needed transit benefits for priority populations* via co-creation, a process used to integrate the knowledge and expertise community members bring from their own lived experience directly into program decisions. This allows the program to stay flexible and responsive to emerging and changing needs over time.

Equitable transportation will give everyone the ability to travel safely, affordably, and reliably to work, school, healthcare and government services, family and friends, and other important places in their lives. It should be fast, clean, efficient, welcoming, and accessible for anyone. By following a more equitable process, Link21 will help advance more equitable transportation outcomes throughout the Northern California Megaregion (Megaregion).

*Link21 defines priority populations as the geographic areas where people are most impacted by negative economic, mobility, community, health, and safety outcomes. These outcomes are often correlated with race, ethnicity, gender, income level, and other historically underserved identities in the Megaregion.



LINK21

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Can the new transbay passenger rail crossing be a bridge?

Study Purpose: Assessment of a passenger rail bridge for Link21

The Link21 Team has conducted several important initial studies to address key technical issues that will help shape the future of Link21 planning.

Previous studies have shown that building an underground transbay passenger rail crossing is feasible, but would it be possible to build a new rail bridge or use the existing San Francisco-Oakland Bay Bridge instead? This initial study examined the possibility of using a bridge for the new transbay passenger rail crossing.

About Link21

Link21 and its partners will transform Northern California's passenger rail network into a faster, more integrated system, providing safe, efficient, and affordable travel for everyone. At the core of Link21 is a new transbay passenger rail crossing between Oakland and San Francisco that could be a second crossing for BART, a new one for Regional Rail, or both.

Link21Program.org



Key Findings

The new transbay passenger rail crossing must have logical locations for stations on either end and connect to existing or new tracks on either side of the San Francisco Bay. Exact connection points for the transbay crossing have not yet been determined. However, they do impact the possibility of a rail bridge.

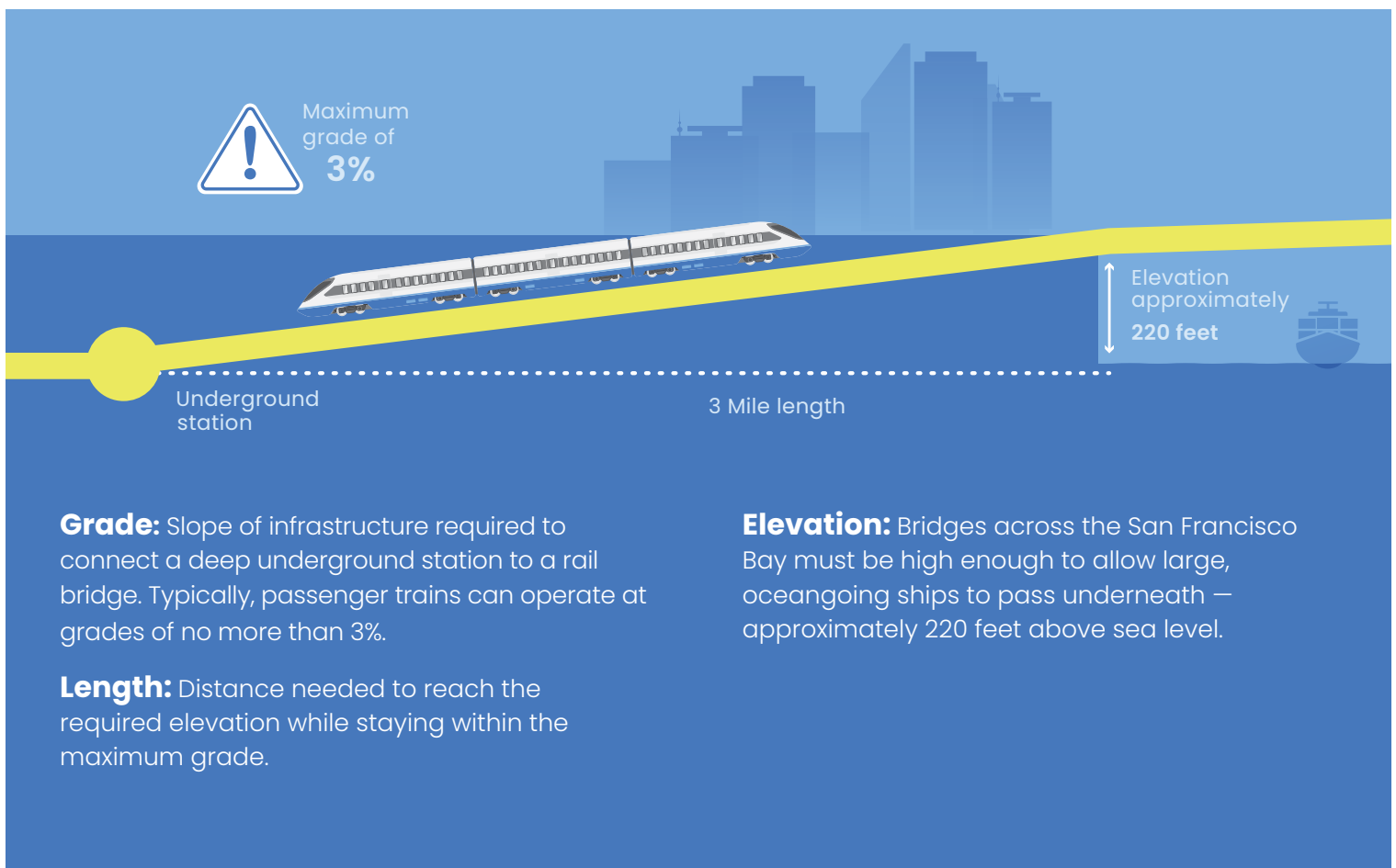
Here's why:

To connect in San Francisco at an existing or planned underground station, large infrastructure, such as trenches, ramps, and elevated structures, would be required to rise from the station platform to the bridge. While technically feasible to construct, this level of impact to the surrounding neighborhoods would likely be unacceptable.

Although rail ran on the Bay Bridge until 1958, the connection in San Francisco at that time was elevated to a second story station platform whereas the existing and planned stations in San Francisco today are underground.

Future Link21 planning will focus on an underground crossing for the Transbay Corridor that will meet Link21's Goals and Objectives while providing feasible connections and access to the underground stations in San Francisco.

For more information, visit Link21Program.org.



Grade: Slope of infrastructure required to connect a deep underground station to a rail bridge. Typically, passenger trains can operate at grades of no more than 3%.

Length: Distance needed to reach the required elevation while staying within the maximum grade.

Elevation: Bridges across the San Francisco Bay must be high enough to allow large, oceangoing ships to pass underneath — approximately 220 feet above sea level.



CONNECT NORTHERN CALIFORNIA

Will Link21 include new train technologies?

Study Purpose: Define train technologies that will be considered in Link21 planning

Link21 is focused on improving two different existing rail systems – BART and Regional Rail – so that the passenger rail network in the Northern California Megaregion (Megaregion) functions as an interconnected system. Several important initial studies have been conducted to address key technical issues that will help shape the future of Link21 planning. One initial study looked at modern train technologies and their ability to meet Link21’s Goals and Objectives, and to serve the needs of urban, commuter, and intercity rail travelers.

Megaregional Travel Needs

Today, neither BART nor Regional Rail technologies alone can efficiently serve all the Megaregion’s diverse travel needs. These systems have different performance characteristics and serve diverse travel needs.

BART is a fast, high frequency urban service with a lightweight, largely electric fleet operating best within the urban core and connecting San Francisco, the Peninsula, South Bay, and East Bay communities.

Regional Rail is a megaregional commuter and intercity service with a heavier fleet largely powered by diesel today, but can also be powered by electricity, hydrogen, or battery. This service operates on longer routes designed for less frequent stops and faster speeds to reduce overall travel time.



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Link21Program.org



Key Findings

Modern Regional Rail train technologies, common throughout Europe and Asia, typically use lightweight, zero-emission electric trains. These technologies are being considered for Link21.

Future train technology must be compatible with the existing train systems and deliver a range of rail services to help meet the transportation needs of people within the Megaregion.

Train technology under consideration will:



Integrate Systems to Enhance Rider Experience

Allow compatibility between the two systems serving both BART and Regional Rail ridership needs with a seamless transition between higher-speed megaregional routes and the urban core.



Connect People and Places to Improve Access

Improve megaregional connections through the new transbay passenger rail crossing by increasing the number of places that are accessible between the Sacramento and San Joaquin regions, and San Francisco, the Peninsula, and the South Bay.



Reduce Emissions to Improve Air Quality

Support environmental stewardship by replacing existing diesel-powered Regional Rail trains to reduce greenhouse gas emissions by the time the new crossing is in service.



High-performance, zero-emission trains, like those in the future Caltrain fleet, could support Link21's goals and needs.

Future Link21 planning will focus on further evaluation of high-performance, zero-emission train technologies that have the potential to achieve Link21's Goals and Objectives. Link21 is working with the state of California on technology considerations as the leader of procurement of zero-emission rail vehicles for intercity passenger rail. Within the Link21 planning efforts, only systems compatible with BART and existing Regional Rail systems are going to be considered.

**For more information,
visit Link21Program.org.**



APPENDIX B. STAGE GATE REVIEW MEETING NOTES

- Peer Industry Expert Review
- BART/CCJPA Staff Review
- Executive Review

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PEER INDUSTRY EXPERT REVIEW MEETING NOTES (12/14/2021)

Chair and Panel in Attendance

The Peer Industry Experts review panel includes five industry subject matter experts, all who are on the Link21 Program Management Consultant Team, who are familiar with, but not actively involved, in Link21 and can challenge constructively, add value, and have knowledge of the issues faced during the development phase of similar programs.

Review Panel

- Peter Gertler, HNTB (**Chair**)
- Jeff Morales, InfraStrategies (**Vice**)
- Alasdair Dawson, Steer
- Caroline Flowers, InfraStrategies
- Darlene Gee, HNTB
- Simon Whitehorn, Network Rail Consulting
- Thomas Jenkins, HNTB

Recommendations and Actions Recorded

STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
1	For future reviews, clarify the years of analysis for each of the Business Cases: cost-benefit analysis (the Economic Case) will be carried out for an extended evaluation period with benefits starting from 2040, the progress towards objectives (Strategic Case) will be evaluated for a single year, 2050.	Complete
	Once complete, an excerpt from the Strategic Case Framework should be shared with the panelists.	To be addressed once complete
	Future documentation and presentations for decision-makers should include clear maps and representation of projected future growth.	Complete
2	Age should be included in the demographic slide under Statement 2.	Complete
	For future reviews, and particularly the BART/CCJPA boards presentations, further emphasis should be given to demonstrating the effectiveness of Link21's engagement and outreach.	Complete

DRAFT - DELIBERATIVE



STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
3	The wording “competitive with BART” should be reviewed for clarity to avoid confusion or impression of bias.	Complete
	The wording of the section entitled “ideas not advancing to Phase 1” should be reviewed to improve clarity.	Complete
	In advance of the BART/CCJPA board decision, the conclusions of supporting documentation should be reviewed to include an aligned statement with Stage Gate 1.	Complete
	The location and narrative framing of the recommendation regarding an auto-crossing should be reviewed to improve clarity.	Complete
4	The organization chart diagram should be reviewed to clarify a relationship between the Collaboration Council and the wider Link21 Program.	Complete

Record of Concurrence

The panel concurred with the four statements subject to actions and recommendations noted, allowing the Stage Gate to:

Progress to BART/CCJPA Staff Review, noting actions and recommendations above.

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BART/CCJPA STAFF REVIEW MEETING NOTES (1/14/2022)

Chair and Panel in Attendance

The BART/CCJPA Staff Review panel included senior managers from the San Francisco Bay Area Rapid Transit (BART) and Capitol Corridor Joint Powers Authority (CCJPA), representing executive offices that have been involved with the advancement of Link21 today. This allowed Link21 to be reviewed from subject matter experts within the two organizations sponsoring the program. Panel members were asked to provide concurrence with the key statements and inform the chair’s decision to proceed to the Executive Review with the opportunity to note actions, recommendations, and risks.

Review Panel

- Sadie Graham, BART (**Chair**)
- Camille Tsao, CCJPA (**Vice Chair**)
- Jim Allison, Planning, CCJPA
- Emily Alter, Office of Civil Rights, BART
- Joel Cox, Civil and Structural, CCJPA
- Kim Koempel, Real Estate and Property Development, BART
- Hannah Lindelof, Strategic Planning, BART
- Priya Mathur, Office of Performance and Budget, BART
- John McCormick, Operations Planning and Analysis, BART
- Lyn Williams, Strategic Engineering, BART
- Amanda Cruz, Government and Community Relations, BART

Recommendations and Actions Recorded

STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
1	The Stage Gate presentation and notes will be reviewed to reference how the program will consider rail freight operations.	Complete
2	The Stage Gate presentation and notes will be reviewed to reference how the program will consider fare pricing.	Complete
3	A meeting will be booked with LW to directly discuss the auto crossing in further detail.	Complete

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STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
4	Future Stage Gate reviews will include illustration of the program's cash flow and indication of when sources would expire.	Complete
4	Statement 4 will be modified to include an explicit reference to program funding. "The program has the people, processes, <u>funding</u> , and tools to support progress through Phase 1."	Complete

Record of Concurrence

The panel concurred with the four statements subject to actions and recommendations noted, allowing the Stage Gate to:

Progress to Executive Review, noting actions and recommendations above.

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EXECUTIVE REVIEW MEETING NOTES (1/28/2022)

Chair and Panel in Attendance

The BART/CCJPA Executive review panel included executives from San Francisco Bay Area Rapid Transit (BART) and Capitol Corridor Joint Powers Authority (CCJPA), representing offices across the two organizations. The review was informed by previous reviews by industry experts and BART/CCJPA staff. Panel members were asked to provide concurrence with the key statements, with the opportunity to note actions, recommendations, and risks. This concurrence is to inform the Chair’s decision to proceed to the BART and CCJPA Boards with the Stage Gate recommendations.

Review Panel

- Bob Powers, BART (**Chair**)
- Rob Padgette, CCJPA (**Vice Chair**)
- Pamala Herhold, Performance and Budget, BART
- Sylvia Lamb, Engineering, BART
- Alicia Trost, Communications, BART
- Rod Lee, External Affairs, BART
- Val Menotti, Planning and Development, BART
- Leo Sanchez, CCJPA
- Maceo Wiggins, Office of Civil Rights (OCR), BART

Recommendations and Actions Recorded

STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
1	The Stage Gate presentation and notes will be reviewed to reference how the Program metrics will be considered against a ‘no build’ baseline in the next Phase.	Complete
2	Further information on the Co-creation work undertaken on the Program is available on request for the Executive Panel.	Available at Panelists’ request
3	A Dual-gauge concept will be addressed in Phase 1.	Action for Phase 1
	The Stage Gate presentation and notes will be revised to better explain the reasoning for the Transbay rail bridge crossing concept not advancing to Phase 1.	Complete
	The Stage Gate presentation and notes will be reviewed to better explain how the Program will explore areas of mutual benefit with freight operators.	Complete

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STATEMENT	ACTIONS AND RECOMMENDATIONS	TIMESCALE FOR COMPLETION
	There should be a clear understanding of the resource implications, particularly on BART/CCJPA staff numbers and skill requirements, as the program grows and changes.	Recommendation for Phase 1
4	Quality Management should be included as a specific item on the slide showing the list of processes being undertaken on the Program.	Complete
	Link21 should work with the BART Performance and Budgets and External Affairs Offices in future positioning for any Regional Funding measures that support future opportunities for Link21 Funding.	Recommendation for Phase 1

Record of Concurrence

The panel concurred with the four statements subject to actions and recommendations noted, allowing the Stage Gate to:

Progress to Board Decisions, subject to actions completed above.

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Throughout another challenging year, the Capitol Corridor maintained reliability and as continued to work towards rebuilding and expanding its service.

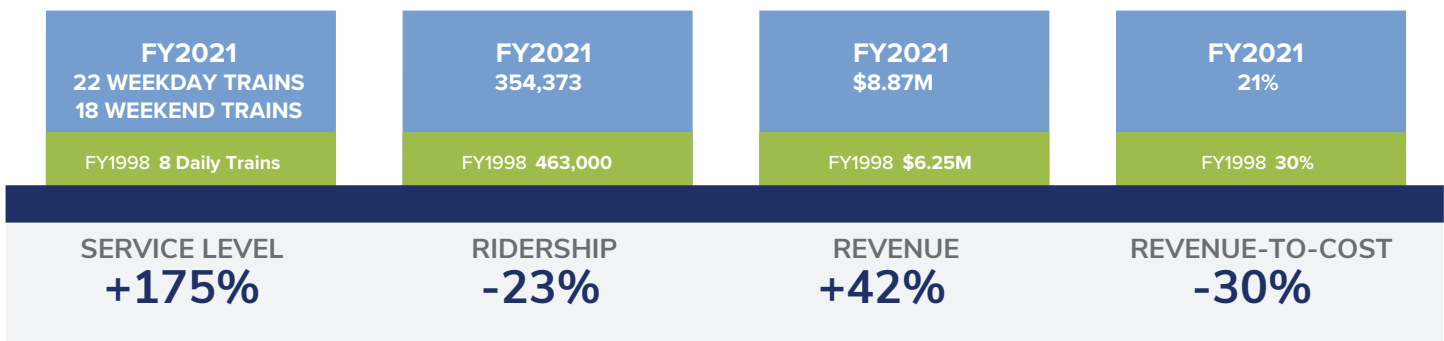
FY2021 PERFORMANCE REPORT

Welcome Aboard

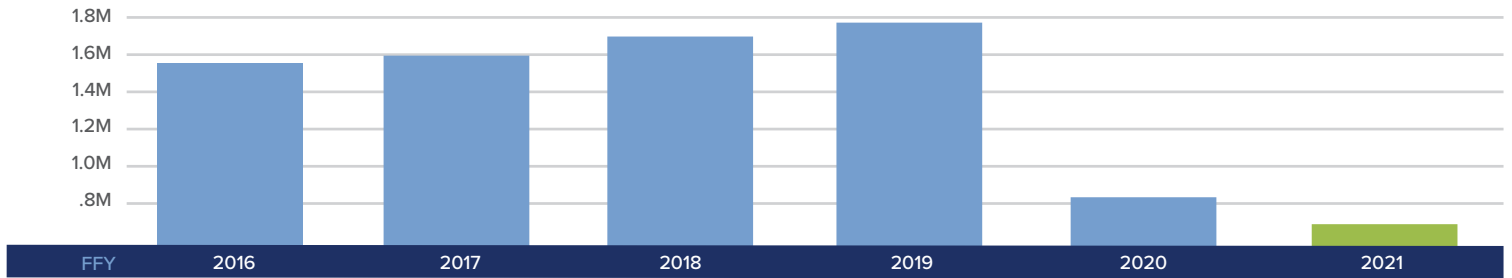
While FY2020 saw Capitol Corridor Joint Powers Authority (CCJPA) responding to the initial stages of COVID-19, in FY2021 CCJPA found itself still grappling with the pandemic's ongoing effects. Public health conditions necessitated continued travel and social restrictions early in FY2021. With the rollout of vaccines starting in January 2021, we planned for an anticipated ridership recovery. Federal and State support aided in the ability to increase service levels from 16 to 22 daily trains; restore Café Car service for all trains; and reach new milestones with projects that support the short- and long-term vision of the Capitol Corridor service. Despite the challenges our service faced due to the pandemic, FY2021 is a year in which we never stopped our service for even one day; reclaimed a 90% on-time performance (OTP) standard; created direct daily service between Auburn and San Jose; and came together with the leaders from San Joaquin Joint Powers Authority (SJJPA) and Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN) to reassure our collective riders of the resiliency of California rail.



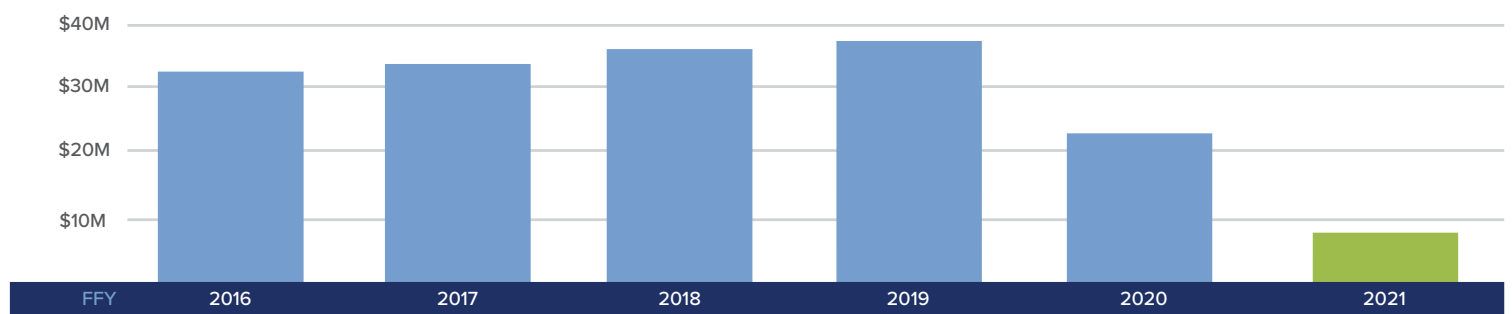
23 Years of Results



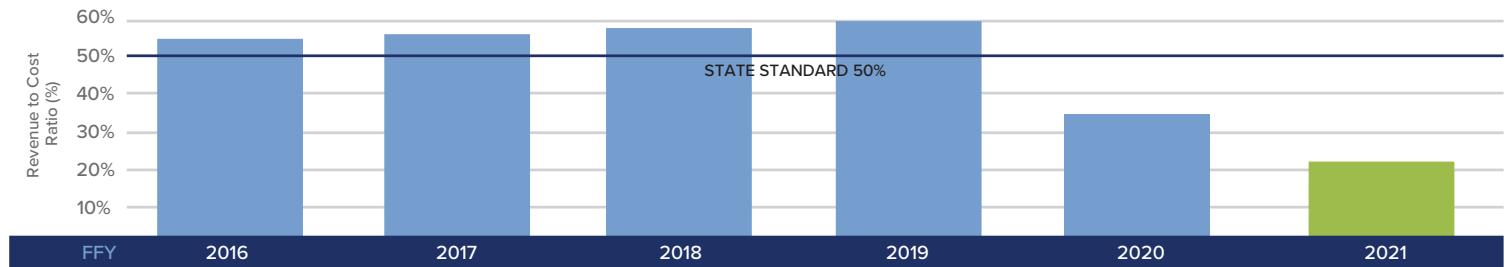
Ridership



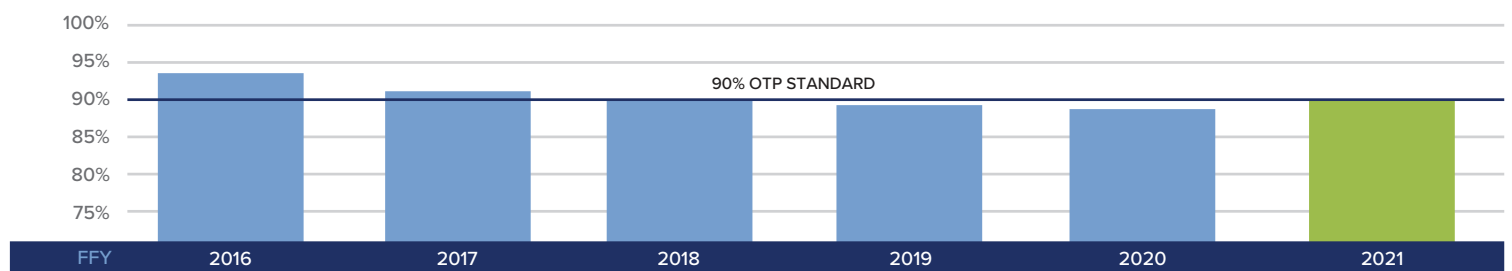
Revenue



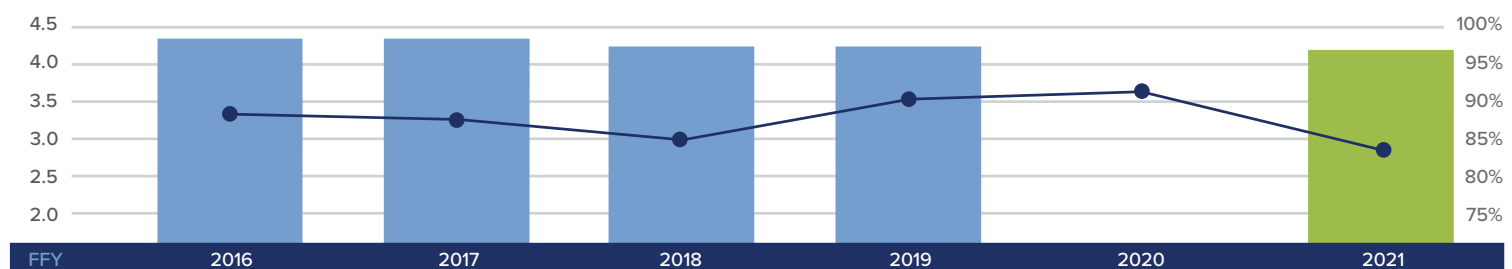
Farebox



On-Time Performance



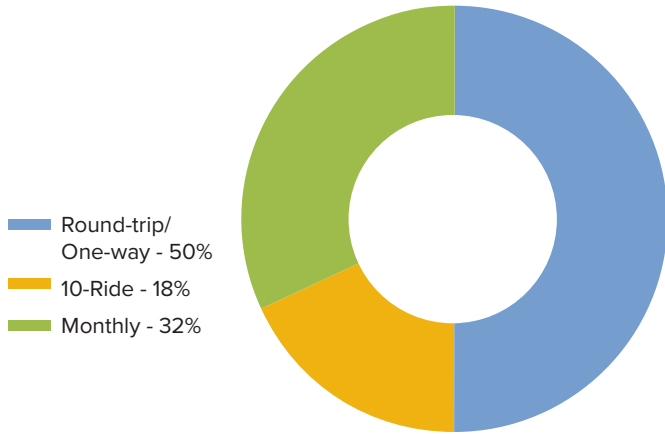
Overall Satisfaction



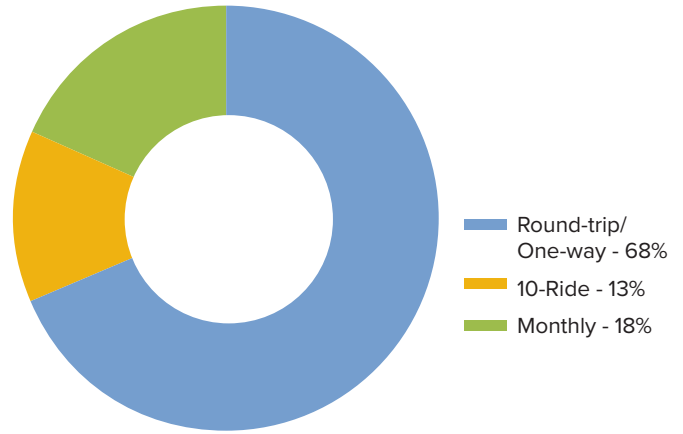
● = AVERAGE ANNUAL SCORE BASED ON BIENNIAL CCJPA ON-BOARD SURVEYS

Rider Profile

Ticket Type – FFY19



Ticket Type – FFY21



Since the pandemic, ticket purchases have significantly shifted in favor of round-trip/one-way trips, showing that riders are traveling with reduced frequency and perhaps are uncertain about future travel needs

Ticket Purchase

80% Internet & Mobile
17% At Stations
3% Other

Top 3 Origin and Destination City Pairs

Emeryville – Sacramento
Oakland Jack London – Sacramento
Martinez – Sacramento

Busiest Trains

538
542
536

Service Levels

Over the course of FY2021, adhering to health and safety standards as well as meeting ridership demands, the Capitol Corridor service saw a total of 8 train and connecting bus schedules changes. Each change was an effort to optimize our performance. The schedule change on March 29, 2021, was one of the most impactful since the initial reduction in March 2020. Its highlights included:

- Phase one of a "pulse" schedule with more predictable departure times after the hour (e.g. 5:11 pm, 6:11 pm...) for select trains
- Daily direct service between Auburn and San Jose
- Reduced midday gaps between trains
- Return of a sixth round-trip between San Jose and Oakland

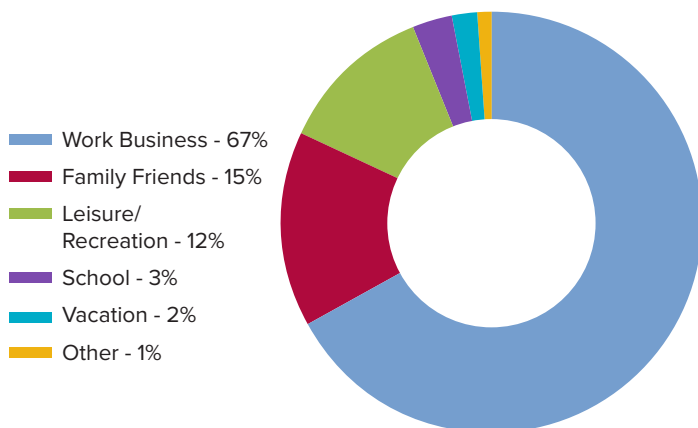
Market Segmentation

As part of the State's service recovery efforts, Caltrans initiated a market segmentation study to benefit the three JPA's, with a goal of informing the JPA's ridership recovery marketing campaigns with data and insight on customer lifestyles and behavior. The resulting persona outputs highlight the propensity to ride intercity rail for both leisure travel and commuting by market segment.

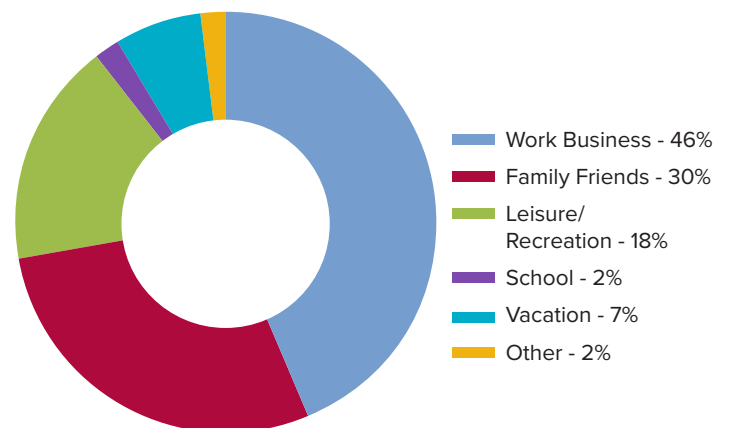
Rider Profile

Despite low ridership throughout FY2021, we never lost sight of our rider experience and explored opportunities to learn and share their journeys. Prior to the availability of vaccinations, we wanted to hear what it was like traveling on the train and shared their stories in a profile, "Riding Through a Pandemic." Historically, CCJPA administered an annual on board survey to passengers to gain insight into their trip purpose, travel frequency, station access and egress, demographics, etc. While we were unable to conduct last year's survey due to the pandemic, health conditions improved sufficiently for us to resume the on-board survey for FY2021. In June 2021, 1,079 passengers provided feedback on their Capitol Corridor experience.

Rider Profile – FFY19

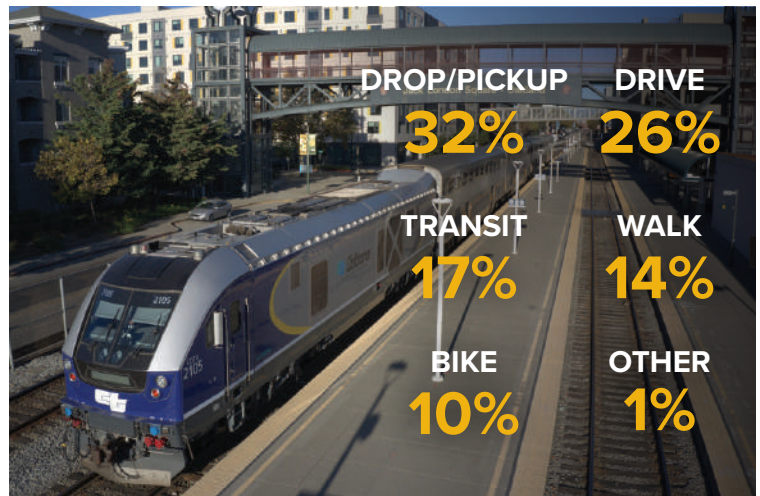


Rider Profile – FFY21



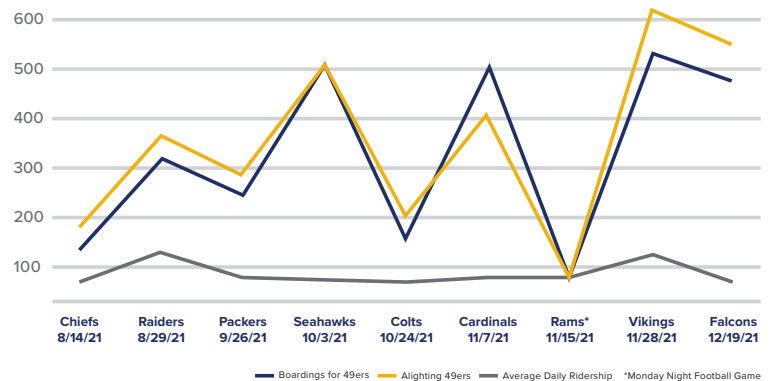
Café Car Returns

Due to health concerns, one of our riders' favorite amenities was unavailable throughout the majority of FY2021; however, on June 14, 2021, the Café Car returned with a limited menu and featuring a new custom product. Working in collaboration with the SJJPA, the CCJPA unveiled a co-branded snack box for passengers to enjoy.



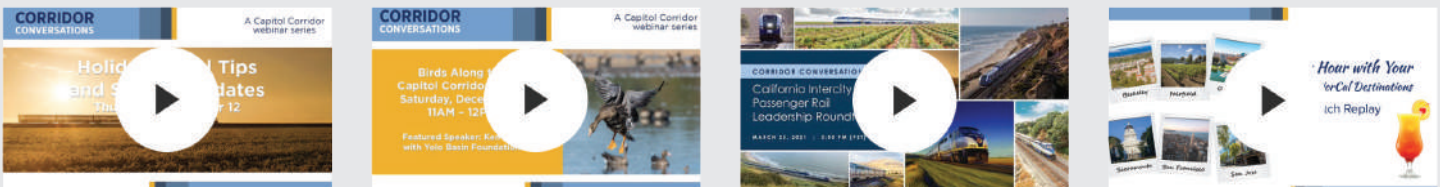
49ers Home Games Boosted Ridership

With so many riders yet to return to the train, digital engagement has become an increasingly important means of staying connected, which we have embraced through *Corridor Conversations* in addition to reformatting some of our business process including our Virtual Business Plan Meetings. Those riders who were anxious to get back out on the rails were not disappointed, particularly San Francisco 49ers fans who proved their loyalty to not only the team, but also the Capitol Corridor.



Corridor Conversations

What began as a forum for providing service updates, our webinar series expanded throughout the year to include education and destination-themed content, which is all available for replay:



Community Relations

Last year CCJPA affirmed its commitment to racial equality and utilized its resources to bring awareness to and uplift diverse communities. Our continued efforts in this area are exemplified in our work:

- We Stand Against Racism: Stand Against Anti-Asian Pacific Islander Violence
- Hispanic Heritage Month





CC Rewards

As a follow up to our student rewards program, Stride On Board, CCJPA launched a new loyalty program, CC Rewards, which is open and free to every member of our Capitol Corridor community. In addition to having access to discounts from local vendors along our route, CC Reward members received a private offer of 50% Off Weekends, including Friday travel.

Offers and Promotions

In consideration of the various health and safety restrictions by county, traditional marketing efforts were paused until early summer, when we released a *Summer of Savings* with some of our favorite, and even some new, offers. Since many employers still had limited in-person schedules, our promotional offers focused on the opportunity area of off-peak/weekend leisure markets. Offers included:



TAKE 5 FOR \$5 ON WEEKENDS



SENIORS RIDE HALF-OFF MIDWEEK



CC REWARDS 50% OFF WEEKENDS



30TH ANNIVERSARY 30% DISCOUNT

Customer Experience

As travel restrictions relaxed and vaccinations became more widely available, essential workers found themselves in good company with an increasing number of business and leisure riders. To celebrate their return, riders could enter our #CCBackOnBoard contest by snapping a picture of themselves at a station or on board the train. Over the past year, those who were new or returning to the Capitol Corridor also experienced several changes and enhancements impacting our service.



EL DORADO TRANSIT
El Dorado Transit became the new operating agency for the Capitol Corridor's connecting bus service between Sacramento and South Lake Tahoe.



NEW CHARGER LOCOMOTIVES
Two new, Tier IV Charger locomotives were added to the Capitol Corridor fleet, replacing a pair of older EPA Tier II F-59 locomotives. This brings our fleet to a total of 10 Tier IV locomotives.



THANKSGIVING 2020
During the week of Thanksgiving, November 23-30, 2020, reservations were required to travel during what is traditionally our busiest travel time of the year.



FLEXIBLE FARES
One-way and round-trip tickets moved to Flexible Fares—fully refundable without any change or cancellation fees, if canceled prior to the passenger's original departure date.

Projects

Throughout the year, efforts to ensure the short- and long-term success of the Capitol Corridor remained a priority. Reinvestment in the maintenance of our equipment, with projects such as new door panels and HVAC overhauls promote the reliability of our service.

Innovative problem-solving provide a glimpse into the future of the Northern California Megaregion, which will become a more connected transportation network through programs like Link21 and South Bay Connect. And proper groundwork has been laid so that riders will experience expansions and modernizations of our service as planned with the Sacramento-Roseville Third Track and California Integrated Ticketing projects.

Support for rail-related projects and initiatives at the state and federal levels has never been stronger and will undoubtedly promote the vitality and longevity of the Capitol Corridor service now and into the future.



On Wednesday, July 7th, 2021, Rob Padgette and Leo Sanchez hosted Representative Ro Khanna of CA-17 at the Santa Clara-Great America station to provide him with information about the Capitol Corridor's Agnew Siding Project. Representative Khanna supported \$6.6M in project funding for inclusion in H.R. 3684 INVEST in America Act. If the Legislation is approved, this funding, together with the existing \$3.5M of committed State funding, would allow the Capitol Corridor and Altamont Commuter Express (ACE) to complete work by the end of 2022. The Agnew Siding Project will reduce train delays, improve road congestion, and combat climate change.

Link21 Program

Funding: TIRCP, Annual State Supplemental (BART Measure RR, RM3) Allocation

EXPERIENCE **ENVIRONMENT**

Link21 is working with the California State Transportation Agency (CalSTA) and other agency partners to transform Northern California's passenger rail network into a faster, more integrated system, providing safe, efficient, and affordable travel. At the core of Link21 is a new Transbay passenger rail crossing between Oakland and San Francisco, as well as other improvements to the BART and the regional rail network, which includes Capitol Corridor and other operators. These improvements will make rail travel more attractive and reliable and provide better access to jobs and housing in the Northern California Megaregion. By shifting more trips from automobiles to modern zero-emission trains, we will help the region and State meet its greenhouse gas reduction goals.

2019 Funding awarded to survey project impact on employers and workforce demands

2020 Hire staff dedicated to managing project, Embark on 21-county market analysis

2021 Rename program Link21, launch website, Bay Area Council Economic Institute issues report on a new rail crossing's benefit to the Megaregion, conduct two rounds of outreach with priority populations and the general public

2022 Program Development

2024 Define and Prioritize Projects

2028 Begin Design / Project Delivery Phase

2040 New crossing opens for revenue service

California Integrated Ticketing

Program (Cal ITP) Funding: TIRCP

EXPERIENCE

CCJPA is managing a CalSTA and Caltrans-led, multi-agency initiative to research, develop and implement an Integrated Travel Program (Cal ITP) that will enable California residents and visitors to plan and pay for travel across multiple modes of transportation, including bus, metro, light and intercity rail, paratransit, bike hire, and ride-hailing services in California.

2016 Case study of European models of integration and fare policies

2018 Cal ITP forum for sharing lessons learned

2019 Team assembled to build framework for comprehensive Cal ITP

2021 First trials of EMV payment and GTFS programmatic support launched

Sacramento-Roseville Third Track Service Expansion Project

Funding: TIRCP, Prop 1A, Prop 1B

ENVIRONMENTAL EXPERIENCE

With the addition of a third railroad track between Sacramento and Roseville, the Capitol Corridor would be able to increase frequencies between the two stations. An overnight train layover/servicing facility will also be a part of the project.

2015 Environmental phase complete

2016 Awarded \$87M from TIRCP, Prop 1A and 1B towards project design and construction

2021 25% design complete

2022 Phase one final design to be complete

2023 Phase one construction to begin

Peoplesense Trials

Funding Source: CCJPA & TIRCP Project Impact (Environmental, Rider Experience, or Safety)

EXPERIENCE

Real-time person counting using machine learning techniques and artificial intelligence methods to provide passengers real-time and predictive car by car occupancy counts and also assist in conductor fare collection and overall passenger analytics via a real-time database that can be easily queried.

Key milestones:

2018 Initial portable device testing – phase one

2019 Trainset based remote testing – phase two

2021 Machine learning/artificial intelligence and GTFS occupancy development – phase three

2022 Commercial deployment – final phase

South Bay Connect

Funding Source: TIRCP Project Impact (Environmental, Rider Experience, or Safety)

EXPERIENCE

South Bay Connect proposes to relocate Capitol Corridor service between Oakland Coliseum and Newark from the current route on the Union Pacific (UP) Niles Subdivision to the UP Coast Subdivision, which could save up to 13 minutes of travel time between Oakland and San Jose. The project also intends to facilitate new transbay connections via a new Ardenwood rail station for Capitol Corridor passengers between the East Bay and the Peninsula, an underserved market for the Capitol Corridor service. Key milestones:

2019 Project Definition Report completed

2020 Environmental documentation and review process initiated with Notice of Preparation of an Environmental Impact Report (EIR)

2021 Draft EIR expected to be released

2023 Final EIR expected to be adopted

2025 Construction expected to begin

2028 Construction expected to finish and project operational

SR 84 Intermodal Center

Funding Source: TIRCP Project Impact (Environmental, Rider Experience, or Safety)

EXPERIENCE

As a companion project to South Bay Connect, it builds vertical circulation from the Ardenwood rail station to directional bus stops aligned and on SR 84. The proximity of the bus stops to the rail will vastly improve bus travel times and facilitate movement between rail and bus services connecting from East Bay to the Peninsula.

Key milestones:

2021 Required Caltrans Documentation developed

2022 CEQA Environmental documentation and review process initiated

2022 Design documentation commences

2025 Construction expected to begin

2028 Construction expected to finish and project operational

Agnew Siding Improvement Design

Funding: SRA, TIRCP

EXPERIENCE SAFETY

This project creates a new place for trains to meet and pass south of the Great America Station, easing train congestion in the South Bay. Trains that have been impacted by congestion will see these related more than once delays reduced to less than daily on average and to a few minutes from an average of 13 minutes.

2019 Final design started

2022 Final project design to be completed

2023 Construction to begin

Passenger Information Display System (PIDS) Modernization

Funding Source: SRA Project Impact
(Environmental, Rider Experience, or Safety)

EXPERIENCE

The existing PIDS was designed and implemented in the early 2000's, and both software and hardware have been in use without major upgrades since then. The PIDS Modernization project will implement a new PIDS with new software and hardware that improves upon the functionalities of existing PIDS.

Key milestones:

2020 Software development began

2022 Implementation at stations to begin

Carquinez High Level Crossing Studies

Funding Source: TIRCP and TBD Project Impact
(Environmental, Rider Experience, or Safety)

ENVIRONMENTAL EXPERIENCE

The lifting of the current Benicia-Martinez Rail Bridge is a current source of delays and causes trains to get out of slot. Any expansion of Capitol Corridor service between Oakland and Sacramento would be limited by the nature of the current lift bridge and how the waterway is used for marine traffic. The study is to begin the process of establishing alternative high-level (non-lift) rail bridge options across the Carquinez strait which can be the basis of future project development phases.

Key milestones:

2021 Developed funding package and initial studies scope

2022 Examine feasible and viable high-level options via a study – phase one

2023 Narrow options via a deeper study and present options to leadership at CCJPA and CalSTA – phase two

2024 Fund project development phases in environmental and initial design

2027 Complete CEQA/NEPA project development and 30% design

2029 Complete 100% design

2030 Commence construction

2033 Complete construction of a viable high-level bridge replacement with approaches

Davis Station Improvement Project

Funding: PTA SRA, CCJPA Revenue Above Budget

EXPERIENCE SAFETY

CCJPA is collaborating with Amtrak and Union Pacific for track and signal upgrades. This is the first phase of a larger future project of improvement initiatives at Davis Station that will improve safety and ADA access with a center island platform.

2019 \$4M committed for track and signal upgrades

2021 Platform replacement design kickoff

2022 Track and Signal design completion

2023 Track and signal upgrade completion

2026 Platform replacement completion

Surfliner Door Panel Replacement

Funding: Caltrans Division of Rail and Mass Transportation

EXPERIENCE **SAFETY**

Over time, there has been an increase in delays associated with the existing door panels on 22 Surfliner rail cars; the door panels are in need of replacement due to age. The new door panels will mitigate related delays, be more secure, and offer a quieter ride by reducing exterior noise.

- 2019** Procurement of new door panels for 22 Surfliner cars
- 2020** Installation of door panels to begin after Thanksgiving Holiday period
- 2021** Project completion

Renewable Diesel

Funding: CCJPA Operating Budget

ENVIRONMENTAL

In collaboration with the California Air Resources Board (CARB), CCJPA has identified and is currently testing alternative fuel options that will work with Tier 4 Charger locomotives which operate with high-pressure fuel systems.

- 2016** Exploration of alternative fuel options
- 2017** Renewable fuels tests on F-59 locomotives
- 2019** Renewable fuels tests on Tier 4 Charger locomotives
- 2020** Renewable testing suspended for 3 months due to covid service reductions. Currently are just past halfway completed and schedule to complete testing by May 2021
- 2021** Run time testing completed
- 2022** Evaluation of system engine parts



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Cheryl Maki (Alt.)

Sacramento Regional Transit District

Kerri Howell
Steve Miller
Steve Hansen (Alt.)
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