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## MEETING OF THE

# REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE

***Monday, January 30, 2023  
10:00 a.m. – 12:00 p.m.***

**\*\*\*ZOOM AND TELECONFERENCE ONLY\*\*\***

### **VIDEOCONFERENCE AVAILABLE**

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TO JOIN THE MEETING: <https://scag.zoom.us/j/220315897>

CONFERENCE NUMBER: +1 669 900 6833

MEETING ID: 220 315 897

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Priscilla Freduah-Agyemang at (213) 236-1973 or email [agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov)

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 630-1402. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.

**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE  
AGENDA  
Monday, January 30, 2023**

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*The Regional Transit Technical Advisory Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.*

**1.0 CALL TO ORDER**

*(Jennifer Nguyen, Riverside Transit Agency, Regional Transit TAC Vice Chair)*

**2.0 PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Regional Transit Technical Advisory Committee, must fill out and present a speaker’s card to the assistant prior to speaking. Comments will be limited to three minutes. The chair may limit the total time for all comments to twenty (20) minutes.**

**3.0 RECEIVE AND FILE**

**Time Page**

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3.2	<u>2023 Regional Transit Technical Advisory Committee Agenda Look Ahead</u> (Priscilla Freduah-Agyemang, SCAG)	8
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3.4	<u>Transit Ridership Update</u> (Krista Yost, Assistant Regional Planner, SCAG)	12
3.5	<u>Federal Transit Administration (FTA) Fiscal Year (FY) 2023 Triennial Reviews, Section 5307 Program Requirements</u> (Priscilla Freduah-Agyemang, SCAG)	18
3.6	<u>Mobile Source Air Pollution Reduction Review Committee (MSRC) Request for Proposals for Microtransit Services Program</u> (Krista Yost, Assistant Regional Planner, SCAG)	21
3.7	<u>Metro Visionary Seed Fund</u> (Krista Yost, Assistant Regional Planner, SCAG)	22
3.8	<u>Transit Operators’ Final Draft Budget Letter to State Leaders</u> (Priscilla Freduah-Agyemang, SCAG)	23

**REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE  
AGENDA  
Monday, January 30, 2023**

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**4.0 INFORMATIONAL ITEMS**

4.1	<b><u>MAP-21 Regional Transit Safety Target Setting Update</u></b> (Jonathan Overman, Cambridge Systematics)	20	30
4.2	<b><u>Hydrogen Fuel Cell Bus Deployment – Foothill Transit</u></b> (Roland Cordero, Foothill Transit)	20	49
4.3	<b><u>Connect SoCal 2024 Updates</u></b> (Priscilla Freduah-Agyemang, SCAG)	15	65
4.4	<b><u>Regional Dedicated Transit Lanes Study Final Report</u></b> (Priscilla Freduah-Agyemang, SCAG)	15	78
4.5	<b><u>SCAG Draft Clean Transportation Technology Policy</u></b> (Alison Linder, Senior Regional Planner, SCAG)	15	102

**5.0 STAFF REPORT**

**6.0 ADJOURNMENT**

*The next Regional Transit Technical Advisory Committee meeting is tentatively scheduled for Wednesday, March 29, 2023.*

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Regional Transit Technical Advisory Committee (RTTAC)  
of the  
Southern California Association of Governments

November 30, 2022

**Minutes**

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**THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE REGIONAL TRANSIT TECHNICAL ADVISORY COMMITTEE (RTTAC). AN AUDIO RECORDING OF THE MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.**

The Regional Transit Technical Advisory Committee held its meeting telephonically and electronically given public health directives limiting public gatherings due to the threat of COVID-19 and in compliance with the Governor's recent Executive Order N-29-20. The meeting was called to order by Chair, Joyce Rooney, Beach Cities Transit.

**Members Participating:**

Joyce Rooney (Chair)	City of Redondo Beach/Beach Cities Transit
Jennifer Nguyen (V. Chair)	Riverside Transit Agency
Martin Tompkins	Antelope Valley Transportation Authority
Eric Hoch	City of Santa Monica Big Blue Bus
Sudesh Paul	City of Corona
Nicolle Aube	City of Huntington Beach
Diane Amaya	City of Redondo Beach/Beach Cities Transit
Ron Profeta	City of Riverside
Socorro Gomez	City of Riverside
Ben Gonzales	City of Simi Valley
Diana Chang	Culver City Transportation Department
Kaitlyn Zhang	Culver City Transportation Department
Joe Raquel	Foothill Transit
John Curley	Foothill Transit
Josh Landis	Foothill Transit
Austin Novstrup	Gold Coast Transit District
Chun Leung	Los Angeles DOT
Mariana Valdivia	Los Angeles DOT
Lori Huddleston	Los Angeles Metro
Randy Lamm	Los Angeles Metro
Teresa Wong	Los Angeles Metro
Christopher MacKechnie	Long Beach Transit
Marisol Barajas	Long Beach Transit
Shirley Hsiao	Long Beach Transit
David Huang	Metrolink (SCRRA)
Timothy Grensavitch	Montebello Bus Lines
Adrianna Kendricks	Montebello Bus Lines
Yessie Granados	Montebello Bus Lines
Alfredo Machuca	Montebello Bus Lines

Derek Donnell	Norwalk Transit System
Anna Jaiswal	Omnitrans
Jeremiah Bryant	Omnitrans
Jack Garate	Orange County Transportation Authority
Kim Tucker	Orange County Transportation Authority
Kurt Brotcke	Orange County Transportation Authority
Eric DeHate	Riverside County Transportation Commission
Tyler Nestved	Thousand Oaks Transit
Aubrey Smith	Ventura County Transportation Commission
Dolores Lopez	Ventura County Transportation Commission
Nicholas Redwine	Victor Valley Transit
Maurice Eaton	Caltrans District 11

**SCAG Staff:**

Philip Law	Steve Fox
Priscilla Freduah-Agyemang	Jonathan Hughes
Krista Yost	Jaimee Lederman
Camille Guiriba	Warren Whiteaker
Ingrid Villela	Jeff Cranmer
Buyan-Erdene Batbaatar	Mariana Estrada
Alexander Chin	Maya Luong

**1.0 CALL TO ORDER**

Joyce Rooney, Beach Cities Transit, called the meeting to order at 10:05 a.m. Attending agencies introduced themselves.

**2.0 PUBLIC COMMENT PERIOD**

No members of the public requested to comment.

**3.0 RECEIVE AND FILE**

- 3.1 Minutes of the August 31, 2022 RTTAC Meeting
- 3.2 Regional Transit Operators Forum
- 3.3 SCAG Transit Priority Best Practices Report
- 3.4 Connect SoCal 2024 Transit Operations and Maintenance Financial Forecast
- 3.5 American Public Transportation Association (APTA) Report on Transit Workforce Shortage, Root Causes, Potential Solutions and the Road Ahead
- 3.6 Federal Transit Administration (FTA) Dear Colleague Letter: Cutaway Rebuild Useful Life Waiver

Priscilla Freduah-Agyemang, SCAG staff, reviewed the Receive and File items and noted the Regional Transit Operators forum is available and any issues, comments and discussions are welcome.

#### **4.0 INFORMATIONAL ITEMS**

##### **4.1 Connect SoCal 2024 Updates**

Priscilla Freduah-Agyemang, SCAG staff, introduced the updates noting that the vision for Connect SoCal 2024 includes a healthy, accessible and connected region for a more resilient and equitable future. She noted a group of studies supporting the plan including the ADA Paratransit Demand Forecast Study, SCAG Integrated Freight and Passenger Rail Study, Mobility as a Service (MaaS) Feasibility White Paper, Regional Dedicated Transit Lanes Study and Metrolink’s Transit Oriented Development (TOD) Study. The new transit/rail infrastructure improvements were noted including L.A. Metro’s NextGen Bus Route redesign, the “K” light rail line connecting Los Angeles Airport, Redlands Rail Arrow service, the increased deployment of zero emission buses across the region, Metrolink’s Tier 4 locomotives and biodiesel as well as its SCORE improvements.

She reported that the region has a vast transit network with greater than 100 operators, passenger rail operators Amtrak and Metrolink, 33,485 miles of bus routes and three bus rapid transit corridors. Despite recent ridership declines, the transit/rail system remains a key component of the region’s plans for improving air quality and reducing greenhouse gas emissions. She noted bus ridership has not recovered from pre-pandemic levels while vehicle miles travelled (VMT) has more than recovered. Steve Fox, SCAG staff, continued the presentation stating that the 2024 plan includes updated efforts to meet federal and state mandates for air quality. The plan will also look at emerging technology such as Mobility as a Service, Mobility Hubs, Basic Mobility Wallet as well as dedicated lanes. He reviewed the regional planning framework, performance measures and timeline.

Jaimee Lederman, SCAG staff, presented the financial forecast for the plan. She noted a key element is to estimate funding needed over the 20-year plus life of the plan to implement recommended improvements and operate and maintain the transportation system. The plan also needs to be fiscally constrained. Operations and Maintenance analysis includes four categories: transit, passenger rail, the state highway system and regionally significant local streets and roads.

Camille Guiriba, SCAG staff, also reported on the plan’s technical methodology. She reviewed the methods to be used to develop the plan and achieve greenhouse gas reduction requirements.

##### **4.2 MOVE Culver City**

Diana Chang, Transportation and Mobility Manager, Culver City Transportation Department, shared the Move Culver City project. It was noted Culver City is a 5 square miles city with a population of 40, 779 and employment of 57,952. The transit service area is approximately 33 square miles. The goals for the project include rethinking mobility, connecting community, and enhancing quality of life with a view toward creating multi modal mobility choices for the public. The elements of MOVE Culver City include bus and bike lanes, gateway mobility hubs, bus stop improvements, placemaking asphalt art,

expanded mobility services, technology improvements, bus and bike platforms and transportation on demand.

She noted the first corridor improvement was completed November 2021, a 1.3 mile treatment from the Metro E Line light rail station toward Downtown Culver City and the Culver City Arts District. Bus and bike lanes were added in both directions. Lower cost and temporary materials were used to catalyze long term changes quicker utilizing paint, delineators, signs and bus/bike platforms. The build out time was 13 months. She reviewed performance indicators noting that bus ridership increased 52% in the corridor and 26% systemwide. Pedestrian activity increased 18% and 23% in the downtown area. Bike activity increased 32%. Ms. Chang reviewed the elements of the project success including city council support, extensive public outreach, quick build at lower cost and design agreement. She noted MOVE Culver City is an effort to change the mobility paradigm using a holistic approach.

Joyce Rooney, Beach Cities Transit, asked if signal timing and prioritization was needed at intersections. Ms. Chang responded that bike and bus signals were added at some intersections but had to be reevaluated in some cases to improve mobility.

#### 4.3 Antelope Valley Transit Authority (AVTA) Zero Emission Efforts

Martin Tompkins, Antelope Valley Transit Authority reported on their Zero Emission efforts. He noted AVTA is the first transit agency in North America to convert to 100% zero emission technology using 100% electric buses and transit vehicles. AVTA utilizes 44 (forty-foot) local transit busses, 13 (sixty-foot) articulated buses, 24 (forty-five foot) commuter vehicles and 8 (27 foot) micro-transit vehicles. Mr. Tompkins stated AVTA uses 89 electric charging stations for its fleet that covers a 1,200 square mile service area. Buses can travel 135 to 145 miles per charge while commuter vehicles attain 177 miles on a full charge. A backup generator was also acquired which can charge 15 buses. He noted operator training was also a key component to the conversion as well as unique software to monitor vehicle fuel usage and performance.

Mr. Tompkins reported in January 2023, AVTA will achieve 10 million electric miles traveled. Later in the year, it will receive 26 additional transit buses to replace existing vehicles and increase fleet size. Future plans include the purchase of 43 acres adjacent to its current facility to be used as a solar farm with battery storage to further reduce its carbon footprint.

#### 4.4 Microtransit Update – OC Flex

Jack Garate, OCTA, provided an update on OC Flex microtransit service. He reported OC Flex began in 2018 as an on-demand service available in two zones. The service provides rides within the zone as well as to key hubs where riders can transfer to other transit services. It is a wheelchair accessible service that customers can access and pay for the trip using a mobile phone application, or schedule with the app and pay at boarding. The

service is free for OCTA and Metrolink pass holders and day passes are available. He noted the service is currently operating in one zone. One service area was eliminated due to low ridership. OCTA identified five goals for micro transit including providing public transit mobility in low-demand areas, reduce total operating and capital costs, reduce vehicle miles traveled and extend the reach of the OC Bus and Metrolink services. He reviewed key performance metrics. Mr. Garate noted upcoming service changes include new contractors and technology modifications as well as updated market research to evaluate rider feedback.

## **5.0 STAFF REPORT**

### **5.1 Transit Target Setting Update**

Priscilla Freduah-Agyemang, provided a staff report on transit target setting. She noted data was sought from transit providers and encouraged agencies to share information.

### **5.2 High Quality Transit Corridor (HQTC) and Major Transit Stop (MTS) Update**

Steve Fox updated the group on the development of High-Quality Transit Corridors for Connect SoCal 2024.

### **5.3 2022 Transit and Intercity Rail Capital Program (TIRCP) Guidelines**

Steve Fox, provided an update.

## **6.0 ADJOURNMENT**

Joyce Rooney, Beach Cities Transit, adjourned the meeting at 11:58 a.m.



## **Regional Transit Technical Advisory Committee 2023 Agenda Look Ahead**

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The RTTAC meets quarterly on the fifth Wednesday of the month. The following is a tentative look-ahead to the proposed RTTAC agendas for 2023. It includes three standing items requested by the Chair and Vice Chair for:

- 1) Regulatory Compliance – items addressing compliance with MAP - 21 and FAST Act rulemakings, as well as state regulations including SB 375 or ARB fleet rules
- 2) Performance – items related to understanding why ridership has declined, and highlighting steps local agencies are taking to address these losses
- 3) Technology and Mobility Innovations – items related to transportation network companies, ITS, advanced technologies, and other mobility innovations

The discussion items below are proposed and speakers have not yet been contacted. Suggestions from RTTAC members are welcome.

### **Spring 2023 (March 29)**

- Regulatory Compliance Standing Item
  - Connect SoCal 2024 updates
  - MAP 21 Regional Transit Safety Target Setting Update
- Performance Standing Item
  - TBD
- Technology and Mobility Innovations Standing Item
  - California Integration Travel Project (CAL-ITP) update
  - LADOT LAnow Program Update
- VCTC Transit Integration and Efficiency Study (TIES)
- Metro NextGen Study and Recovery Plan Update
- Metrolink Transit Oriented Development (TOD) Study

### **Summer 2023 (May 31)**

- Regulatory Compliance Standing Item
  - Connect SoCal 2024 updates
  - MAP 21 Regional Transit Safety Target Setting Update
- Performance Standing Item
  - Transit Ridership Update
- Technology and Mobility Innovations Standing Item
  - Regional Microtransit update
    - OC Flex
    - Metro Micro
- SBCTA – Redlands Passenger Rail Project (Arrow) Update
- HQTC/A Mapping Update

**Fall 2023 (August 30)**

- Regulatory Compliance Standing Item
  - Connect SoCal 2024 updates
- Performance Standing Item
  - TBD
- Technology and Mobility Innovations Standing Item
  - MTS San Diego Bus on Shoulder Pilot Project
  - Regional Microtransit update
    - RTA Go Micro
- Transportation Network Company (TNC) Access for All Program Update
  - Metro
  - VCTC
- Metro Fare Capping Policy

**Fall 2023 (November 29)**

- Regulatory Compliance Standing Item
  - Connect SoCal 2024 updates
- Performance Standing Item
  - TBD
- Technology and Mobility Innovations Standing Item
  - Metro Mobility Wallet Pilot Update
  - VCTC Cal-ITP mobile ticketing and contactless payment initiative – update
- Metro I-405 corridor studies
- Metrolink Station Accessibility Study

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Southern California Association of Governments  
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017  
Agenda Item No. 3.3  
**January 30, 2023**

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**To:** Regional Transit Technical Advisory Committee (RTTAC)

**From:** Priscilla Freduah-Agyemang, Senior Regional Planner,  
213-236-1973, [agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov)

**Subject:** Regional Transit Operators Forum

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**DISCUSSION:**

This is to remind the RTTAC members of the SCAG regional transit operators' forum, which was launched in 2021. The community forum is a platform for operators to discuss relevant topics related to transit in the region.




The forum is a discussion space for transit operators in the SCAG region to continue to dialogue and exchange information, share best practices and receive feedback on transit service planning, operations, emerging trends and issues, share ideas on future projects, as well as give operators the opportunity to continue to engage in meaningful discussions and peer-learning experiences on variety of transit topics.

The membership is made up of the RTTAC members and is limited to agency staff from public transportation providers in the SCAG region and designees. Other membership to the site will be by request only, pending approval by SCAG staff. Every RTTAC member should have received an email with the link to the community.


SCAG wants to ensure the best experience for all members and has included some guidelines for members of the site. The guidelines include community rules, individual and group discussion etiquette, and information on privacy.

Please contact Priscilla Freduah-Agyemang, [agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov) or 213-236-1973 with any questions related to the forum. We also welcome any comments/thoughts on how to improve the site.

SharePoint

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## Regional Transit Operators Forum

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Welcome to the SCAG Regional Transit Operators Forum. This is a space for the transit providers in the SCAG region to exchange information, best practices and receive feedback on transit service planning, operations, emerging trends and issues, share ideas on future projects and offer the opportunity to continue to engage in meaningful discussions and peer-learning experiences on variety of transit topics.

We want to hear from you. Ask a question, Share your thoughts, Get smarter and help others. [Learn More](#)

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**Seeking Applicants for the FY21 round of the INFRA Grant Program**

 The USDOT recently announced that it is seeking applicants for the FY21 r...

By Priscilla Freduah-Agyemang   In [Grants/Funding](#)   February 25

**Community tools**

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**What's happening**

14 members



Southern California Association of Governments  
Remote Participation Only  
January 5, 2023

**To:** Transportation Committee (TC)  
Transportation Committee (TC)  
**From:** Krista Yost, Assistant Regional Planner  
(213) 630-1503, yost@scag.ca.gov  
**Subject:** Transit Ridership Update

EXECUTIVE DIRECTOR'S  
APPROVAL

**RECOMMENDED ACTION:**

Receive and File

**STRATEGIC PLAN:**

This item supports the following Strategic Plan Goal 3: Be the foremost data information hub for the region.

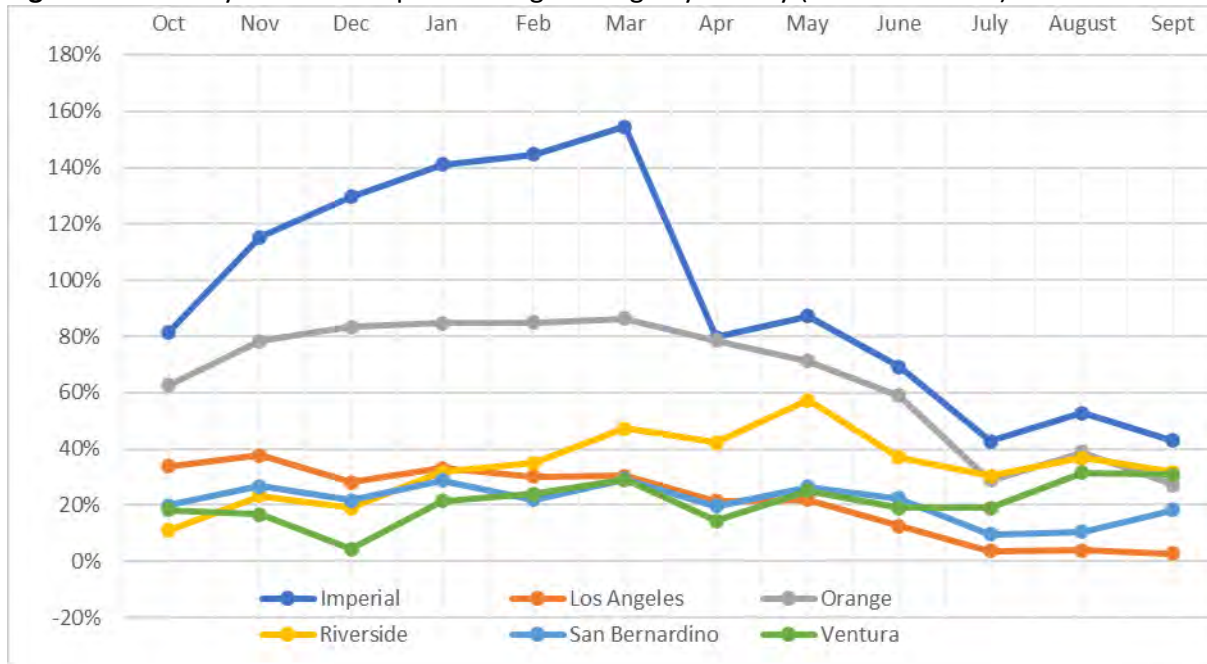
**EXECUTIVE SUMMARY:**

*Since before the pandemic, SCAG staff has monitored transit system performance and reported it to the Regional Transit Technical Advisory Committee and in Connect SoCal. In response to last summer's Transportation Committee member comments, staff committed to presenting quarterly transit ridership data for transit operators across the region. Though transit ridership has improved over the course of the past several years, it is still significantly less than it was prior to the pandemic. Overall, the region's bus ridership levels are currently 27% below what they were pre-pandemic. For Metro, bus and rail ridership have now recovered at a similar level when comparing September 2019 to September 2022 (down by roughly 30%). The issue with rail ridership recovery extends to Metrolink whose ridership is currently 60% lower than it was pre-pandemic at this time. Though some transit operators anticipate that higher gas prices and worsening traffic congestion may motivate more ridership, driver shortages present an immediate challenge and many remain uncertain of what the longer term future normal may look like, particularly if remote working remains a norm for discretionary riders who tend to take rail.*

**BACKGROUND:**

In response to past Transportation Committee member comments regarding transit ridership recovery, SCAG staff has prepared this update depicting the ongoing impacts of the COVID-19 pandemic on transit ridership. Figures 1 and 2 and Table 1 below reflect National Transit Database (NTD) information reported by urban Full Reporters. These graphics demonstrate that bus ridership levels have improved over the course of the past year, though they are nowhere near their pre-pandemic levels.

**Figure 1. Monthly Bus Ridership Percentage Change by County (Year-Over-Year)**



Source: National Transit Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release> as of September 2022.

Most counties in the region have experienced gains in transit ridership over the course of the past year, with Imperial County experiencing the most significant increase (43%, comparing September 2021 to September 2022), while San Bernardino and Los Angeles Counties are reflecting low to modest gains (18% and 3% respectively, comparing September 2021 to September 2022). The Counties of Riverside, Ventura, and Orange fall somewhere in between, with transit ridership gains of 32%, 31%, and 27% respectively, comparing September 2021 to September 2022. Regional bus ridership overall increased 6%, comparing September 2021 to September 2022. Note: the September increases across the board are lower than they were for the preceding months. For example, bus ridership overall increased 17% comparing June 2021 to June 2022 and 27% comparing May 2021 to May 2022.

**Table 1. Bus Ridership Change by Operator, Fiscal Year-Over-Year**

Bus Operator	Qtr2	Qtr3	Qtr4	Qtr1
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
Anaheim Transportation Network*	159150%	114607%	2659%	55%
Antelope Valley Transit Authority	25%	32%	23%	24%

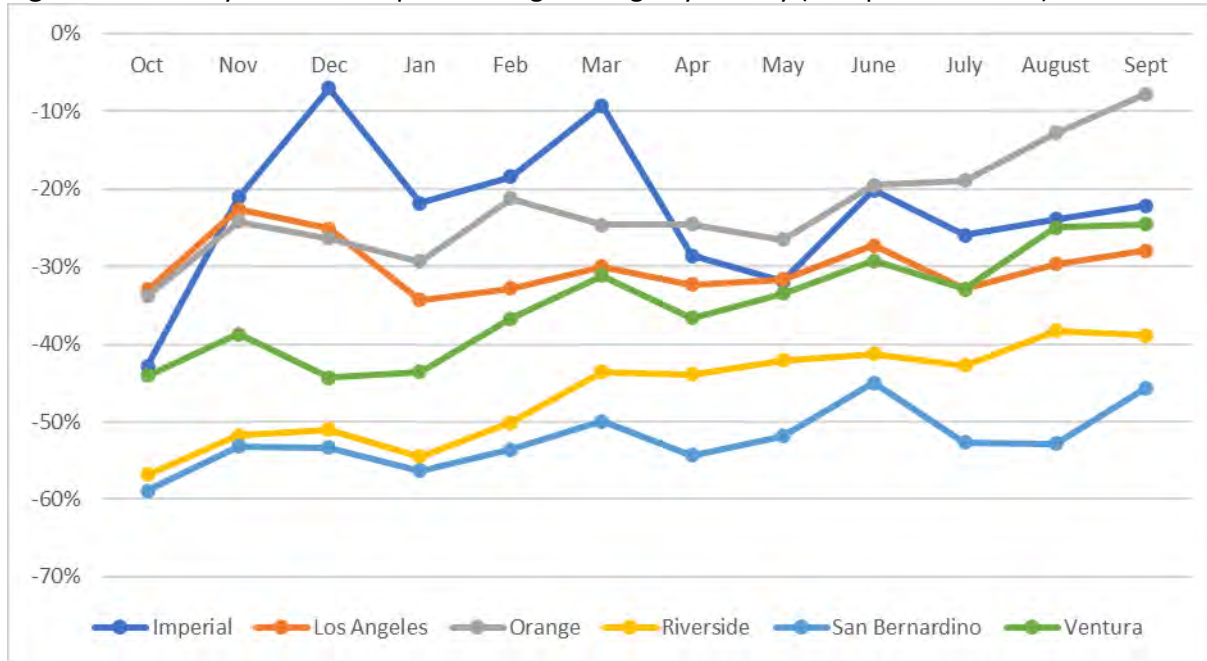
Beach Cities Transit (City of Redondo Beach)	99%	96%	43%	18%
City of Commerce Municipal Buslines	66%	149%	181%	155%
City of Glendale	44%	51%	54%	55%
City of Los Angeles Department of Transportation	35%	44%	48%	18%
City of Pasadena	6%	23%	29%	26%
Culver City Municipal Bus Lines	46%	35%	23%	2%
Foothill Transit	10%	26%	19%	13%
Gold Coast Transit	10%	21%	15%	27%
City of Gardena Transportation Department	36%	28%	22%	-15%
Imperial County Transportation Commission	108%	147%	79%	46%
Long Beach Transit	15%	23%	13%	7%
Los Angeles County Metro	36%	31%	17%	1%
Montebello Bus Lines	36%	46%	13%	0%
Norwalk Transit System	5%	25%	17%	32%
Omnitrans	26%	32%	25%	17%
Orange County Transportation Authority	33%	46%	38%	26%
Riverside Transit Agency	26%	56%	63%	39%
Santa Clarita Transit	40%	56%	35%	43%
Santa Monica's Big Blue Bus	18%	34%	35%	26%
SunLine Transit Agency	5%	15%	19%	23%
Torrance Transit System	13%	-4%	-6%	-27%
Ventura Intercity Service Transit Authority	39%	54%	51%	32%
Victor Valley Transit Authority	2%	-9%	5%	-19%
<b>TOTAL</b>	<b>36%</b>	<b>36%</b>	<b>23%</b>	<b>7%</b>

Source: National Transit Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release> as of September 2022. \* These extreme percentages may be due to a data reporting error or due to service cuts (see pages 1 and 2 of the following report: <https://rideart.org/wp-content/uploads/2022/01/Agenda-Item-17-Annual-Report.pdf>).

Overall, these trends are better than where the region was in September 2020 when overall transit ridership was down by 51%. However, bus ridership is still nowhere near what it was pre-pandemic for all counties aside from Orange County as reflected in Figure 2 below. In Orange County, bus ridership is 8% below what it was pre-pandemic for the most recent month of data, September, which is a significant improvement from preceding months (e.g., Orange County bus ridership was

20% below pre-pandemic levels in June). In Imperial, Ventura, and Los Angeles Counties, bus ridership remains 22%, 25%, and 28% below where it was pre-pandemic for the most recent month of data, September. And in Riverside and San Bernardino Counties, bus ridership is 39% and 46% below where it was pre-pandemic for the most recent month of data, September. Overall, the region’s bus ridership levels are currently 27% below what they were pre-pandemic.

**Figure 2.** Monthly Bus Ridership Percentage Change by County (Compared to 2019)

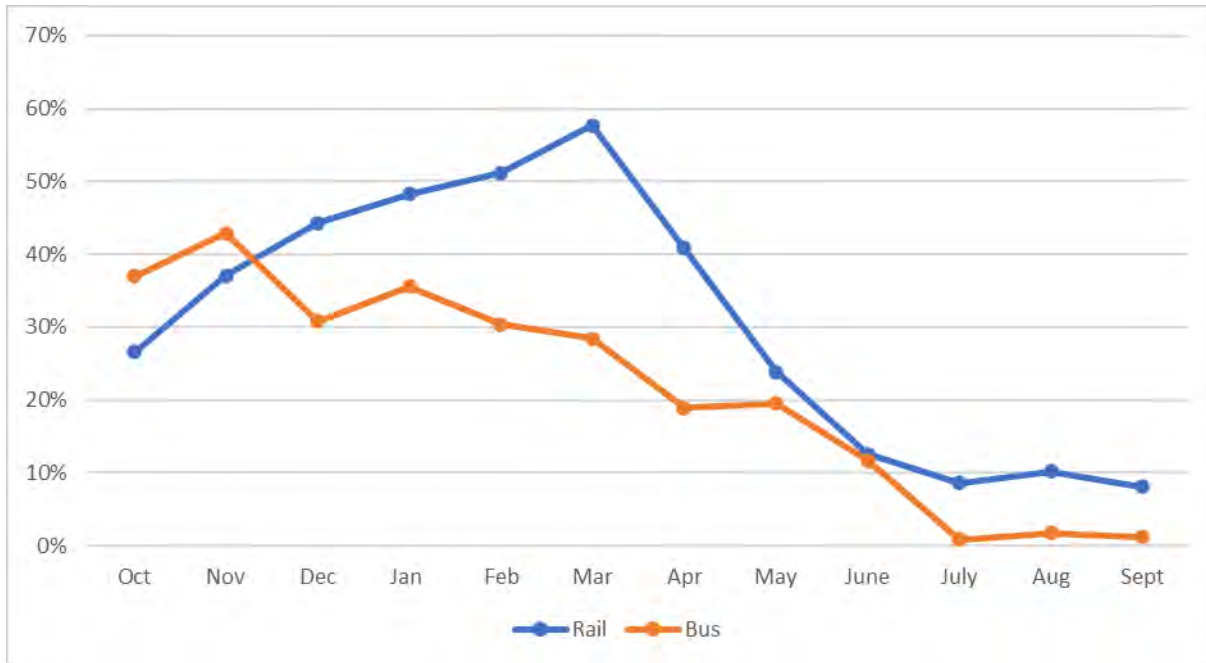


Source: National Transit Database, <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release> as of September 2022.

Data reported by Metro for its bus and rail systems through September 2022 are reflected in Figures 3 and 4 below. Metro bus ridership is up by only 1% in September 2022 compared to September 2021. Metro rail ridership is up by 8% for the same time period. Similar to other transit operators, Metro ridership increases were more significant in May when they were 20% (bus) and 24% (rail). While these trends are better than where the region was in September 2020, they are still well below pre-pandemic levels. For example, when comparing September 2019 to September 2022, bus ridership was down 27% and rail ridership was down 30%.

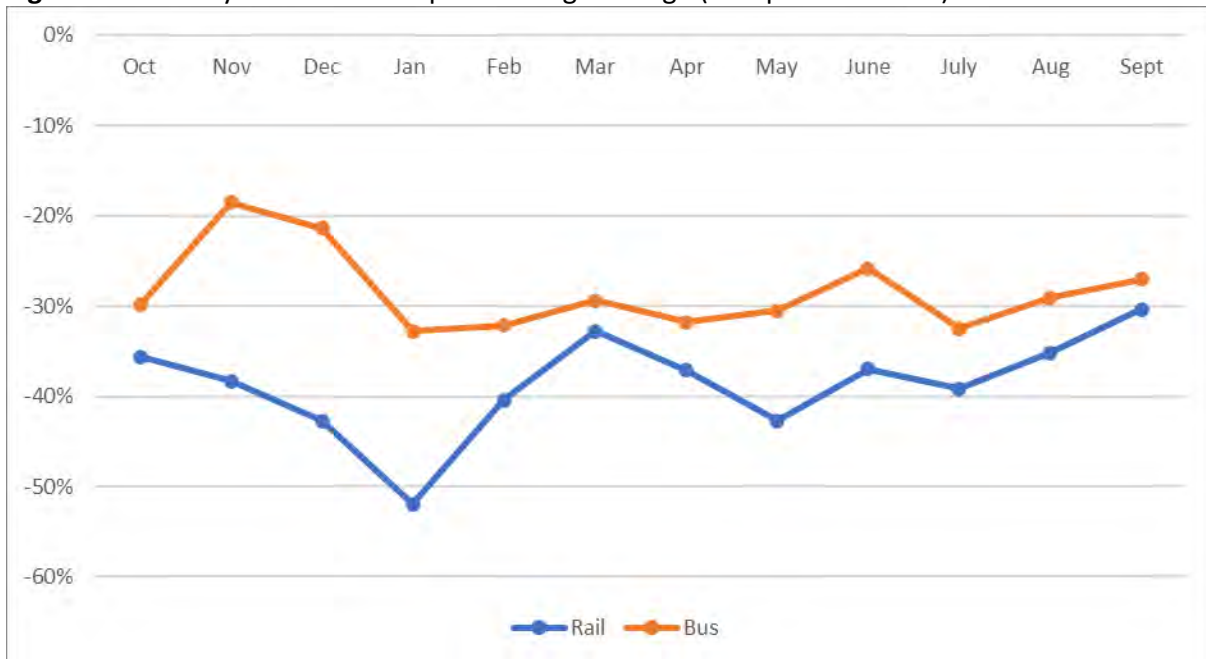
**Figure 3.** Monthly Metro Ridership Percentage Change (Year-Over-Year)





Source: Los Angeles County Metropolitan Transportation Authority, <https://isotp.metro.net/MetroRidership/Index.aspx> as of September 2022.

**Figure 4.** Monthly Metro Ridership Percentage Change (Compared to 2019)



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Source: Los Angeles County Metropolitan Transportation Authority, <https://isotp.metro.net/MetroRidership/Index.aspx> as of September 2022.

Metrolink commuter rail ridership is up by nearly 38% in September 2022 compared to September 2021. Though this represents an improvement, ridership is still 60% lower than it was pre-pandemic at this time (September 2022 compared to September 2019). Metrolink estimates that it has only recovered 40% of its pre-pandemic ridership. Pre-pandemic, 80% of Metrolink trips were commute trips. That figure has declined to just over half (52%) of total ridership. At the same time, the percentage of non-commute trips has more than doubled, from 20% pre-pandemic to currently 48%. Metrolink has noted that higher gas prices and worsening traffic congestion may continue to attract traditional commuters.<sup>1</sup>

#### **American Public Transportation Association (APTA) Ridership Trends Dashboard**

APTA and the Transit app developed a dashboard to track demand for transit and estimate real-time changes in ridership. The dashboard compares the differences between pre-pandemic ridership, using ridership figures reported by agencies and estimated ridership during the pandemic. Estimated ridership values for each week are extrapolated values from the most recent quarterly actual ridership figures reported by transit agencies (currently June 2022). Estimated ridership values are modeled based on measures of Transit app usage to provide a current measure of demand for public transit. These estimates do not represent actual reported ridership counts from agencies. The dashboard supports comparisons by size, region, and agency and includes estimates for 17 of the largest transit agencies in the SCAG region. The dashboard is available at <https://transitapp.com/apta>.

#### **NEXT STEPS:**

Staff will continue to provide updates for ridership trends using the NTD's monthly adjusted data release as the data becomes available.

#### **FISCAL IMPACT:**

None.

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<sup>1</sup> Metrolink 2022 Customer Survey Staff Report:

<https://d2kbo27fdvtw.cloudfront.net/metrolink/97954c01397b5cd4e13a0002dbcc1ef20.pdf>

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Southern California Association of Governments  
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017  
Agenda Ítem No 3.5  
**January 30, 2023**

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**To:** Regional Transit Technical Advisory Committee (RTTAC)

**From:** Priscilla Freduah-Agyemang, Senior Regional Planner  
213-236-1973, [agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov)

**Subject:** Federal Transit Administration (FTA) Fiscal Year (FY) 2023 Triennial  
Reviews, Section 5307 Program Requirements

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**DISCUSSION:**

Staff is providing this report to the RTTAC regarding the Federal Transit Administration (FTA) Fiscal Year (FY) 2023 Triennial reviews, Section 5307 program requirements, directly related to SCAG’s planning and programming processes and/or documentation, to facilitate consistent responses among the region’s transit providers.

Staff previously reported to the RTTAC regarding the FTA compliance checklist used as part of the Section 5307 Triennial Review. FTA asks recipients that rely on SCAG’s Federal Transportation Improvement Program (FTIP) public participation process to review SCAG’s adopted Public Participation Plan (PPP) using the compliance checklist, to ensure that the PPP describes explicit procedures, strategies, and desired outcomes. To assist operators undergoing the FTA review, SCAG staff completed the compliance checklist using SCAG’s adopted 2018 PPP, and provided the checklist to the RTTAC at its October 31, 2018, meeting.

Subsequently, on April 7, 2022, SCAG’s Regional Council adopted the new 2022 PPP, available at <https://scag.ca.gov/community-participation-public-participation-plan>. Staff has updated the compliance checklist to reflect the 2022 PPP and has attached the checklist to this report.

**BACKGROUND:**

As mandated by Congress in 1982, the FTA conducts triennial reviews of recipients of Urbanized Area Formula Program funds to examine grantee performance and adherence to statutory and administrative requirements and policies. FTA’s Triennial Review Recipient Information Request (RIR) for FY 2023 includes areas of review which directly relate to SCAG planning and programming processes and/or documentation—specifically, 5. Section 5307 Program Requirements, which are as follows:

**5. SECTION 5307 PROGRAM REQUIREMENTS, BASIC REQUIREMENT:** The recipient must participate in the transportation planning process in accordance with FTA requirements and the metropolitan and statewide planning regulations. Recipients shall develop, publish, afford an opportunity for a public hearing on, and submit for approval, a program of projects (POP). Recipients are expected to have a written, locally developed process for soliciting and considering public comment before raising a fare or carrying out a major transportation service reduction. For fixed-route service supported with Section 5307 assistance, fares charged to seniors, persons with disabilities or an individual presenting a Medicare card during off peak hours will not be more than one half the peak hour fares.

Question b in the RIR directly relates to SCAG's planning and programming process and/or documentation.

The FTA allows Section 5307 recipients to rely on SCAG's adopted public participation requirements for the FTIP, in lieu of the process required in the development of the Program of Projects (POP), if the recipient has coordinated with SCAG and ensured that the public is aware that the FTIP development process is being used to satisfy the POP public participation requirements.

To assist operators relying on SCAG's adopted public participation plan requirements, SCAG staff has completed the compliance checklist and provided it as an attachment to this report. The compliance checklist is taken from page 19-7 of the FTA's FY 2023 Comprehensive Review Contractors Manual. The references provided in the checklist are to SCAG's newly adopted 2022 PPP.

SCAG's latest 2023 FTIP was adopted on December 16, 2022, and is available at the following here: [2023 Adopted FTIP](#). The FTIP notices are available here: [2023 FTIP Notices](#), see pages 377 – 402. This section includes public hearing flyers in various languages that note dates, time, locations and public hearing notices, certification that the notices were published in several newspapers, meeting minutes from the FTIP hearings and a list of public libraries that have been issued copies of the 2023 FTIP.

**ATTACHMENT:**

Updated Compliance Checklist

## DETERMINING COMPLIANCE

For recipients that rely on the MPO's Public Participation Plan (PPP): Obtain and review the MPO's adopted public participation plan to ensure it describes explicit procedures, strategies, and desired outcomes for:

Note: All page references are to the adopted SCAG 2022 Public Participation Plan at: <https://scag.ca.gov/post/scag-2022-public-participation-plan>

Element	Addressed in Plan (page #)
Provide adequate public notice of public participation activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed metropolitan transportation plan and the TIP	<i>Methods</i> , pp. 8-15; <i>Evaluation</i> , pp. 16-19; <i>Appendix A</i> , pp. 20-27; and <i>Appendix B</i> , pp. 28-38
Provide timely notice and reasonable access to information about transportation issues and processes	<i>Methods</i> , pp. 8-15; <i>Appendix A</i> , pp. 20-27; and <i>Appendix B</i> , pp. 31-34
Employ visualization techniques to describe metropolitan transportation plans and TIPs	<i>Overview</i> , pp. 5-6; <i>Methods</i> , p. 9; and <i>Appendix A</i> , p. 20-21
Make public information (technical information and meeting notices) available in electronically accessible formats and means, such as the web	<i>Methods</i> , pp. 8-15; <i>Evaluation</i> , pp. 16-19; <i>Appendix A</i> , pp. 20-21 and 24-27; and <i>Appendix B</i> , pp. 29 and 32-35
Hold any public meetings at convenient and accessible locations and times	<i>Methods</i> , pp. 8-11; <i>Appendix A</i> , pp. 21 and 24-26; and <i>Appendix B</i> , pp. 30-35
Demonstrate explicit consideration and response to public input received during the development of the metropolitan transportation plan and the TIP	<i>Overview</i> , pp. 5-7; <i>Methods</i> , pp. 13-15; <i>Evaluation</i> , pp. 16-17; <i>Appendix A</i> , pp. 21-22 and 24-27; and <i>Appendix B</i> , pp. 33-35
Seek out and consider the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services	<i>Overview</i> , pp. 5-7; <i>Methods</i> , pp. 8 and 13; <i>Evaluation</i> , p. 17; <i>Appendix A</i> , pp. 21-26; and <i>Appendix B</i> , pp. 28 and 35-36
Provide an additional opportunity for public comment, if the final metropolitan transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues that interested parties could not reasonably have foreseen from the public involvement efforts	<i>Appendix A</i> , pp. 21-22
Coordinate with the statewide transportation planning public involvement and consultation processes	<i>Overview</i> , pp. 5-6; <i>Appendix A</i> , pp. 20-22 and 24-27; and <i>Appendix B</i> , pp. 28-29 and 32-34
Periodically review the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process	<i>Methods</i> , pp. 12-13; <i>Evaluation</i> , pp. 16-18; and <i>Appendix A</i> , p. 21

NOTE: Follow-up with the recipient if unable to locate the above items in the PPP.

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Southern California Association of Governments  
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017  
Agenda Item No. 3.6  
**January 30, 2023**

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**To:** Regional Transit Technical Advisory Committee (RTTAC)

**From:** Krista Yost, Assistant Regional Planner,  
213-630-1503, [yost@scag.ca.gov](mailto:yost@scag.ca.gov)

**Subject:** Mobile Source Air Pollution Reduction Review Committee (MSRC),  
Request for Proposals (RFP) for Microtransit Services Program

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**SUMMARY:**

From: [http://www.cleantransportationfunding.org/sites/default/files/agendas/2022-12/Dec 2022 MSRC Agenda for Web reduced 2.pdf](http://www.cleantransportationfunding.org/sites/default/files/agendas/2022-12/Dec%202022%20MSRC%20Agenda%20for%20Web%20reduced%20.pdf)

On December 15, 2022, the MSRC approved an RFP for microtransit services: technology-enabled, shared transportation that fills the void between traditional “fixed route” transit and “ride hailing” technology. The purpose of the Microtransit Services Program is to provide funding for microtransit projects that propose a new microtransit service within a specified geographic area, particularly in an area that lacks adequate transportation options and/or suffers disproportionately from air pollution, or the expansion of an existing microtransit service targeting a new service area, new riders, and additional reductions in automobile vehicle miles traveled. The deadline for proposals is 4:00 pm on Friday, March 24, 2023.

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Southern California Association of Governments  
900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017  
Agenda Item No. 3.7  
**January 30, 2023**

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**To:** Regional Transit Technical Advisory Committee (RTTAC)

**From:** Krista Yost, Assistant Regional Planner,  
213-630-1503, [yost@scag.ca.gov](mailto:yost@scag.ca.gov)

**Subject:** Metro Visionary Seed Fund (VSF)

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**SUMMARY:**

From: <https://www.metro.net/about/visionary-seed-fund/>

Measure M allocates \$20 million over 40 years for Metro’s Visionary Seed Fund (VSF) and the Measure M Final Guidelines give Metro authority to make \$1.5 million available every three years through a competitive grant process to fund projects that “help spark and develop innovative mobility concepts in Los Angeles County.” Metro anticipates funding pilot projects to test and assess ridership strategies that demonstrate through measurable outcomes how to grow ridership to pre-COVID levels and beyond. Ideas include improving first/last mile connections, addressing women’s transportation needs, easing payment and navigation, and other creative proposals that will assist the region in restoring and growing ridership.

Metro anticipates releasing the first VSF call for proposals in February 2023 and hosting a public forum in March to answer questions and help ‘match’ innovators with public transit operators.



January 18, 2023

The Honorable Nancy Skinner  
 Chair, Senate Budget and Fiscal Review Committee  
 California State Senate

The Honorable Phil Ting  
 Chair, Assembly Committee on Budget  
 California State Assembly

Dear Chair Skinner & Chair Ting,

As you begin budget negotiations this year, the undersigned organizations request your support to help the state’s public transit systems avoid looming cuts to critical transit service that millions of Californians rely upon and that is foundational to our state’s climate strategy. These potential cuts reflect the lingering impact of the COVID-19 pandemic, which has devastated transit operating budgets as a result of diminished ridership as well as higher costs arising from inflation. While the Governor’s proposed budget for FY 2023-24 does not specifically address this need and in fact proposes \$2 billion in reductions to public transit capital that the Legislature approved last year, we look forward to engaging with your budget subcommittees to ensure that this year’s final budget bill provides additional transit operating assistance to sustain critical transit service riders depend upon and fund proven strategies to attract new riders and help lessen financial challenges in the future.

**A Strong Public Transit System is Vital to Creating an Equitable, Economically Vibrant and Climate Friendly Future**

Based on 2021 U.S. Census data, almost 60 percent of California residents who commute via public transit have a household income below \$35,000. Over half a million California households own no vehicle and count on public transit for their daily needs, including access to K-12 education and college. Public transit is an economic lifeline for these residents, especially seniors and persons with disabilities. Yet residents of all income levels also depend on transit to access their jobs and maintaining the viability of the transit systems is essential for the future of the state’s economy and quality of life. Public transit also supports good-paying jobs, employing over 31,000 California workers statewide in FY 2021.

When it comes to climate change, California prides itself on being a global leader. The state has taken a two-pronged strategy to reduce transportation-related emissions – the largest of any



sector – by decarbonizing the vehicle fleet, while also encouraging less driving through a combination of investments in transit and other modes plus a suite of policies to encourage more infill, transit-oriented development. Policies aimed at reducing vehicle miles traveled (VMT) depend on a reliable and convenient public transit system; they have little chance of success if transit agencies across the state have to make severe cuts to service.

Today, about 65 million trips/month are taken on transit in California, reducing VMT by hundreds of millions each year. To meet the state's carbon neutrality goals by 2045, however, significantly more people will need to choose transit instead of driving. To encourage this shift, California Air Resources Board has urged the state to support efforts to *double local transit coverage and service frequencies* by 2030, recognizing that both vehicle decarbonization *and* less driving are needed to achieve our state's bold greenhouse reduction targets. However, without a multi-year commitment of state funds to help sustain transit and put it on a path to attracting millions of new riders, the state's climate strategy is in serious jeopardy.

### **Bay Area Operators Face Significant Looming Budget Shortfalls**

We are at an unprecedented moment, with the survival of transit as we know it at risk. The rise of remote work, growing costs due to inflation, and apprehension to ride transit due to health concerns has led to a growing fiscal cliff on the horizon. Additionally, the transit sector is severely understaffed (with some agencies reporting as high as 30 percent of jobs unfilled for some positions), limiting service agencies can put on the street and placing upward pressure on salaries and benefits as agencies work to retain and attract workers.

Based on current ridership, service levels, and cost trends, Bay Area operators forecast annual budget shortfalls in the tens of millions of dollars in FY 2023-24, growing to hundreds of millions of dollars beginning in FY 2024-25 and thereafter. Funding gaps of this magnitude cannot be addressed through fare increases or service cuts; doing so would lead to service of such poor quality that it would erode transit's climate benefits and cut off even basic access to critical destinations for those who rely on it most. For instance, to achieve budgetary savings in the range of 20-40 percent, the Bay Area Rapid Transit District (BART) would need to cut service by 65-85 percent, eliminating access to jobs, schools, grocery stores, and other essential services for many current riders. This, in turn, would further reduce passengers, leading to further cuts. We cannot let this doomsday scenario happen.

Fortunately, in the medium and long term, there is reason for optimism. While statewide ridership is around 60 percent of its 2019 levels and Bay Area ridership around 53 percent, ridership is steadily growing. In October 2022, statewide ridership was up 14 percent compared to a year before and in the Bay Area up by 34 percent. Bay Area transit operators are working more closely than ever, together with the Metropolitan Transportation Commission (MTC), to create a better, more seamless transit experience across the region. Plans are beginning for a future regional transportation measure to follow the regional housing measure planned for 2024. A unified mapping and wayfinding system is being designed to make transit easier to navigate. The first all-agency transit pass using the Clipper® card is being piloted at key colleges and affordable housing sites. Operators across the state are likewise deploying technology to shift to mobile fare payment and updating their routes and frequencies to better serve existing riders while also attracting more of them.

## Honor Transit Commitments from FY 2022-23 Budget

Under your leadership, California has made historic investments in our transit capital infrastructure, supporting critical rail and bus expansion and the zero-emission transit transition. The historic transit investment made in last year's Transportation Package includes \$4 billion over the next two years for further transit and intercity rail capital investments, yet Governor Newsom proposes to cut this in half, reducing the amount to \$1 billion next year and \$500 million for the following two years. Doing so would put at risk the funding plans for high priority projects in the Bay Area, several of which are already under construction or poised to receive billions of dollars in highly competitive federal funds.

### Request: Provide New Multi-Year Funding for Transit Operating Assistance

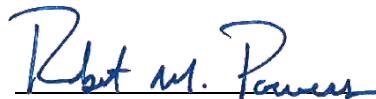
To address the operating challenges, we are seeking a new multi-year operations funding commitment on a limited term basis to assist California's transit systems as they recover from the pandemic and develop long-term funding plans, as necessary. The funding picture for each transit system is unique and there is no one-size-fits-all path to financial sustainability. While some agencies need assistance to stave off service cuts next year, other agencies face deficits in the hundreds of millions of dollars starting in FY 2024-25 or FY 2025-26. Others may not face near-term service cuts but have priorities that, *if funded*, could attract significantly more riders (advancing the state's climate goals) and help avoid budgetary challenges down the road. This month, we are working in coordination with partners statewide, including the California Transit Association, to refine our assessment of the funding need and aim to follow up with a more detailed proposal in February. In addition, we are seeking an extension of the statutory relief previously provided to transit agencies through FY 2024-25.

Californians demand meaningful action on climate change and want their state representatives to ensure transit is not just a viable option, but an attractive one to get to work, school, health care, shopping, dining, entertainment and more. We know that you share these goals and look forward to working with you to ensure that public transit both survives and thrives in California. Please contact Rebecca Long, MTC Director of Legislation and Public Affairs, at [rlong@bayareametro.gov](mailto:rlong@bayareametro.gov) or 510-504-7914 with any questions.

Sincerely,



Therese W. McMillan  
Executive Director, MTC



Robert Powers  
General Manager, BART



Jeff Tumlin  
Director of Transportation, San Francisco  
Municipal Transportation Agency



Mike Hursh  
General Manager, AC Transit



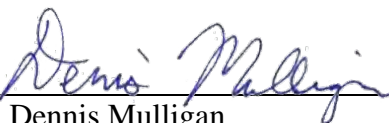
Carolyn Gonot  
General Manager, Santa Clara VTA



April Chan  
General Manager/CEO/Executive Director,  
SamTrans/San Mateo County Transportation  
Authority



Michelle Bouchard  
Acting Executive Director, Caltrain



Dennis Mulligan  
General Manager, Golden Gate Bridge,  
Highway and Transportation District



Steve Adams  
Transit Manager, Union City Transit



Jason Baker  
Senior Vice President,  
Silicon Valley Leadership Group



Daniel Barad  
Associate Director, Sierra Club




Rashidi Barnes  
Chief Executive Officer, Tri Delta Transit




Tilly Chang  
Executive Director, San Francisco County  
Transportation Authority



Sean Charpentier  
Executive Director, San Mateo County  
C/CAG



Bill Churchill  
General Manager, County Connection



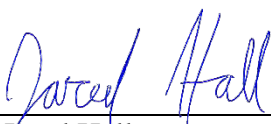
Eddy Cumins  
General Manager, SMART



Zack Deutsch-Gross  
Policy Director, Transform



Tim Haile  
Executive Director, CCTA



Jared Hall  
Transit Manager, Petaluma Transit



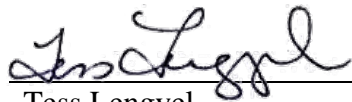
Daryl Halls  
Executive Director, Solano Transportation  
Authority (Solano Express)



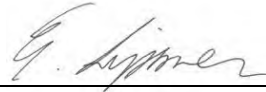
Caro Jauregui  
Co-Executive Director, Cal Walks



Beth Kranda  
Executive Director, Solano County Transit



Tess Lengyel  
Executive Director, Alameda County  
Transportation Commission



Eli Lipman  
Executive Director, Move LA



Carolina Martinez  
Climate Justice Director,  
Environmental Health Coalition



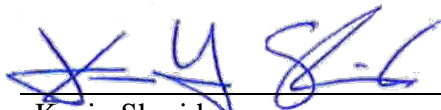
Kate Miller  
Executive Director,  
Napa Valley Transportation Authority



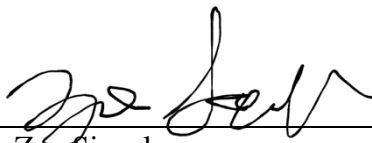
Sofia Rafikova  
Policy Advocate,  
California Coalition for Clean Air



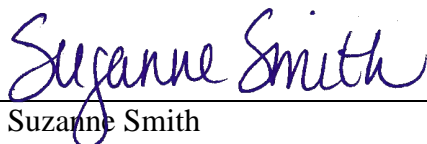
Anne Richman  
Executive Director,  
Transportation Authority of Marin



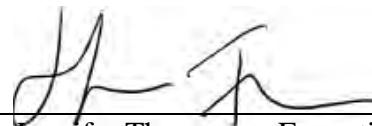
Kevin Sheridan  
Executive Director, Tri-Valley – San  
Joaquin Valley Regional Rail Authority



Zoe Siegel  
Director of Climate Resilience,  
Greenbelt Alliance



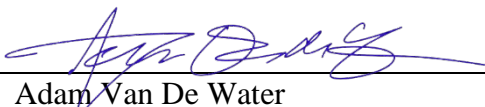
Suzanne Smith  
Executive Director, Sonoma County  
Transportation Authority



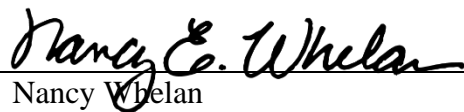
Jennifer Thompson, Executive Director  
Sustainable Silicon Valley



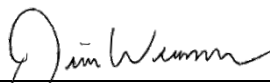
Rob Thompson  
General Manager,  
Western Contra Costa Transit Authority



Adam Van De Water  
Executive Director,  
Transbay Joint Powers Authority



Nancy Whelan  
General Manager, Marin Transit



Jim Wunderman  
President & CEO, Bay Area Council

Zak Accuardi  
Transportation Advocate, NRDC

Arturo E. Aguilar  
Chairman, California Conference Board  
Amalgamated Transit Union

Shiloh Ballard  
Executive Director,  
Silicon Valley Bike Coalition

Eugene Bradley  
Founder, Silicon Valley Transit Users

Rita Clement  
Transportation Co-Leader,  
San Diego 350

David Diaz  
Executive Director,  
Active San Gabriel Valley

Christine Fitzgerald  
Community Advocate, Silicon Valley  
Independent Living Center

Sara Greenwald  
Transportation Committee Member,  
350 Bay Area Transportation Committee

Ian Griffiths  
Co-director, Seamless Bay Area

Josh Hawn  
President, Common Ground California

Lavie Kakol  
Democratic Socialists of America,  
San Francisco

Adina Levin  
Executive Director, Friends of Caltrain

Bryn Lindblad  
Deputy Director, Climate Resolve

Jerry Maldonado  
Vice President of Programs, PolicyLink

Richard Marcantonio  
Managing Attorney, Public Advocates

Emma Martin  
Community Engagement Program Manager,  
Center for Independent Living

Kristina Pappas  
President, SF League of Conservation  
Voters

Jesse O'Sullivan  
Policy Counsel, Circulate SD

Jared Sanchez  
Senior Policy Advocate, CalBike

Arnold Sowell, Jr.  
Executive Director, NextGen California

Laura Tolkoff  
Transportation Policy Director, SPUR

Cheryl Weiden  
Steering Committee Member  
350 Silicon Valley

Sam Wilkins  
California State Conference Chairperson  
Transport Workers Union of America,  
AFL-CIO

Ellen Wu  
Executive Director, Urban Habitat

Chair Skinner and Chair Ting

1/18/2023

Page 7 of 7

cc: Bay Area Legislative Delegation  
The Honorable Toni Atkins, Senate President Pro Tempore  
The Honorable Anthony Rendon, Assembly Speaker  
The Honorable Lena Gonzalez, Senate Transportation Committee Chair  
The Honorable Laura Friedman, Assembly Transportation Committee Chair  
The Honorable Toks Omishakin, Secretary, California State Transportation Agency



# Transit Performance Monitoring and Target Setting

Regional Transit Technical Advisory Committee

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January 30, 2023

[WWW.SCAG.CA.GOV](http://WWW.SCAG.CA.GOV)

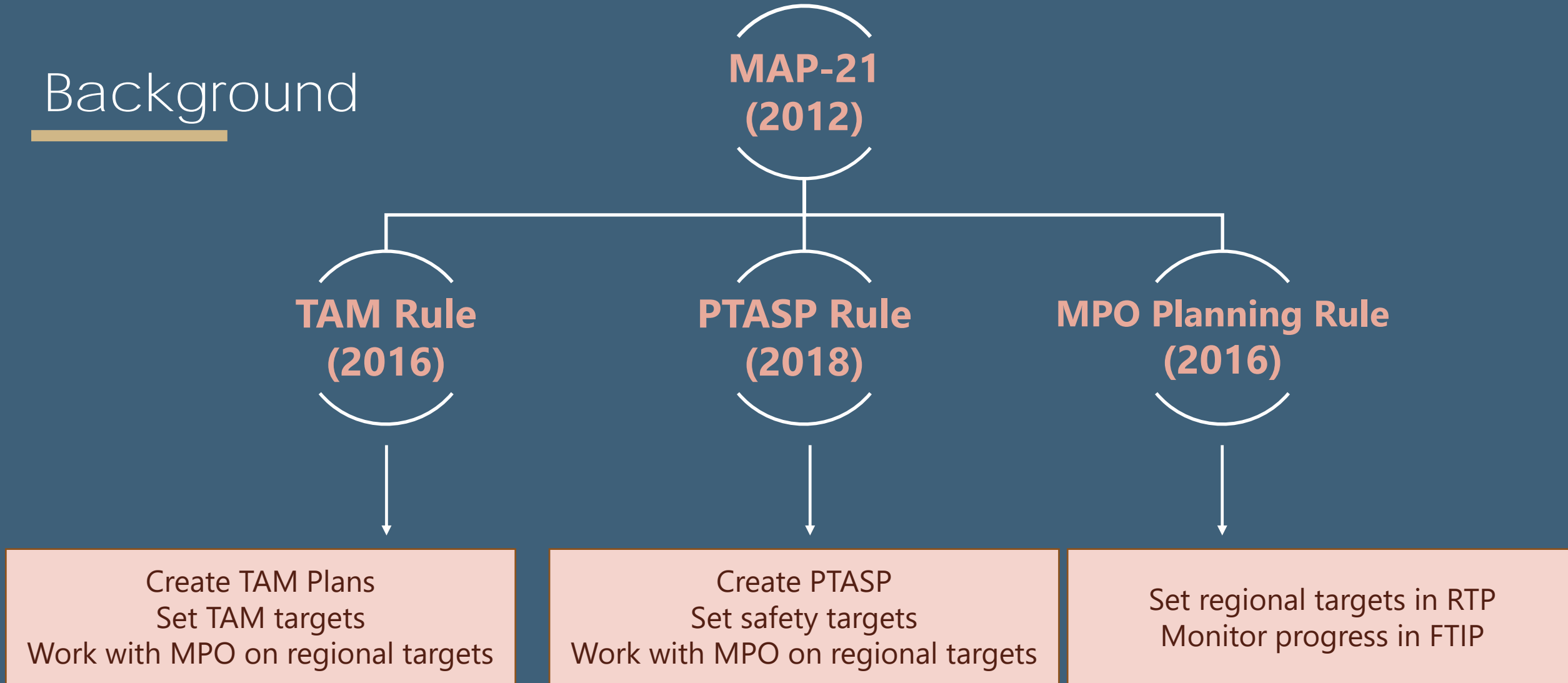
# Agenda

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1. Background
2. Progress to date
3. Draft 2022 Regional Targets
4. Approaches for Future Target Scenarios
5. Next Steps



# Background



# Project Timeline

## Primary Analysis

### Fall 2022

- Engage operators
- Collect TAM and Safety Data

### Winter 22/23

- Develop Regional Targets

### Spring 2023

- Engage Stakeholders
- Initial Targets Ready

### Key Deadlines

April 2023 – Initial Targets

June 2023 – Draft Targets for Draft RTP/SCS

April 2024 – Final Targets for RTP/SCS

# 2022 Target Setting – Progress

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- Completed/Underway:
  - Met with transit operators and collected data/reviewed targets
  - Compiling data and calculating draft 2022 targets
  - Engaged other stakeholders
  - Interviewed peer MPOs
- Next Steps:
  - Scenarios for future targets
  - Feedback from RTTAC and CTCs on approach

# Federally Required TAM Targets

Category	Performance Target
Rolling Stock (Revenue Vehicles)	1) Percentage of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB) <i>-One target for each vehicle type</i>
Infrastructure	2) Percentage of guideway track miles with performance restrictions by class <i>-One target for each rail mode</i>
Facility	3) Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale <i>-One target for each facility type (Maintenance/Administration, Passenger/Parking)</i>
Equipment (Service Vehicles)	4) Percentage of service vehicles that have met or exceeded their ULB <i>- One target for each vehicle type</i>

## 2022 Draft TAM Targets – Rolling Stock

### Regional Targets Weighted Based on the Operator Targets and Number of Assets

County	2019	2020	2021	2022	3-Yr Average
Imperial	0.0%	0.0%	0.0%	0.0%	0.0%
Los Angeles	16.0%	16.9%	24.8%	12.5%	18.1%
Orange	11.7%	14.4%	10.3%	10.4%	11.7%
Riverside	3.8%	2.0%	2.3%	11.8%	5.4%
San Bernardino	22.2%	45.5%	44.4%	47.8%	45.9%
Ventura	6.3%	6.3%	15.6%	10.0%	10.6%
Metrolink	10.0%	0.5%	0.5%	0.5%	0.5%
<b>SCAG Region</b>	<b>14.8%</b>	<b>17.2%</b>	<b>22.3%</b>	<b>14.4%</b>	<b>18.0%</b>

*Percent of vehicles past useful life*

## 2022 Draft TAM Targets – Service Vehicles

### Regional Targets Weighted Based on the Operator Targets and Number of Assets

County	2019	2020	2021	2022	3-Yr Average
Imperial	n/a	0.0%	0.0%	0.0%	0.0%
Los Angeles	27.7%	34.4%	33.2%	39.3%	35.6%
Orange	18.6%	18.7%	18.7%	17.9%	18.4%
Riverside	17.9%	16.5%	28.7%	12.7%	19.3%
San Bernardino	27.7%	11.4%	14.5%	34.8%	20.2%
Ventura	25.0%	22.6%	25.0%	25.0%	24.2%
Metrolink	22.7%	59.7%	48.9%	42.1%	50.2%
<b>SCAG Region</b>	<b>26.1%</b>	<b>33.3%</b>	<b>32.3%</b>	<b>36.5%</b>	<b>34.0%</b>

*Percent of vehicles past useful life*

# 2022 Draft TAM Targets – Facilities

## Regional Targets Weighted Based on the Operator Targets and Number of Assets

County	2019	2020	2021	2022	3-Yr Average
Imperial	n/a	n/a	n/a	n/a	n/a
Los Angeles	6.4%	2.0%	1.5%	0.6%	1.4%
Orange	0.0%	0.0%	0.0%	0.0%	0.0%
Riverside	22.1%	11.2%	12.7%	0.0%	8.0%
San Bernardino	26.3%	6.4%	0.0%	26.1%	10.8%
Ventura	0.0%	0.0%	0.0%	0.0%	0.0%
Metrolink	33.3%	0.0%	20.0%	20.0%	13.3%
<b>SCAG Region</b>	<b>10.3%</b>	<b>2.7%</b>	<b>2.6%</b>	<b>1.9%</b>	<b>2.4%</b>

*Percent of facilities rated <3 on TERM scale*

## 2022 Draft TAM Targets – Infrastructure

### Regional Targets Weighted Based on the Operator Targets and Number of Assets

County	2019	2020	2021	2022	3-Yr Average
Los Angeles	1.5%	1.8%	2.0%	2.3%	2.0%
Metrolink	15.0%	2.0%	2.0%	1.5%	1.8%
<b>SCAG Region</b>	<b>11.5%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>1.7%</b>	<b>1.9%</b>

*Percent of track segments with speed restrictions*



# Federally Required Safety Targets

<b>Category</b>	<b>Performance Target</b>
<b>Fatalities</b>	1) Total fatalities 2) Fatality rate by mode (per vehicle revenue mile (VRM))
<b>Injuries</b>	3) Total injuries 4) Injury rate by mode (per VRM)
<b>Safety Events</b>	5) Total safety events 6) Safety event rate by mode (per VRM)
<b>System Reliability</b>	7) Major mechanical failure rate by mode (per VRM)

# 2022 Draft Safety Targets – Fixed Route Bus

## Regional Targets Weighted Based on the Operator Targets and Vehicle Revenue Miles

County	Fatalities Target	Fatality Rate (per 100k VRM)	Injuries Target	Injuries Rate (per 100k VRM)	Safety Events Target	Safety Events Rate (per 100k VRM)	System Reliability (VRM/ failures)
Imperial	0	0	0.0	0.0	8.0	0.24	102,868
Los Angeles	0	0	191.7	0.6	40.5	0.34	10,843
Orange	0	0	80.2	0.6	131.7	1.02	14,912
Riverside	0.14	0	8.3	0.2	8.4	0.23	16,255
San Bernardino	0	0	16.2	0.1	16.2	0.10	17,070
Ventura	0.0	0.0	2.1	0.2	5.5	0.17	24,045

*Preliminary targets will change as some agencies still to provide data*

# 2022 Draft Safety Targets – Demand Response

## Regional Targets Weighted Based on the Operator Targets and Vehicle Revenue Miles

County	Fatalities Target	Fatality Rate (per 100k VRM)	Injuries Target	Injuries Rate (per 100k VRM)	Safety Events Target	Safety Events Rate (per 100k VRM)	System Reliability (VRM/ failures)
Imperial	0	0	3.5	0	5	0.20	36,595
Los Angeles	0	0	0.1	0.1	0.1	0.22	48,920
Orange	0	0	0	0	0	0.00	14,823
Riverside	0	0	3.1	0.1	1.5	0.21	7,120
San Bernardino	0	0	1.4	0.1	1.4	0.09	62,837
Ventura	0	0	2.2	0.3	3.2	0.23	41,899

*Preliminary targets will change as some agencies still to provide data*

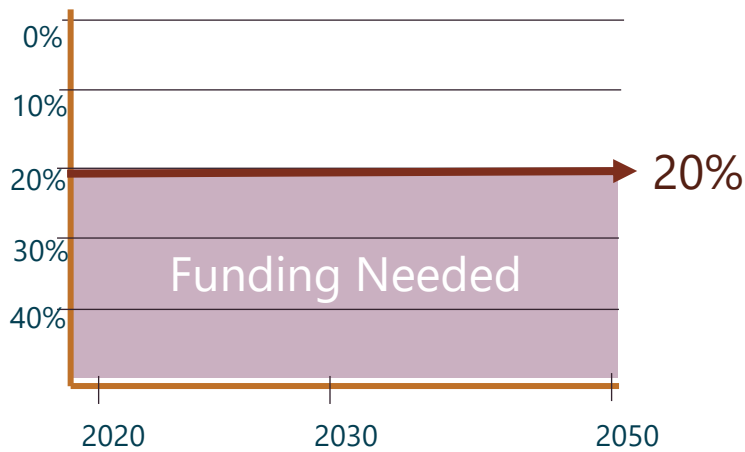
# 2022 Draft Safety Targets – Rail

County	Fatalities Target	Fatality Rate (per 100k VRM)	Injuries Target	Injuries Rate (per 100k VRM)	Safety Events Target	Safety Events Rate (per 100k VRM)	System Reliability (VRM/ failures)
Los Angeles	0	0	92.0	0.5	33.0	0.16	50,624

*Currently there is only one rail operator with safety targets for FTA. Metrolink falls under different safety regulations with the FRA*

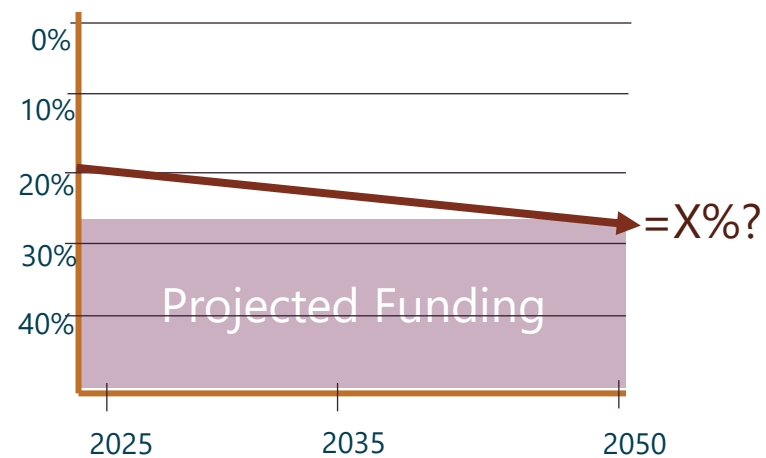
# Proposed TAM Scenarios

## Baseline Scenario



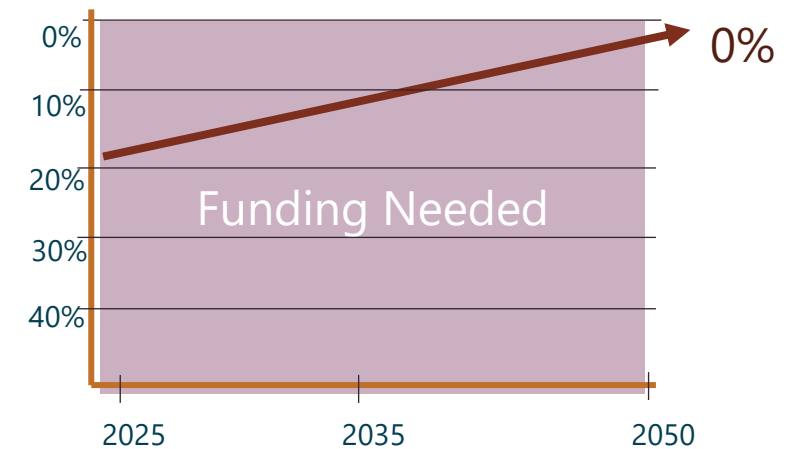
To maintain current target, how much **funding** is needed?

## Constrained Scenario



Based on anticipated funding, what **target** can we achieve?

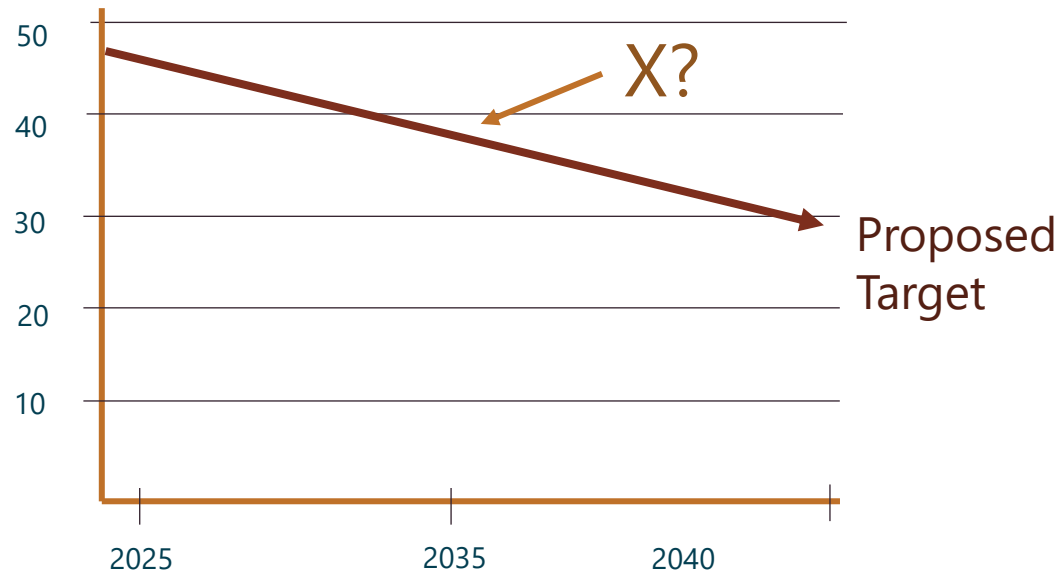
## Unconstrained Scenario



What is the total **funding** needed to replace all assets past their useful life?

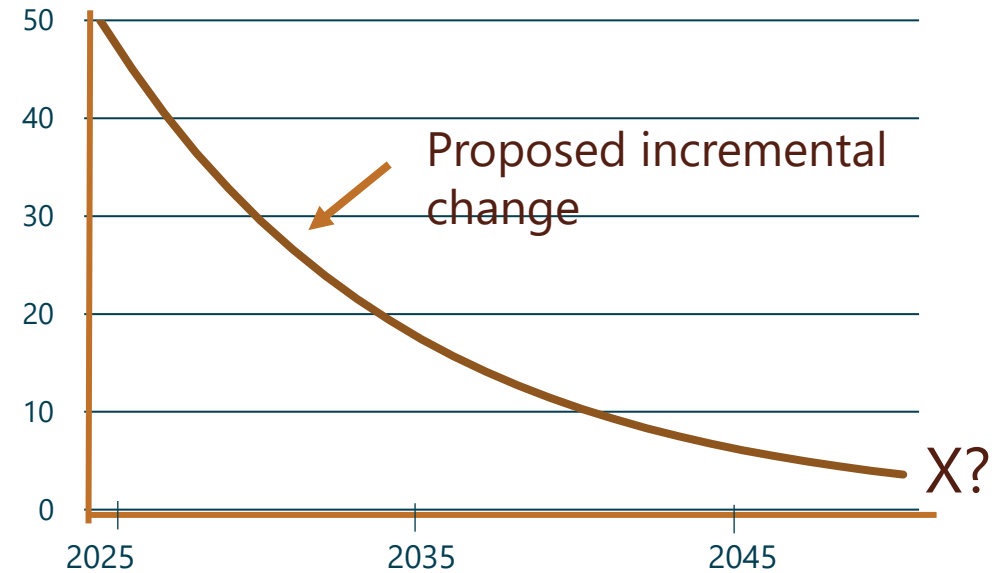
# Potential Safety Target Scenarios

## Aspirational Target



What **change per year** is necessary to hit proposed aspirational target?

## Incremental Change



What **future target** would result from a consistent, incremental change?

## Next Steps

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- Soliciting feedback on approaches discussed today
- CTC meetings to be scheduled in February
- Develop future target scenarios
- Draft future targets will be ready for next RTTAC meeting

## RTTAC and CTC Feedback

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*Provide feedback today or via e-mail by 2/15/23*

- Data Collection
  - *If we are still waiting on your data – please update ASAP*
- Draft targets
  - *SCAG is proposing moving to 3-year rolling average for baseline targets. Do you agree?*
- Future targets
  - *Do you have any feedback on the TAM or Safety scenarios?*

***Other comments or questions?***





# THANK YOU!

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**Jon Overman**

Cambridge Systematics

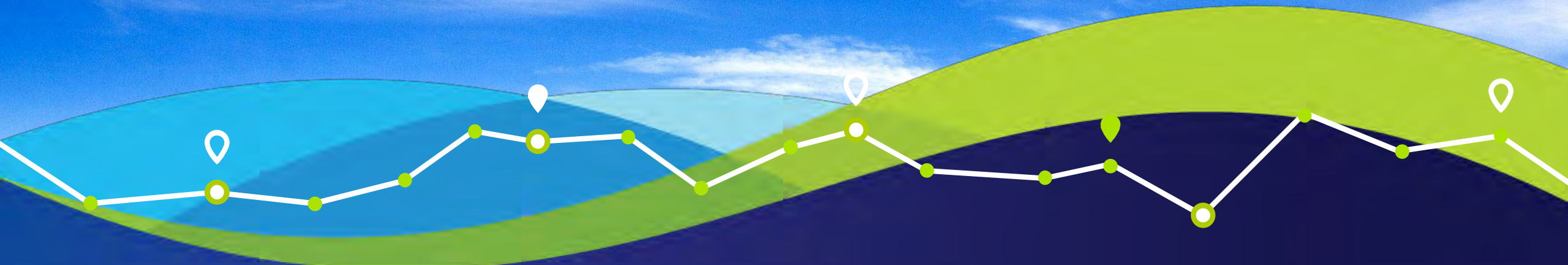
[joverman@camsys.com](mailto:joverman@camsys.com)

**Priscilla Freduah-Agyemang**

SCAG

[agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov)

# FOOTHILL TRANSIT'S Zero Emissions Bus Journey



Roland Cordero | Director of Maintenance and Vehicle Technology  
rcordero@foothilltrtansit.org



**Foothill Transit**

# ABOUT FOOTHILL TRANSIT

- Pomona and San Gabriel Valleys (Eastern Los Angeles County)
- 327 sq. mile service area, 1.5m service pop.
- 30 local and 6 express routes
- 337 CNG buses, 33 electric buses
- Innovation is part of our core mission



# LOS ANGELES BASIN AIR QUALITY

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- Poor air quality
- Large population base
- On-shore breeze pushes air inland



Foothill Transit is proud to introduce the world's first heavy duty, fast charge, zero emissions electric bus.

Launching in  
Pomona, California  
September 3, 2010.



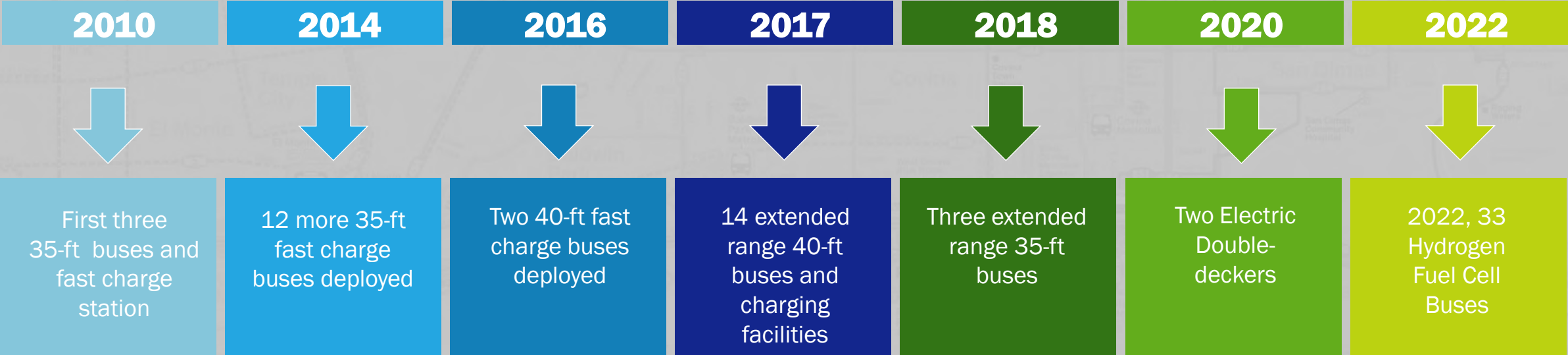
**ecoliner**  
Zero Emissions Electric Vehicles



**Foothill Transit**



# ELECTRIC BUS PROGRAM MILESTONES



# IN-ROUTE CHARGERS

## Pomona Transit Center

- Two high power fast-charge station with two overhead chargers, sufficient to serve all buses
- Over 200,000 charge cycles to-date, and 2.1 million electric bus miles
- Located at Pomona Transit Center, a central hub with off-street flexibility, safety and security



# IN-ROUTE CHARGERS

## Azusa Intermodal Transit Center - AITC

- Two overhead fast charges
- Supports extended range buses
- 14 Extended range buses





# IN-DEPOT CHARGERS



# BEB EXPERIENCE

- Limited Range
- Demanding charging requirements
- Operational impacts
- High cost of in-route chargers
- High cost of technology parts



# BEB LESSONS LEARNED

- \$120 M to electrify entire fleet
- Not one to one bus replacement
- Buses will be charged when returning to the depot.
  - Overnight charging will be the bottleneck in the future
  - Charged buses will move to parking area and another bus will be charged
- Only electrify 60% of bus routes



# THERE ARE TWO ROADS TO ZERO

- 33 hydrogen fuel cell buses being delivered
- Fueling infrastructure under construction



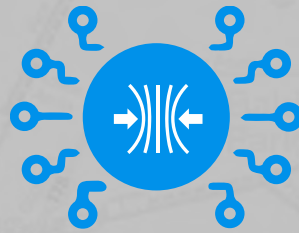
# THERE ARE TWO ROADS TO ZERO



# WHY FUEL CELL?



Vehicle Range



System Resiliency



Infrastructure Cost



Vehicle Fueling Process



# FUNDING IS CRITICAL

- \$429,000 differential between fuel cell and CNG buses
- Hydrogen fuel is more than double the cost of CNG
- Electric charging infrastructure is very costly and impacts operations
- Zero Emissions can't come at the cost of service cuts!



# COLLABORATE, SHARE, AND SUPPORT

- California Transit Association's Zero Emissions Vehicle Taskforce
- Zero Emission Bus Resource Alliance
- Hydrogen Fuel Cell Bus Coalition
- California Air Resources Board





# Thank you!



Roland Cordero | Director of Maintenance and  
Vehicle Technology  
[rcordero@foothilltrtansit.org](mailto:rcordero@foothilltrtansit.org)

THE 2024 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY  
OF THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS



**Priscilla Freduah-Agyemang**

Senior Regional Planner  
Regional Transit Technical Advisory  
Committee (RTTAC)

January 30, 2023

# Background on RTP/SCS

*What kind of region do we want to be by 2050?*

**A healthy, accessible, and connected region for a more resilient and equitable future.**

## **Simplified Goals**

- Mobility, Communities, Environment, and Economy
- Further defined through sub-goals



# Development Update

Connect SoCal 2024



Foundations  
and  
Frameworks

**2021**

Data  
Collection and  
Policy  
Development

**2022**

Outreach  
and  
Analysis

**2023**

Plan  
Adoption

**2024**



## COMPLETED MILESTONES

- ✓ Draft Goals & Vision
- ✓ Draft Performance Measures
- ✓ Local Data Exchange
- ✓ Project List

## MILESTONES FOR 2023

- Subcommittee Recommendations
- Public Outreach and Engagement
- Plan Modeling, Analysis, Writing
- Draft Release in Fall 2023

# Regional Mobility Hubs Strategy

# What are Mobility Hubs?

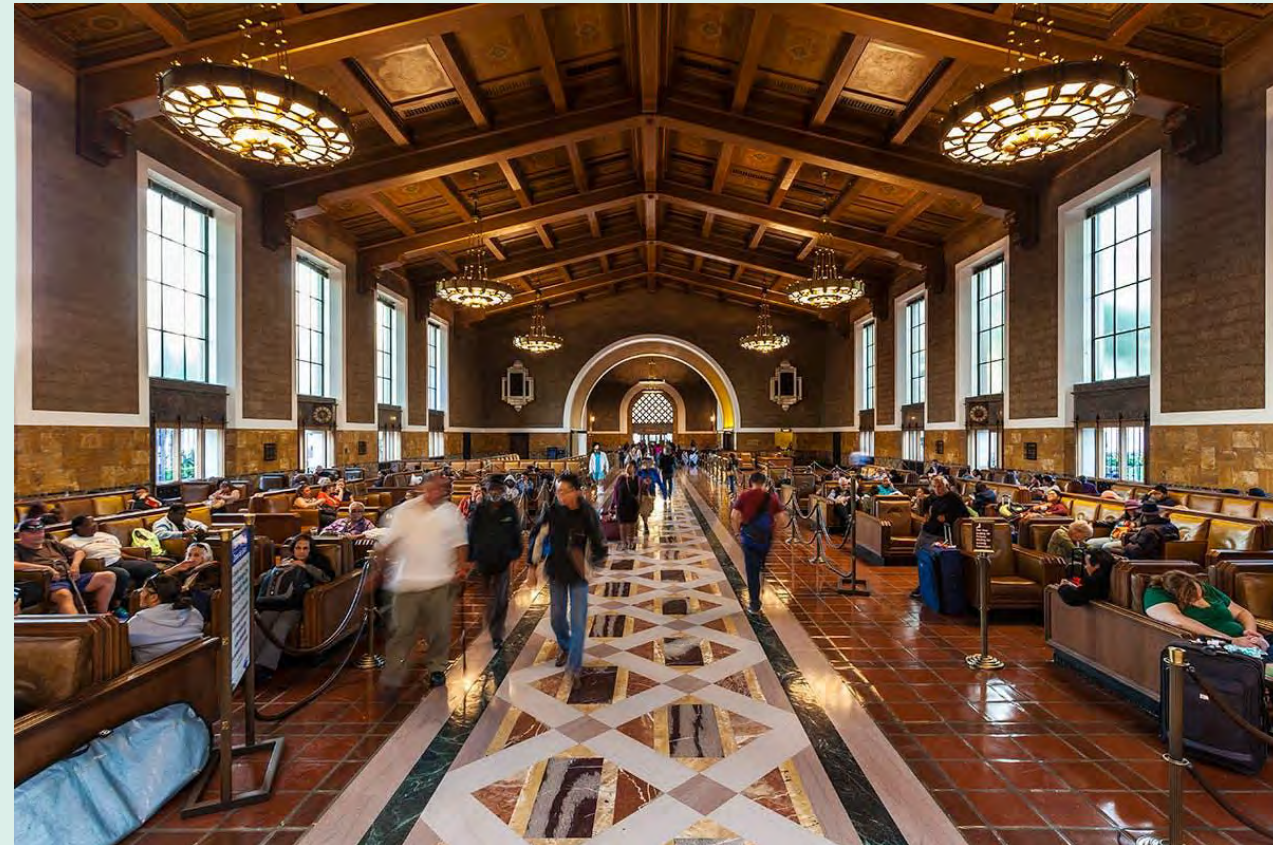
- Locations with a range of transportation options that connect and interact with each other
- May include public transit, active transportation, and shared vehicles
- Should be equipped with infrastructure that grants internet



GoActiveLB Hub (Long Beach)

# What are Mobility Hubs?

- Not typically considered independently of land use
  - Potential for nesting within existing concepts – Livable Corridors, Neighborhood Mobility Areas
- Differing naming conventions and definitions
- Differing typologies



Union Station (Los Angeles)



# Why Mobility Hubs?

- Support safe and convenient transfer between transportation modes
- Improve experience by supplying dynamic, real-time travel and location-based info
- Provide travel options, esp. for those underserved by transit
- Promote mode shift
- Motivate GHG reductions



Willowbrook/Rosa Parks Station (Los Angeles)

# Mobility Hubs Across the Region

- **Los Angeles County**
  - Union Station; North Hollywood Station
    - Secure bike parking, bus layover zones, and other infrastructure built into the station itself
  - Wilshire/Vermont Station; Willowbrook/Rosa Parks Station
    - Car share, bike share, bus shelters, and next bus information
- **San Bernardino County**
  - Fontana Transit Center
  - Montclair Transit Center



Montclair Transit Center

# Mobility Hubs Across the Region by County

- **Imperial County:** Regional Mobility Hub Implementation Strategy (2017)
- **Los Angeles County:** City of Los Angeles Mobility Hubs Readers Guide (2016); I-710 North Mobility Hubs Plan (underway)
- **Orange County:** OCTA's Mobility Hubs Strategy (2022)
- **Riverside County:** Downtown Hemet Specific Plan; Vine Street Mobility Hub (underway)
- **Ventura County:** City of Santa Paula Mobility Hub Expansion (Ventura/Mill Streets - underway)

# Connect SoCal 2024 – Strategies Consolidation

Mobility Hubs could include:

- Car share
- Bike share
- Microtransit
- Average Vehicle Ridership for Job centers



# Regional Mobility Hub Strategy

- Identify mobility hubs across the region
- Identify data needed to develop the methodology to quantify the strategies included in the mobility hub strategy for Connect SoCal
- Establish a recommended baseline mobility hubs network
- Develop regional mobility hub guidelines, implementation guidance and recommended tools to advance mobility hubs



# Questions? Comments?

FOR MORE INFORMATION, PLEASE VISIT  
[SCAG.CA.GOV/CONNECT-SOCAL](http://SCAG.CA.GOV/CONNECT-SOCAL)





Southern California Association of Governments  
January 5, 2023

**To:** Transportation Committee (TC)  
**From:** Priscilla Freduah-Agyemang, Senior Regional Planner  
(213) 236-1973, agyemang@scag.ca.gov  
**Subject:** Regional Dedicated Transit Lanes Study Final Report

EXECUTIVE DIRECTOR'S  
APPROVAL

**RECOMMENDED ACTION:**

Receive and File

**STRATEGIC PLAN:**

This item supports the following Strategic Plan Goal 1: Produce innovative solutions that improve the quality of life for Southern Californians.

**EXECUTIVE SUMMARY:**

*SCAG's Regional Dedicated Transit Lanes Study identifies best practices and key benefits of dedicated transit lanes and priority treatments and the primary factors for successful implementation, including where priority treatments may be most feasible and beneficial in the region. The Study also provides implementation guidance for local agencies. Advancing opportunities for more reliable, frequent, and accessible transit is aligned with Connect SoCal's Core Vision and goals of improving mobility, the environment, communities, and the economy. Last July SCAG staff shared an update on the Study, including the key findings from the existing conditions analysis, best practices research, and the corridor identification and initial screening corridor list. This report is to provide an update on the final report, including the corridor evaluation and key recommendations.*

**BACKGROUND:**

Though transit ridership has improved over the course of the past few years, it is still significantly less than it was prior to the COVID-19 pandemic. As detailed in the Transportation Committee's Transit Ridership Update staff report, overall, the region's bus ridership levels are currently 27% below what they were pre-pandemic. For Metro, bus and rail ridership have now recovered at a similar level when comparing September 2019 to September 2022 (down by roughly 30%). The issue with rail ridership recovery extends to Metrolink whose ridership is currently 60% lower than it was pre-pandemic at this time. And though the COVID-19 pandemic impacted transit ridership, it only exacerbated an existing transit ridership decline that was occurring nationwide. Transit ridership had been declining in the SCAG region in part because a majority of the region's built

environment is designed to facilitate the movement of private vehicles. Taking public transit today is not convenient for most people. As SCAG's report on *Falling Transit Ridership: California and Southern California (2018)* succinctly put it, as long as driving in the SCAG region is the easiest way to get around, people will drive more (often at a considerable cost burden) and ride transit less.

In the face of these challenges, the region's transit agencies are continuing to work hard to restore services and recover ridership losses resulting from the pandemic and those from before. Efforts to attract riders include carefully responding to the pre-pandemic challenges they faced. Transit riders have consistently reported speed and reliability of services as key factors in decision-making in transit use, along with safety, security, convenience, and accessibility of the ride.

Supporting transit agencies as they work to improve transit offerings and the rider experience is critical to SCAG as it has ambitious goals to reduce greenhouse gas emissions (GHG) in transportation by reducing single-occupancy vehicle trips and increasing transit mode share. A key step toward meeting these goals, as well as local and county goals for mobility and equity, can come from improving the speed and reliability of transit services throughout the region.

The Regional Dedicated Transit Lanes Study (Study) explored the opportunities, needs, challenges, and best practices for developing a regional network of dedicated bus lanes and other transit priority treatments. Dedicated transit lanes and transit priority treatments are proven methods to address transit rider priorities. Examples of these improvements include dedicated bus lanes, peak-only bus lanes, bus service on Express Lanes, transit signal priority, bus bulb outs, level boarding platforms, all-door boarding, and a variety of others. Essentially, transit priority treatments adapt the built environment to provide a better user experience for transit riders, and in so doing increase the mobility of people through a given corridor. Transit priority treatments reduce common barriers that prevent people from using transit services. These include lack of confidence in when the bus will arrive, concern about being stuck in traffic, uncompetitive travel times compared to auto trips, and variable trip travel times that waste customer time by forcing them to arrive too early to their destination if they want to ensure they are on time.

The Study and the corresponding regional transit priority network are intended to enable enhanced transit services, improved mobility, accessibility and sustainability, and advance implementation of Connect SoCal. Furthermore, the Study is meant to inspire jurisdictions to explore transit priority treatments on regional corridors. While not a prescriptive list, the final network of corridors provides each county with a view of where priority treatments could improve mobility and access and a starting point for local communities as they embark on improving transit speed and reliability in their communities.



## STAKEHOLDER ENGAGEMENT

Since the July update to the Transportation Committee, SCAG staff and the project team continued to engage with key stakeholders including the Regional Transit Technical Advisory Committee (RTTAC), which is comprised of dozens of transit operators from across the region, sharing project updates and the key research findings, and the screened and final evaluated corridor lists. Staff also shared the final evaluated corridor lists with various stakeholders, including Los Angeles Metro's Bus Operators Subcommittee (BOS) and Local Transit Systems Subcommittee (LTSS), the Ventura County Transportation Commission Transportation Technical Advisory Committee (VCTC TTAC), local jurisdictions and transit agencies, and the project Technical Advisory Committee (TAC). The project team asked stakeholders to provide feedback on the final evaluated corridor lists. Staff continued to engage with stakeholders throughout the region as the Study advanced.

### Technical Advisory Committee (TAC)

Since the last update to the Transportation Committee, the project team convened a final meeting with the project TAC in August. At this meeting, the project team discussed the corridor evaluation results, implementation planning, and the outline of the final report. TAC members were asked to review the final corridor evaluation results, share with other staff, departments, and stakeholders within their organizations and provide feedback. Members were also given the opportunity to review and provide feedback on the draft final report. An office hour session was held on December 6 to seek feedback, address comments, and respond to the TAC's questions on the draft final report.

## CORRIDOR EVALUATION

As shared previously with the Transportation Committee, a two-stage process was used to arrive at a set of corridors considered most promising for transit priority treatments in the region. The first stage, Corridor Identification and Screening, considered the universe of corridors within the SCAG region and from the over 15,000 miles of feasible roadways, narrowed down to just over 300 corridors that could be candidates for priority treatments. Around 100 of these corridors, as determined by potential performance and TAC feedback, were promoted to the second stage of the Corridor Evaluation process that simulated priority treatments on the corridors to assess likely performance.

### Goals and Criteria for Priority Corridors

The TAC and the project team worked together to create a set of prioritized goals for transit priority corridors in the region. These goals (**Table 1**), shared with the Transportation Committee previously, were used to identify, screen, and evaluate roadways in the SCAG region to see where transit priority treatments would have the most impact. The TAC identified Goal Areas 1 and 2 as essential to why priority treatments are implemented; namely, to maximize mobility through speed and reliability improvements to the transit network. Goal Areas 3 through 6 were considered to be ideal outcomes of the most well-designed priority treatments. Within each of these six goal areas, the TAC identified key criteria that would be useful for determining whether that goal might be realized

in a given corridor. In the screening and evaluation stages, the project team then assigned quantifiable metrics that correlated to each criterion, and weighted each based on its relative contribution to a given goal.

**Table 1: Criteria for Transit Priority Corridor Screening and Evaluation**

Goal Area	Criteria
1. Improve transportation system performance	<ul style="list-style-type: none"> <li>• Transit speed and reliability potential</li> <li>• Minimize traffic and safety impacts</li> <li>• Promotes regional connectivity</li> </ul>
2. Increase people throughput and attract riders	<ul style="list-style-type: none"> <li>• Population and employment density</li> <li>• Travel markets/trip intensity</li> <li>• Transit ridership</li> </ul>
3. Improve access for equity-focused communities	<ul style="list-style-type: none"> <li>• Equity populations (race (non-white))</li> <li>• Equity populations (income)</li> <li>• Proximity to schools and civic institutions</li> </ul>
4. Promote local plans and priorities	<ul style="list-style-type: none"> <li>• Identified plans and studies</li> <li>• Financial feasibility</li> <li>• Jurisdictional feasibility</li> </ul>
5. Integrate with the built environment	<ul style="list-style-type: none"> <li>• Transit supportive land use and transit oriented development (TOD)</li> <li>• Supportive first/last mile and bike network</li> <li>• Technical feasibility</li> </ul>
6. Improve climate and health outcomes	<ul style="list-style-type: none"> <li>• GHG and other emissions impacts</li> <li>• Benefits to healthy places</li> </ul>

**Final Transit Priority Corridors Network**

After each treatment corridor was simulated in SCAG’s transportation model and scored across all metrics, three tiers of performance were identified based on natural breaks in the scoring data. Tier 1 corridors scored the highest in the evaluation, followed by Tier 2 and Tier 3. It is important to note that any corridor that advanced to the evaluation stage represented an excellent opportunity to study transit priority treatments in more detail. The purpose of tiering the final scores was simply to prioritize focus and expected benefits in areas with limited resources for further study.

The final existing and proposed corridors span the SCAG region. Ultimately, 73 corridors were ranked using the evaluation process, and 58 corridors were included as either existing (30), planned (19), or added (9) by the TAC after analysis (see **Attachment 1**). The added corridors were included as planned/proposed on the map, but are not tiered as they did not go through the evaluation process. Of the new corridors that were fully evaluated as the strongest opportunities for development, 21 corridors were ranked Tier 1, 28 were ranked Tier 2, and 24 ranked Tier 3. If implemented in total, these corridors would expand SCAG’s regional transit priority network by 970 centerline miles.

The project team identified different treatment types for corridors based on the analysis. They included lane level treatments, which are bus lanes that provide a dedicated space for transit vehicles to operate, improving reliability and reducing travel times by keeping buses out of auto traffic. Examples include bus lanes, bus-on-shoulder, peak-only lanes, or bus service on Express Lanes. They also included intersection-level treatments, which are a mix of infrastructure and technology changes around the signalized intersections through which the transit vehicle must travel. Examples include transit signal priority, bus-only signals, queue jumps, or freeway queue jumps. And finally, stop-level treatments were also included, which focus on improving user experience, speed and reliability, and safety at the bus stop. Examples include level boarding, all-door boarding, or real-time information.

## RECOMMENDATIONS

A final recommendation of the Study is to include the regional transit priority network into the development of Connect SoCal 2024 and related regional planning efforts. Improving the speed and reliability of public transit through transit priority treatments is a vital part of SCAG’s long-range strategy. As such, this Study—and the over 500 percent expansion to the regional transit priority network it imagines—helps inform Connect SoCal 2024 and SCAG’s long-range transportation planning efforts moving forward.

The Study also recommends promoting the corridors identified through this Study into local planning efforts, stakeholder discussions, and funding and grant opportunities. Planning and implementing transit priority treatments can be complex. It involves close collaboration between multiple governmental parties, especially public infrastructure owners and transit operators. Further, since transit priority treatments frequently consist of adapting the design and use of the existing built environment, corridor development must absolutely consider the voice and needs of local stakeholders, such as community groups, business owners, residential associations, and the general public.

**NEXT STEPS**

SCAG staff are currently working with the TAC to finalize the Study and anticipate the final Study will be posted online by February 2023.<sup>1</sup> Moving forward, the Study findings and recommendations will inform and be incorporated into Connect SoCal 2024 development. As noted within the recommendations above, the identified regional transit priority network will be taken into account in Connect SoCal 2024. SCAG staff anticipate continuous policy discussions with the Transportation Committee during the plan development and incorporating key recommendations from the Study in the transit/passenger component of the Connect SoCal Mobility Technical Report.

**FISCAL IMPACT:**

Funding for staff work on this issue is included in the FY22/23 OWP 140.0121.01.

**ATTACHMENT(S):**

1. Corridors for Transit Priority
2. PowerPoint Presentation - Regional Dedicated Transit Lanes Study

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<sup>1</sup> Report will be posted online here: <https://scag.ca.gov/transit-presentations-reports-guidelines>

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# ATTACHMENT 1: REGIONAL DEDICATED TRANSIT LANES STUDY FINAL REPORT

## CORRIDORS FOR TRANSIT PRIORITY

### Tier 1 Corridors (Final Draft)

County	Corridor	Extent	Direction	Type
<b>Imperial (1)</b>	SR 98—E Cole Blvd	City of Calexico	East West	TSP
<b>Los Angeles (17)</b>	Amar Rd	Baldwin Park Blvd—Valley Blvd	East West	TSP
	Azusa Ave	E Sierra Madre Ave—Valley Blvd	North South	TSP
	Beverly Blvd	N Crescent Heights Blvd— N Toluca St	East West	TSP
	Central Ave	SR 91 Express Lanes—E 1 <sup>st</sup> Street	North South	TSP
	E Gage Ave	S Central Ave to E Slauson Ave	East West	TSP
	E Imperial Hwy	S Broadway Ave to Carmenita Rd	East West	Bus Lane
	Firestone Blvd	Central Ave to Orange County Line	East West and South West/ North East	TSP
	Glendale Blvd— N Verdugo	Honolulu Ave/Verdugo Blvd— San Fernando Rd	North South	TSP
	I-405 HOV Seg 1 (SFVCOG)	I-5N to Orange County Line	North West/South East	Express Lane
	N Hollywood Way	Golden State Fwy—Ventura Fwy	North South	TSP
	Nordhoff St	Tampa Ave—Osborne St	East West	Bus Lane
	S Hoover St	Wilshire Blvd to W Jefferson Blvd	North South	TSP
	Slauson Ave	Sepulveda—Rosemead Blvd	East West	TSP
	Valley Blvd	N Mission Rd—SR 71	East West	TSP
	Victory Blvd	Valley Circle Blvd—N Victory Blvd	East West	Bus Lane
	W 3 <sup>rd</sup> St	La Cienega Blvd to S Flower St	East West	TSP
	W Pico Blvd	Gateway Blvd to S Figueroa St	East West	TSP
<b>Orange (1)</b>	Bristol Street	Memory Lane to Anton Blvd	North South	TSP
<b>Riverside (0)</b>				
<b>San Bernardino (2)</b>	Haven Ave	Chaffey College to Bellegrave Ave	North South	Bus Lane
	Highway 62	Kickapoo Trail to Wilshire Ave	East West	TSP
<b>Ventura (0)</b>				

### Tier 2 Corridors (Final Draft)

County	Corridor	Extent	Direction	Type
<b>Imperial (1)</b>	SR 78/SR 86 (Brawley)	Highway 111—Main Street	East West	TSP
<b>Los Angeles (16)</b>	Atlantic Blvd N	Main Street—W Riggan St/ Avenida Cesar Chavez	North South	Bus Lane
	Hawthorne Blvd	Century Blvd to Rolling Hills Rd	North East	Bus Lane
	I 105 Express Lane	I-405 to I-605	East West	Express Lane
	I-605 Express Lanes	I-10 to I-405	North South	Express Lane
	La Brea Ave	Sunset Blvd—Coliseum St	North South	Peak Hour Bus Lane
	Long Beach Blvd	Slauson—SR 91	North South	TSP
	Roscoe Blvd	Tampa Ave—Lankershim Blvd	East West	Bus Lane

Notes: TSP = transit signal priority, BRT = bus rapid transit

# ATTACHMENT 1: REGIONAL DEDICATED TRANSIT LANES STUDY FINAL REPORT

County	Corridor	Extent	Direction	Type
	Rosemead Blvd	I-5—Huntington Dr	North South	TSP
	S San Pedro St	E 1 <sup>st</sup> St to E Jefferson Blvd	North East/South West	Bus Lane
	S Western Ave	Beverly Blvd St to W 38 <sup>th</sup> Pl	North South	Bus Lane
	San Fernando Road	Glendale Fwy—Metrolink Burbank	North West/South East	TSP
	Sierra Hwy Lancaster-Palmdale	E Ave S—Ave A	North South	TSP
	Sierra Hwy Santa Clarita	I-5—Davenport Rd	North East/South West	TSP
	Telegraph Rd	S Downey Rd to Pioneer Blvd	North West/South East	Bus Lane
	U.S. 101 Express Lane	N Bronson Ave to U.S. 5	North West/South East	Express Lane
	Walnut Grove Ave	E La Tunas Dr—San Gabriel Blvd	North South	TSP
	<b>Orange (2)</b>	Katella Ave	From 55 freeway to 605 freeway	East West
I-605 Express Lanes		Orange County Section	North South	Express Lane
<b>Riverside (3)</b>	Alessandro Blvd	Victoria Ave—I-215	East West	TSP
	Gene Autry Trail/Palm Dr	Desert Hot Springs—Highway 111	North South	TSP
	Old RapidLink BRT Riverside to Corona	Metrolink—UC Riverside <i>not operating as of October 2022</i>	East West	TSP
<b>San Bernardino (3)</b>	Central Ave	SR 71—Foothill Blvd	North South	Bus Lane
	Euclid Ave	San Antonio Community College to Corona	North South	Bus Lane
	Foothill Blvd	Victoria Gardens to Highland	East West	TSP
<b>Ventura (4)</b>	Oxnard Blvd	City of Oxnard to S Pleasant Valley	North South + East West	TSP
	Rose Ave	Lei/Sanford St—U.S. 101	North South	Bus Lane
	Ventura Rd	101 to E Hueneme Rd	North South	TSP
	Victoria Ave	Channel Islands Beach—Foothill Rd	North South	TSP

## Tier 3 Corridors (Final Draft)

County	Corridor	Extent	Direction	Type
<b>Imperial (5)</b>	2 <sup>nd</sup> Street (Calexico)	SH 111—E Rivera Ave	East West	TSP
	I-8 (El Centro)	Between Highway 111 and Forester Road—connector for transit	North South	Bus on Freeway
	Imperial Ave (I-8)	W. Main Street—SR 114	East West	Limited Stop
	Kloke Rd	Grant St—the Canal	North South	TSP
	Rockwood Ave (Calexico)	2 <sup>nd</sup> Street—E Cole Blvd	North South	TSP
	Alameda Street	E 37 <sup>th</sup> St to E Slauson Ave	North South	Bus Lane

Notes: TSP = transit signal priority, BRT = bus rapid transit

## ATTACHMENT 1: REGIONAL DEDICATED TRANSIT LANES STUDY FINAL REPORT

County	Corridor	Extent	Direction	Type
<b>Los Angeles (10)</b>	W Alameda Ave	Riverside Drive—Glendale Rd	East West	TSP
	Crenshaw Blvd	W 80 <sup>th</sup> St to Amsler St	North East	Bus Lane
	E Florence Ave	W Blvd to N La Brea Ave	North East/South West	Bus Lane
	Garfield Ave	SR 91 Express Lane—E Alhambra Rd	North South	Bus Lane
	I-405 HOV Seg 2 (Central LA)	I-5N to Orange County Line	North West/South East	Express Lane
	SR 110	I-5 Interchange to I-10 Interchange	North East/South West	TSP
	S La Cienega Blvd	Wilshire Blvd to E El Segundo Blvd	North South	TSP
	Sepulveda Blvd	Venice Blvd to W Centinela Ave	North West/South East	Bus Lane
	Ventura Blvd	LA County Line—Burbank	East West	Bus Lane
<b>Orange (1)</b>	I-405 HOV Seg 3 (OCCOG)	Los Angeles County Line to SR 73	East West	Express Lane
<b>Riverside (2)</b>	I-15 Express Lane (Riverside)	San Bernardino County Line to SR 74	North South	Express Lane
	Van Buren Blvd	Jurupa Rd—Wood Rd	East West	TSP
<b>San Bernardino (7)</b>	Barton Rd	S La Cadena Dr to S San Mateo St	East West	Bus Lane
	Big Bear Blvd	Through the City of Big Bear—Village/Pine to Stanfield Cutoff	East West	TSP
	Edison Ave	SR 71 to Haven Avenue	East West	Bus Lane
	I-15 Express Lane	SR 18 to Riverside County Line	All	Express Lane
	San Bernardino Ave	Milliken Ave to Sierra Ave	East West	Bus Lane
	Sierra Ave	Armstrong Rd to I-15	North South	Bus Lane
<b>Ventura (3)</b>	Valley Blvd	Kaiser Fontana to San Bernardino Transit	East West	Bus Lane
	Erringer Rd	118—Royal Ave	North South	TSP
	Telegraph Rd	Victoria to Mills	East West	Bus Lane
	Vineyard Ave	N Oxnard Blvd—Los Angeles Ave	North South	Bus Lane

### Corridors Added by Stakeholders After Evaluation

County	Corridor	Extent	Direction
<b>Los Angeles (1)</b>	Jefferson Blvd	Sepulveda—La Cienega Blvd	North South
<b>San Bernardino (7)</b>	N Mt. Vernon Ave	Valley Blvd to Rialto	North South
	Rialto	Mt Vernon to E Street	East West
	Baseline	E Street to Boulder	East West
	Boulder Ave	Baseline to Highland Ave	North South
	Highland Ave	Boulder Ave to Victoria	East West
	SR 71	Euclid Ave to Metrolink West Corona Station	North South
	Riverside Ave	N Riverside to Riverside Metrolink Station	North South
<b>Ventura (1)</b>	Cochran Ave	N Madera Rd—Yosemite Ave	East West

Notes: TSP = transit signal priority, BRT = bus rapid transit

# ATTACHMENT 1: REGIONAL DEDICATED TRANSIT LANES STUDY FINAL REPORT

## Existing or Planned Corridors

County	Corridor	Extent	Type	Existing or Planned
<b>Imperial</b>	SH 111 (Imperial Ave)	Imperial County	Bus on Freeway	<b>Planned</b>
<b>Los Angeles</b>	5 <sup>th</sup> Street	Downtown LA	Peak Hour Bus Lane	Existing
	6 <sup>th</sup> Street	Downtown LA	Peak Hour Bus Lane	Existing
	98 <sup>th</sup> Street	S Sepulveda Blvd to Bellanca Ave	Bus Lane	Existing
	Aliso Street	Downtown LA	Peak Hour Bus Lane	Existing
	Alvarado Street	Downtown LA	Peak Hour Bus Lane	Existing
	Broadway BRT	Little Tokyo Gold Line to Imperial Hwy (5 <sup>th</sup> Street to Ocean Ave EB)	Bus Lane	<b>Planned</b>
	Culver Blvd	Venice Blvd—Dunquesne Ave	Bus Lane	Existing
	Figueroa Bus Lane	Downtown LA	Bus Lane	Existing
	Flower Street	Downtown LA	Peak Hour Bus Lane	Existing
	G (Orange) Line	Lassen—Lankershim (Chatsworth—North Hollywood)	BRT	Existing
	Grand Ave	Downtown LA	Bus Lane	Existing
	I-10 Express Lane	I-605 to San Bern County Line	Express Lane	<b>Planned</b>
	I-405 Expresslane (Los Angeles)	I-5N to Orange County Line	Express Lane	<b>Planned</b>
	I-605 ExpressLane (Los Angeles)	I-10 to I-405	Express Lane	<b>Planned</b>
	J Silver Line/I-10 and I-110 ExpressLanes	El Monte—Long Beach	Express Lane	Existing
	J Silver Line Seg 1/I-10	El Monte—Long Beach	BRT	Existing
	Lincoln Blvd	Dewey Ave to Venice Blvd	Bus Lane	Existing
	Metro Rapid 754 Vermont	W 122 <sup>nd</sup> St—Hollywood Blvd	Limited stop service	Existing
	Metro Rapid Van Nuys Blvd	Expo and Sepulveda—Vermont, then on Van Nuys to San Fernando Rd to Metrolink, Laurel Canyon Blvd—Victory Blvd	Limited stop service	Existing
	N Spring Street	Downtown LA	Bus Lane (EB)	Existing
Noho Pasadena BRT	Olive/Glenoaks/Broadway/Colorado	BRT	<b>Planned</b>	
Olive Street	Downtown LA	Bus Lane	Existing	
Santa Monica Blvd	Ocean Ave to 5 <sup>th</sup> Street WB	Bus Lane	Existing	
SR 91 Express Lanes	Orange County Line—Magnolia Ave	Express Lane	<b>Planned</b>	
Sunset/Chavez	Dodger Stadium to Union Station	Game Day Bus Lane	Existing	



# ATTACHMENT 1: REGIONAL DEDICATED TRANSIT LANES STUDY FINAL REPORT

County	Corridor	Extent	Type	Existing or Planned
	Sunset-Glendale-Atlantic BRT	Atlantic Blvd via Vermont/ Los Feliz/Central to Broadway	BRT	<b>Planned</b>
	Venice Blvd	Santa Monica—Downtown LA	BRT	<b>Planned</b>
	Washington/Culver Blvd	La Cienega Ave— Duquesne Ave.	Bus Lane	Existing
	Wilshire Blvd	Centinela to Federal Ave; Crenshaw Blvd to Western Ave, Valencia to 5 <sup>th</sup>	Peak Hour Bus Lane	Existing
<b>Orange</b>	Beach Blvd Bravo	La Mirada Blvd—PCH	TSP	Existing
	Harbor Blvd Bravo	E Chapman Ave—Newport Blvd	TSP	Existing
	I-5 (Orange County)	Orange County Section	Express Lane	Planned
	SR 55 (Orange County)	Orange County Section	Express Lane	<b>Planned</b>
	Westminster/17 <sup>th</sup> Bravo	Beach, Harbor	Limited Stop	Existing
	I-405 ExpressLane (Orange County)	Los Angeles County Line to SR 73	Express Lane	<b>Planned</b>
	SR 91 ExpressLane (Orange County)	SR 55 to Riverside County	Express Lane	Existing
<b>Riverside</b>	I-215 Express Lane	I-15 to Van Buren Bl	Express Lane	<b>Planned</b>
	SH 111 TSP	Coachella to Palm Springs along Highway 111	TSP. Limited Stop Service	<b>Planned</b>
	SR 60 Express Lane	I-15 to Gilman Springs Rd	Express Lane	<b>Planned</b>
	I-15 Express Lane	San Bernardino County Line to SR 74	Express Lane	<b>Planned</b>
<b>San Bernardino</b>	I-10 Express Lane	LA County Line to Ford St	Express Lane	<b>Planned</b>
	SbX Green Line	California State University to Loma Linda University & Medical Center	BRT	Existing
	West Valley Connector	Pomona Transit Center to Rancho Cucamonga	Bus Rapid Transit	<b>Planned</b>
	I-15 Express Lane	SR 18 to Riverside County Line	Express Lane	<b>Planned</b>
<b>Ventura</b>	U.S. 101 Express Bus lanes	Ventura County	Express Lane	<b>Planned</b>

Attachment: Corridors for Transit Priority (Regional Dedicated Transit Lanes Study Final Report)

Notes: TSP = transit signal priority, BRT = bus rapid transit



# Regional Dedicated Transit Lanes Study

Regional Transit Technical Advisory Committee  
(RTTAC)

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Priscilla Freduah-Agyemang, Senior Regional Planner

Mobility Planning & Goods Movement

Monday, January 30, 2023

[WWW.SCAG.CA.GOV](http://WWW.SCAG.CA.GOV)

# Background – Connect SoCal 2020



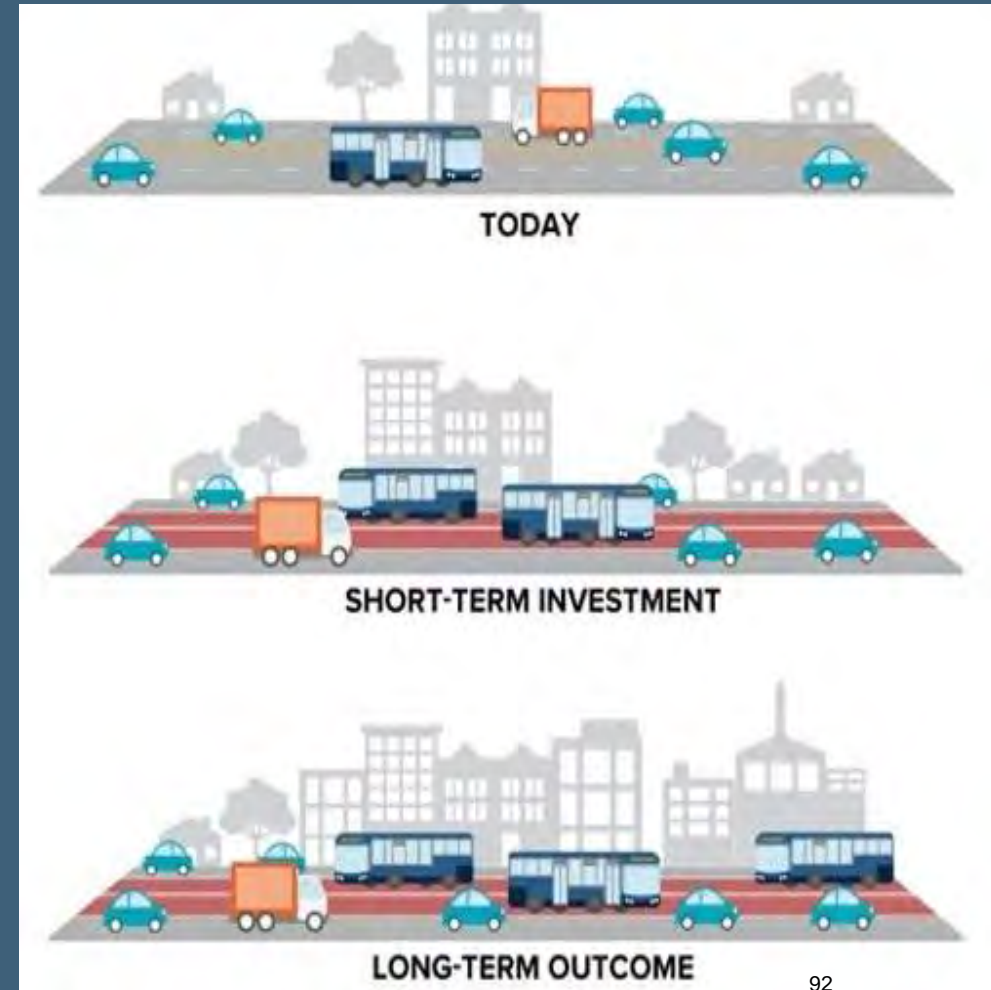
# Study Background

- **Decline in transit ridership** (SCAG-UCLA 2018 study) and national trends
- **Rethinking mobility and improving efficiencies**
  - e.g., tactical transit lanes, transit signal priority
- **COVID-19 pandemic** and need for recovery



# Why Transit Priority Treatments Matter

- Proven benefits in the short and long term
- Reinforces and informs land use investments over time
- Helps reduce the use of single-occupancy vehicles
- Achieves greenhouse gas emission goals



# Regional Dedicated Transit Lanes Study

## Purpose

- Support the development of a regional network of dedicated bus lanes and priority treatments

## Summary

- Identify key benefits, challenges and opportunities for dedicated bus lanes and priority treatments
- Assess and recommend potential network of corridors for prioritization
- Provide best practices and implementation guidance for local jurisdictions



# Stakeholder Engagement Efforts

- Transportation Agency stakeholders
- Conducted individual county meetings with **CTCs, COGs, transit operators & CBOs**
- Technical Advisory Committee (TAC)
  - Conducted **4 TAC** meetings





# CORRIDOR EVALUATION

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# High Level Methodology

## Step I. Identification & Screening

1. Developed goals (and relative importance) for priority treatments
2. Associated metrics and weights to each goal
3. GIS assessment of metrics for corridors throughout region
4. Alternative methods for goals or treatments that are less quantifiable
5. Developed a first list of corridors or areas that pass screening thresholds



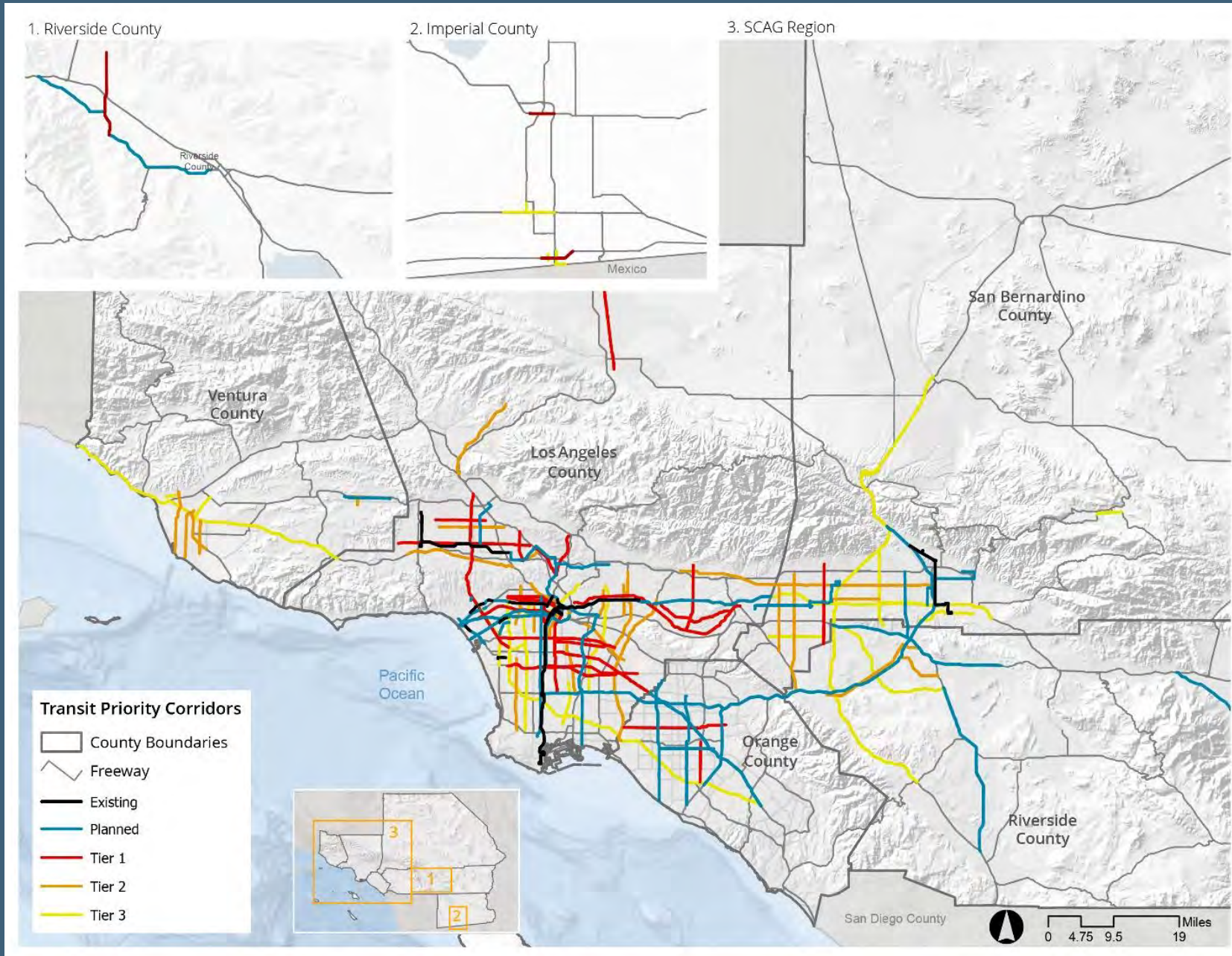
## Step II. Evaluation & Prioritization

1. Applied treatment types to screened corridors based on feasibility/suitability criteria
2. Coded and run in SCAG model based on sensitivity test results
3. Calculated and weighted model-derived metrics
4. Off-model calculations and adjustments as needed (minimize)
5. Reviewed and prioritized based on goals and geographic considerations

# Transit Priority Corridor Screening and Evaluation Goals

Goal Area	Criteria
<b>1. Improve transportation system performance</b>	<ul style="list-style-type: none"> <li>• Transit speed and reliability potential</li> <li>• Minimize traffic and safety impacts</li> <li>• Promotes regional connectivity</li> </ul>
<b>2. Increase people throughput and attract riders</b>	<ul style="list-style-type: none"> <li>• Population and employment density</li> <li>• Travel markets/trip intensity</li> <li>• Transit RIDERSHIP</li> </ul>
<b>3. Improve access for equity-focused communities</b>	<ul style="list-style-type: none"> <li>• Equity populations (race (non-white))</li> <li>• Equity populations (income)</li> <li>• Proximity to schools and civic institutions</li> </ul>
<b>4. Promote local plans and priorities</b>	<ul style="list-style-type: none"> <li>• Identified plans and studies</li> <li>• Financial feasibility</li> <li>• Jurisdictional feasibility</li> </ul>
<b>5. Integrate with the built environment</b>	<ul style="list-style-type: none"> <li>• Transit supportive land use and TOD</li> <li>• Supportive first/last mile and bike network</li> <li>• Technical feasibility</li> </ul>
<b>6. Improve climate and health outcomes</b>	<ul style="list-style-type: none"> <li>• GHG and other emissions impacts</li> <li>• Benefits to healthy places</li> </ul>

# Network of Proposed Corridors for Priority Treatments



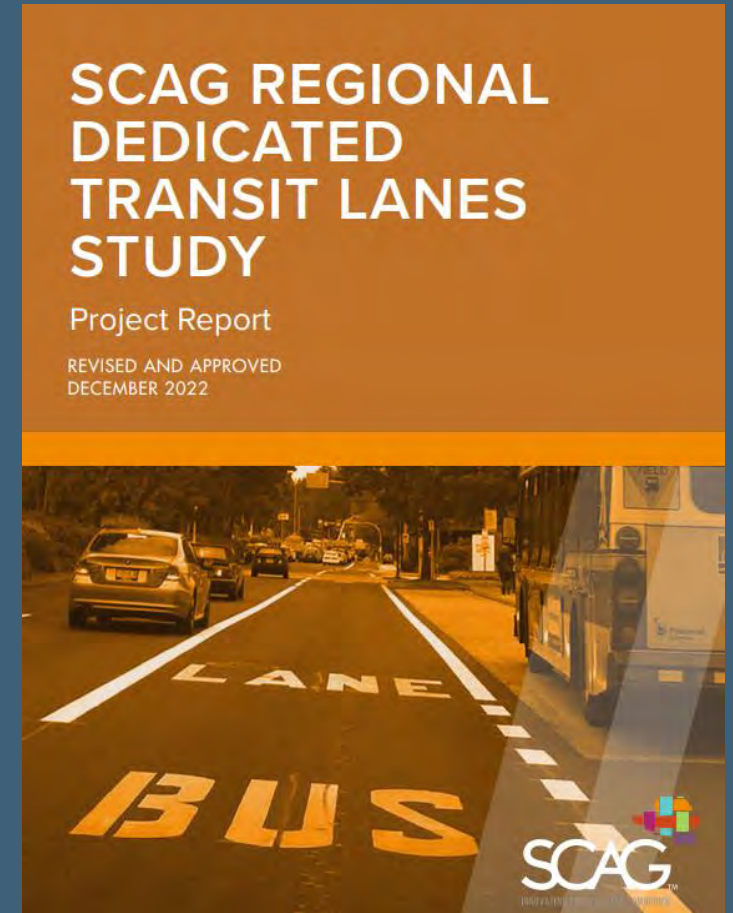
# Recommendations

- Incorporate the regional transit priority network into the development of Connect SoCal 2024 and related regional planning efforts
- Promote the corridors identified through this study into local planning efforts, stakeholder discussions, and funding and grant opportunities



## Next Steps

- Incorporate comments in the final report
- Share draft with Regional Transit Technical Advisory Committee (RTTAC) (Jan 2023)
- Publish Final Report by **March 2023**





# THANK YOU

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**Contact info:**

**Priscilla Freduah-Agyemang, Senior Regional Planner, Mobility Planning & Goods Movement**

**[agyemang@scag.ca.gov](mailto:agyemang@scag.ca.gov)/213-236-1973**



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**DRAFT**  
**A RESOLUTION OF THE SOUTHERN CALIFORNIA**  
**ASSOCIATION OF GOVERNMENTS APPROVING A REGIONAL**  
**CLEAN TRANSPORTATION TECHNOLOGY POLICY**

**REGIONAL COUNCIL OFFICERS**

President  
Jan C. Harnik, Riverside County  
Transportation Commission

First Vice President  
Art Brown, Buena Park

Second Vice President  
Curt Hagman, County of  
San Bernardino

Immediate Past President  
Clint Lorimore, Eastvale

**COMMITTEE CHAIRS**

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Jan C. Harnik, Riverside County  
Transportation Commission

Community, Economic &  
Human Development  
Frank Yokoyama, Cerritos

Energy & Environment  
Deborah Robertson, Rialto  
Transportation  
Ray Marquez, Chino Hills

**WHEREAS**, SCAG is the largest Metropolitan Planning Organization (MPO) in the United States covering six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura), and serving 19 million people pursuant to 23 USC § 134 et seq. and 49 USC § 5303 et seq.; and

**WHEREAS**, SCAG is responsible for bringing Southern California’s diverse residents and local partners together with unifying regional plans, policies, and programs that result in more healthy, livable, sustainable, and economically resilient communities; and

**WHEREAS**, improving mobility, accessibility, reliability, regional environmental conditions, and transportation safety has been a goal included in SCAG’s long-range plans, including Connect SoCal, for decades; and

**WHEREAS**, Connect SoCal 2020 identified a vision to create a holistic and coordinated approach to de-carbonizing or electrifying passenger vehicles, transit, and goods movement vehicles; and

**WHEREAS**, improvement of regional air quality and attainment of Clean Air Act requirements remains a priority for the SCAG region; and

**WHEREAS**, Clean Transportation Technology is defined for SCAG’s purposes as “zero- and near zero-emission vehicles, their supporting infrastructure, and other facilitating products that reduce environmental impact over their life cycle,” and the below policy will formalize this; and

**WHEREAS**, Clean Transportation Technology will be necessary in order to meet state goals and requirements such as the Innovative Clean Transit Rule, Advanced Clean Cars Act, and the Advanced Clean Trucks Regulation; and

**WHEREAS**, SCAG’s Regional Council unanimously adopted a Climate Action Resolution in January 2021 that affirmed a commitment to reduce greenhouse gas emissions and establish partnerships to support local jurisdictions’ climate adaptation and mitigation initiatives, including implementation of Clean Transportation Technologies; and



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**WHEREAS**, investment in Clean Transportation Technologies is an important part of meeting SCAG’s objectives in economic development and recovery, resilience planning and achievement of equity; and

**WHEREAS**, jurisdictions throughout the region including cities, counties, transit agencies, and private fleets, are currently evaluating and making investments in Clean Transportation Technology; and

**WHEREAS**, SCAG, though not an implementing agency, has an evolving role in Clean Transportation Technology Investment, including but not limited to the Last Mile Freight Program, and future funding opportunities; and

**WHEREAS**, SCAG supports the region in deployment of Clean Transportation Technology through research and evaluation, stakeholder support, partnerships, and advocacy;

**NOW, THEREFORE, BE IT RESOLVED** by the Regional Council of the Southern California Association of Governments, that SCAG hereby adopts a regional Clean Transportation Technology Policy with the long-term aim of supporting the development, commercialization and deployment of a zero-emission transportation system and its supporting elements to improve air quality, reduce greenhouse gas emissions, meet federal, state and regional targets and promote economic development, resilience and equity.

**BE IT FURTHER RESOLVED THAT:**

1. Clean Transportation Technology is defined as “zero- and near zero-emission vehicles, their supporting infrastructure, and other facilitating products that reduce environmental impact over their life cycle.”
2. SCAG will take a technology neutral approach in its study of, advancement of, and where applicable investment in Clean Transportation Technology where SCAG defines Technology Neutrality as a “stance that does not give preference to a particular technology as long as it furthers the desired outcome of a zero-emission transportation system that meets or exceeds federal and state targets.”
3. As part of the development of Connect SoCal 2024, SCAG will prepare a Clean Transportation Technology Compendium that will support decision making by providing information on various clean transportation technologies;





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4. SCAG will continue to foster innovation and will support deployment of a range of Clean Transportation Technologies with consideration of the best available information and expected use case as determined by the end user, thus maintaining a Technology Neutral Approach;
5. SCAG will continue to support the region in deployment of Clean Transportation Technology through research and evaluation, stakeholder support, resource and tool provision, intrastate and intraregional coordination, advocacy, and where applicable investment programs;
6. SCAG will work to address equity impacts so that all, especially the under-resourced, can access and benefit from Clean Transportation Technologies.

**PASSED, APPROVED AND ADOPTED** by the Regional Council of the Southern California Association of Governments at its regular meeting this xx day of April, 2023.

[SIGNATURES ON FOLLOWING PAGE]



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Ray Marquez, Chino Hills

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Jan Harnik  
President, SCAG

Attested by:

---

Kome Ajise  
Executive Director

Approved as to Form:

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Michael Houston Chief Counsel



# Clean Transportation Technology Policy

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# Clean Transportation Technology (Clean Tech) Vision

- Connect SoCal 2020 includes a holistic and coordinated approach to de-carbonizing or electrifying passenger, transit and goods movement vehicles and a *vision* for a zero-emission transportation system or using cleaner mobility options where zero emission options are not feasible.




## INNOVATING FOR A BETTER TOMORROW

SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities and more than 19 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California.

# Clean Transportation Technology Drivers

- Federal Clean Air Act
- GHG reduction
- Public Health
- Increased Public Funding
- Economic, Equity and Resilience Opportunities

 **100% ZEV sales** by 2035

Full transition to **ZEV short-haul/drayage trucks**  by 2035

 Full transition to **ZEV buses & heavy-duty long-haul trucks**  by 2045\*

 Full transition to **ZE off-road equipment** by 2035\*

\*where feasible



# SCAG Clean Technology Program

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- Ongoing research, evaluation and plan development
  - EV Charging Site Suitability Study (EVCSS), part of the Sustainable Communities Program
  - Medium and Heavy Duty Zero Emissions Roadmap
  - RHETTA pilot partnership with EPRI/CEC
- Providing Support to Regional Stakeholders
- Advocacy and Policy Work
  - Funding for city infrastructure and vehicle purchases
  - Continued funding for vehicle demonstration and early deployment (MD/HD)
  - Share success stories
- Investments in Clean Technology
  - Last Mile Delivery Program

# Support to Regional Stakeholders

- Letters of Support
- Partnerships on Clean Tech related studies and plans
- Last Mile Delivery Program
- Clean Cities Coalition
- Trainings and Tools
  - PEV Atlas and Site Prioritization Tool
  - Toolbox Tuesday Webinars
- Research and Data Support
- Grant Partnerships



# Clean Transportation Technology Policy

---

1. Clean Transportation Technology is defined as “zero- and near zero-emission vehicles, their supporting infrastructure, and other facilitating products that reduce environmental impact over their life cycle.”
2. SCAG will take a technology neutral approach in its study of, advancement of, and where applicable investment in Clean Transportation Technology where SCAG defines Technology Neutrality as a “stance that does not give preference to a particular technology as long as it furthers the desired outcome of a zero-emission transportation system that meets or exceeds federal and state targets.”
3. As part of the development of Connect SoCal 2024, SCAG will prepare a Clean Transportation Technology Compendium that will support decision making by providing information on various clean transportation technologies;



# Clean Transportation Technology Policy

---

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6. SCAG will work to address equity impacts so that all, especially the under-resourced, can access and benefit from Clean Transportation Technologies.

# Clean Transportation Technology Compendium

---

- Systematic and comprehensive approach to presenting technology options
- Includes vehicles, supporting infrastructure and facilitating technologies
- Covers passenger, transit, rail and commercial heavy duty
- Describes important characteristics and makes information transparent
  - ex - total cost of ownership, technology readiness level, environmental impacts, safety, etc.
- Includes existing conditions, scoping criteria for compendium inclusion, descriptive characteristics, and regional clean technology strategies.

# Feedback

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- PEV Study City Stakeholders, Jan 18
- PEV Study Steering Committee, Jan 26
- Regional ZE Truck Collaborative, (over email)
- RTTAC, Jan 30
- GLUE Council, Jan 30



## Next Steps: Upcoming RTP/SCS Development (2024)

- Setting a vision for ZE Tech in the Region
  - Focus on publicly accessible stations
  - Regional Road Map for MD/HD Vehicles
- Demonstrate ability to meet and exceed state targets
- Create Technology Compendium (pending board direction)
- Continued Outreach



<https://scag.ca.gov/connect-socal>  
[linder@scag.ca.gov](mailto:linder@scag.ca.gov)

*What other innovations, benefits or potential consequences need to be addressed as we roll out this technology?*



# THANK YOU!

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For more information, please visit:

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