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Agenda - Final Revised

Thursday, June 17, 2021

10:30 AM

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Executive Management Committee

Eric Garcetti, Chair
Hilda Solis, Vice Chair
Ara Najarian, 2nd Vice Chair
James Butts
Paul Krekorian
Sheila Kuehl
Tony Tavares, non-voting member

Stephanie Wiggins, Chief Executive Officer

METROPOLITAN TRANSPORTATION AUTHORITY BOARD RULES
(ALSO APPLIES TO BOARD COMMITTEES)

PUBLIC INPUT

A member of the public may address the Board on agenda items, before or during the Board or Committee's consideration of the item for one (1) minute per item, or at the discretion of the Chair. A request to address the Board must be submitted electronically using the tablets available in the Board Room lobby. Individuals requesting to speak will be allowed to speak for a total of three (3) minutes per meeting on agenda items in one minute increments per item. For individuals requiring translation service, time allowed will be doubled. The Board shall reserve the right to limit redundant or repetitive comment.

The public may also address the Board on non agenda items within the subject matter jurisdiction of the Board during the public comment period, which will be held at the beginning and/or end of each meeting. Each person will be allowed to speak for one (1) minute during this Public Comment period or at the discretion of the Chair. Speakers will be called according to the order in which their requests are submitted. Elected officials, not their staff or deputies, may be called out of order and prior to the Board's consideration of the relevant item.

Notwithstanding the foregoing, and in accordance with the Brown Act, this agenda does not provide an opportunity for members of the public to address the Board on any Consent Calendar agenda item that has already been considered by a Committee, composed exclusively of members of the Board, at a public meeting wherein all interested members of the public were afforded the opportunity to address the Committee on the item, before or during the Committee's consideration of the item, and which has not been substantially changed since the Committee heard the item.

In accordance with State Law (Brown Act), all matters to be acted on by the MTA Board must be posted at least 72 hours prior to the Board meeting. In case of emergency, or when a subject matter arises subsequent to the posting of the agenda, upon making certain findings, the Board may act on an item that is not on the posted agenda.

CONDUCT IN THE BOARD ROOM - The following rules pertain to conduct at Metropolitan Transportation Authority meetings:

REMOVAL FROM THE BOARD ROOM The Chair shall order removed from the Board Room any person who commits the following acts with respect to any meeting of the MTA Board:

a. Disorderly behavior toward the Board or any member of the staff thereof, tending to interrupt the due and orderly course of said meeting.
b. A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting.
c. Disobedience of any lawful order of the Chair, which shall include an order to be seated or to refrain from addressing the Board; and
d. Any other unlawful interference with the due and orderly course of said meeting.

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Agendas for the Regular MTA Board meetings are prepared by the Board Secretary and are available prior to the meeting in the MTA Records Management Department and on the Internet. Every meeting of the MTA Board of Directors is recorded and is available at www.metro.net or on CD's and as MP3's for a nominal charge.

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The State Political Reform Act (Government Code Section 84308) requires that a party to a proceeding before an agency involving a license, permit, or other entitlement for use, including all contracts (other than competitively bid, labor, or personal employment contracts), shall disclose on the record of the proceeding any contributions in an amount of more than $250 made within the preceding 12 months by the party, or his or her agent, to any officer of the agency, additionally PUC Code Sec. 130051.20 requires that no member accept a contribution of over ten dollars ($10) in value or amount from a construction company, engineering firm, consultant, legal firm, or any company, vendor, or business entity that has contracted with the authority in the preceding four years. Persons required to make this disclosure shall do so by filling out a "Disclosure of Contribution" form which is available at the LACMTA Board and Committee Meetings. Failure to comply with this requirement may result in the assessment of civil or criminal penalties.

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x2 *Español (Spanish)*
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NOTE: ACTION MAY BE TAKEN ON ANY ITEM IDENTIFIED ON THE AGENDA

Live Public Comment Instructions:

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The Committee Meeting begins at 10:30 AM Pacific Time on June 17, 2021; you may join the call 5 minutes prior to the start of the meeting.

Dial-in: 888-251-2949 and enter
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Public comment may be taken at the beginning of the meeting or as the Board takes up each item. To give public comment on an item, enter #2 (pound-two) when prompted. Please note that the live video feed lags about 30 seconds behind the actual meeting. There is no lag on the public comment dial-in line.

Instrucciones para comentarios publicos en vivo:

Los comentarios publicos en vivo solo se pueden dar por telefono.

La Reunion de la Junta comienza a las 10:30 AM, hora del Pacifico, el 17 de Junio de 2021. Puedes unirte a la llamada 5 minutos antes del comienso de la junta.

Marque: 888-251-2949 y ingrese el codigo
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Written public comments must be received by 5PM the day before the meeting.
Please include the Item # in your comment.
Email: BoardClerk@metro.net
Post Office Mail:
Board Administration
One Gateway Plaza
MS: 99-3-1
Los Angeles, CA 90012

CALL TO ORDER

ROLL CALL

APPROVE Consent Calendar Item: 40.

Consent Calendar items are approved by one vote unless held by a Director for discussion and/or separate action.

CONSENT CALENDAR

40. SUBJECT: TRANSPORTATION NETWORK COMPANIES ACCESS FOR ALL PROGRAM FUND ADMINISTRATOR FOR LOS ANGELES COUNTY 2021-0270

RECOMMENDATION

CONSIDER:

A. ADOPTING a resolution (Attachment A) authorizing Metro to serve as the Los Angeles County Local Access Fund Administrator (LAFA) of revenue generated by the Access for All Program of the California Public Utilities Commission (CPUC) to support on-demand wheelchair accessible vehicle (WAV) service; and

B. AUTHORIZING the Chief Executive Officer or their designee to submit an application to pursue a designated status as the LAFA for Los Angeles County of revenue generated from the fee that Senate Bill 1376 requires for each trip originating in our region that Transportation Network Companies (TNCs) provide.

Attachments: Attachment A - Resolution Authorizing to Serve as the LAFA for LA County
Presentation

NON-CONSENT

41. SUBJECT: STATE AND FEDERAL REPORT 2021-0358

RECOMMENDATION

RECEIVE AND FILE June 2021 State and Federal Legislative Report.

42. SUBJECT: FARELESS SYSTEM INITIATIVE (FSI) UPDATE JUNE 2021 2021-0432

RECOMMENDATION

RECEIVE oral report on Fareless System Initiative (FSI) Update.

Attachments: Attachment A – File # 2021-0372 Approved Motion on FSI May 2021

Presentation

43. SUBJECT: DEVELOP A $3.5B FUNDING PLAN TO SUPPORT THE METRO BOARD MOTION FOR ZERO EMISSION CONVERSION BY 2030 2021-0363

RECOMMENDATION

RECEIVE AND FILE status report on programming of fund sources to meet the 2030 goal for the Zero Emission Bus (ZEB) Program with a preliminary program cost estimate of $3.53 billion comprised of $2.0B for Battery Electric Buses (BEB) and $1.5B for Charging Infrastructure.

Attachments: Attachment A - 2020-0636 March 2021 ZEB Rollout Plan

Attachment B - 2020-0636 March Presentation

Presentation

44. SUBJECT: CHARGING INFRASTRUCTURE LIFE OF PROJECT BUDGET ADOPTION 2021-0193

RECOMMENDATION

A. APPROVE Life of Project (LOP) budget of $50.0M commencing FY22 for Phase 1 for the Charging Infrastructure Program alongside the J Line (Silver) supporting the Zero Emission Bus Program;

B. APPROVE amending the FY22 Budget for $34.0M for charging infrastructure; and

C. CONSIDER finding that authorization of the use of alternative delivery methods pursuant to Public Utilities Code Section 130242 will achieve integration of design, project works, and other components in an efficient manner at Metro bus facilities.

(REQUIRES 2/3 VOTE OF THE BOARD)

Attachments: Presentation

45. SUBJECT: TRAFFIC REDUCTION STUDY 2021-0334

RECOMMENDATION

RECEIVE oral report on Traffic Reduction Study (formerly named the Congestion Pricing Feasibility Study).

Attachments: Presentation

46. SUBJECT: COORDINATED PUBLIC TRANSIT - HUMAN SERVICES TRANSPORTATION PLAN FOR LOS ANGELES COUNTY 2021-0216

RECOMMENDATION

CONSIDER adopting the locally developed 2021-2024 Coordinated Public Transit - Human Services Plan for Los Angeles County to comply with the requirements of the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) as reauthorized by the Fixing America's Surface Transportation Act (FAST Act) of 2015.

Attachments: Coordinated Public Transit - Human Services Transportation Plan 2021-2024

47. SUBJECT: LOS ANGELES AERIAL RAPID TRANSIT PROJECT UPDATE 2021-0024

RECOMMENDATION

RECEIVE AND FILE status report on the Los Angeles Aerial Rapid Transit project.

Attachments: Attachment A - Broadway Alignment with Station Locations
Attachment B - Fare Letter to Metro from ARTT
Attachment C - Community Outreach During NOP Scoping Period

48. SUBJECT: SUBREGIONAL EQUITY PROGRAM 2021-0435

RECOMMENDATION

APPROVE Motion by Directors Hahn, Garcetti, Solis, Butts, and Dutra that the Board of Directors direct the Chief Executive Officer to initiate a process with the Gateway Cities, South Bay, and other eligible Subregions to program their Subregional Equity Program funds starting no later than FY22-23, in accordance with project or program readiness and the following provisions:

1. To the extent that Measure M cash-flow may be unavailable for the SEP, Subregions may access SEP funds through a combination of inter-fund borrowing, exchanging with other programs and projects in their Subregions, Metro Measure M bonding capacity, or other discretionary funds designated for their Subregions;

2. Subregions will identify and determine their projects or programs to be funded with SEP, with Metro staff involvement limited to ensuring statutory and regulatory compliance, and with funds programmed and allocated in five-year increments;

3. Availability of SEP will not negatively impact the funding of other Measures R and M projects and programs or the overall funding

committed by Measures R and M to each Subregion across all projects and programs; and,

4. SEP funding availability will be inflation-adjusted from 2015, consistent with the inflation adjustments provision in the Measure M Ordinance, all other MSPs and projects in the Measure M Expenditure Plan, and the June 2016 Board action that created the Subregional Equity Program and Motion 36.1 from July 2019 (Board File 2019-0598).

WE FURTHER MOVE that, henceforth, the "Measure R and Measure M Unified Cost Management Policy" is amended to eliminate the Subregional Equity Program from consideration to address project funding shortfalls during construction. Subregions may still choose to make SEP eligible for selected Measure M projects before they enter the construction phase.

49. SUBJECT: LA RIVER BIKE PATH PROJECT DELIVERY 2021-0436

RECOMMENDATION

APPROVE Motion by Directors Garcetti and Solis that the Board of Directors direct the Chief Executive Officer to assume and maintain the following roles in the delivery of each section of LA River Bike Path currently in development and to report back within 90 days on the status of each project, including funding plans, Sustainability, and Equity Assessments, milestone schedules, and execution of agreements with partner agencies:

A. For the LA Riverway in the San Fernando Valley, Metro shall act as the funding agency administering Measure M and coordinating and supporting the pursuit of additional funds.

B. For the LA River Path through Downtown Los Angeles, Metro shall act as the funding agency administering Measure M and coordinating and pursuing additional funds, the agency of record for environmental clearance, the constructing agency, and a partner in operating and maintaining the completed project.

C. For the Lower LA River Bike Path, Metro shall act as the funding agency administering Measure M and coordinating and pursuing additional funds, and shall provide resources to perform the environmental clearance to LACDPW.

SUBJECT: GENERAL PUBLIC COMMENT 2021-0388

RECEIVE General Public Comment

Consideration of items not on the posted agenda, including: items to be presented and (if requested) referred to staff; items to be placed on the agenda for action at a future meeting of the Committee or Board; and/or items requiring immediate action because of an emergency situation or where the need to take immediate action came to the attention of the Committee subsequent to the posting of the agenda.

COMMENTS FROM THE PUBLIC ON ITEMS OF PUBLIC INTEREST WITHIN COMMITTEE'S SUBJECT MATTER JURISDICTION

Adjournment

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Metro

Board Report

File #: 2021-0270, **File Type:** Resolution **Agenda Number:** 40.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: TRANSPORTATION NETWORK COMPANIES ACCESS FOR ALL PROGRAM FUND ADMINISTRATOR FOR LOS ANGELES COUNTY

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

CONSIDER:

A. ADOPTING a resolution (Attachment A) authorizing Metro to serve as the Los Angeles County Local Access Fund Administrator (LAFA) of revenue generated by the Access for All Program of the California Public Utilities Commission (CPUC) to support on-demand wheelchair accessible vehicle (WAV) service; and

B. AUTHORIZING the Chief Executive Officer or their designee to submit an application to pursue a designated status as the LAFA for Los Angeles County of revenue generated from the fee that Senate Bill 1376 requires for each trip originating in our region that Transportation Network Companies (TNCs) provide.

ISSUE

In September 2018, Senate Bill (SB) 1376 was signed into California law. It requires the CPUC, as part of its regulation of TNCs such as Uber and Lyft, to establish a program to improve the accessibility of persons with disabilities to on-demand transportation services requested through online-enabled applications or platforms. On April 2, 2021 the CPUC released the application for agencies interested in becoming a LAFA, including TNC Access for All Program Overview and Requirements that it revised on April 30, 2021. The CPUC required LAFA applications to be submitted by May 3, 2021. It also required applicants to submit by July 9, 2021 a Board resolution authorizing the agency to serve as the county's LAFA. Metro may not receive funding until after September 30, 2021 if it does not submit the Board resolution by the CPUC deadline.

Approval of the staff recommendation will allow Metro to complete the CPUC's application process to become the LAFA for Los Angeles County. It will also allow Metro to be the LAFA for Los Angeles County for each CPUC annual funding cycle (through 2027) unless it decides to not continue this role in the future.

BACKGROUND

The primary focus of the TNC Access for All Act and Access for All Program is on users who need a WAV capable of transporting their non-folding motorized wheelchairs, scooters or other mobility devices. Per the CPUC proceedings approved to date ("Track 1" through "Track 3"), TNCs now pay a fee of $0.10 (twice the minimum required by SB 1376) to the CPUC for each trip originating in each county statewide that their providers complete. Also, the CPUC created a TNC Access for All Fund to deposit and distribute the revenue that the fee generates (net of offsets claimed by TNCs and approved by the CPUC, as well as CPUC administration and other costs) to LAFAs (or Statewide Access Fund Administrators in counties without a LAFA) to pay for their administrative costs and the services of access providers they select annually on a competitive basis to operate on-demand WAV service in their counties. The CPUC also approved allowing LAFAs to use up to 15 percent of the amount it allocates to each county each year to cover their administrative expenses (including staffing and contracted services, among other costs). The CPUC will decide on Track 4 issues later this year.

Staff have been involved in statewide workshops that the CPUC organized for stakeholders to provide their feedback on the implementation of SB 1376 and Access for All Program, as summarized in the January 15, 2021 Board Box. Among the recommendations that staff provided during these workshops, which the CPUC adopted, is the delegation of its responsibility for the administration of the Access for All Program in each county of the state to Metropolitan Planning Organizations, County Transportation Commissions, or Regional Transportation Planning Agencies (as applicable) due to their better understanding of WAV service needs in their regions and how these services relate to existing regional plans.

DISCUSSION

Summary of Requirements for Local Access Fund Administrators

The LAFA may develop an Access for All Program that best suits its region's needs provided it complies with the CPUC's Access for All Program requirements. Among these requirements, the LAFA cannot use more than 15 percent of the total funds that the CPUC allocates each year to the county to cover its administrative costs. It must also use the funds for countywide WAV services. The LAFA must develop and maintain a webpage dedicated to its county's Access for All Program, as well as make a good faith effort to reach out to members and representatives of persons with disabilities within the community during the planning process for their Access for All Program. The LAFA must also establish a process for procuring WAV access providers through an annual competitive solicitation that screens applications based on the CPUC's eligibility requirements. For each Funding Year, the CPUC requires the LAFA to award contracts to access providers by July 1 of the following year (e.g., July 1, 2022 for the 2021 Funding Year). Selected access providers must then liquidate the funds within 12 months. Funds that the LAFA does not award or that access providers do not spend within 12 months are available for the next funding cycle.

Additionally, the LAFA must submit quarterly reports on the administration of its Access for All Program, including discussion of its administrative costs and involvement with members and representatives of persons with disabilities, with the first of such reports due to the CPUC on

November 15, 2021.The LAFA must monitor the performance of the access providers it selects and provide quarterly reports to the CPUC. To fulfill this requirement, the LAFA would collect data from access providers and review performance metrics quarterly. The LAFA must also determine whether there is any pattern of non-compliance with the standards established by the CPUC and describe any other challenges it encounters, with the first of such reports due to the CPUC on November 15, 2022. The LAFA determines whether access providers are eligible to receive future funding based on their performance.

Metro Outreach

Staff have delivered presentations about the Access for All Fund to the Accessibility Advisory Committee (AAC), the Bus Operations Subcommittee (BOS), the Local Transit Systems Subcommittee (LTSS), and City of Los Angeles Commission on Disability. Staff have also consulted with Access Services, as well as with representatives from other major regional public agencies in California and those representing persons with disabilities. Staff will take into consideration the input of stakeholders in Los Angeles County, including representatives of persons with disabilities and of agencies in Metro's committees and subcommittees, in the development of the Access for All Program for Los Angeles County. Staff will also take into consideration existing plans, processes, procedures and priorities approved by the Board of Directors, including those relevant to Metro's: i) designated recipient status of funds from the Federal Transit Administration Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program; and ii) Coordinated Public Transit - Human Services Transportation Plan for Los Angeles County.

Available Funding

SB 1376 provides an opportunity to expand access to WAV demand-responsive transportation to persons with disabilities from the net revenue generated from the TNC fee per trip originating in each county in California. Staff estimate that TNC provided about 400 million passenger trips per year in California before the coronavirus (COVID-19) pandemic. As reported by the CPUC as of April 8, 2021 based on TNC trips completed during the last two quarters of 2019 and the first two quarters of 2020, the net revenue available statewide for the Access for All Program for the 2021 Funding Year is about $21.5 million. Los Angeles County's share from the TNC Access for All Fund for this first funding cycle, after the TNC offsets that the CPUC has already granted, is about $6.6 million. Revenue for future funding cycles is contingent on the demand for TNC services post-pandemic, as well as on TNC offsets and/or exemptions approved by the CPUC for claims for expenses and/or meeting the levels of service specified in the CPUC's rulemaking, respectively. With the inherent funding volatility from one year to another, Metro's Access for All Program must ensure continuity of funding and enhanced on-demand WAV services throughout the term of the provisions of SB 1376 through December 30, 2025 and the 2027 Funding Year.

Interim Actions to Comply with CPUC LAFA Application Requirements and Deadlines

Due to the short notice of the CPUC's release of the application for agencies interested in becoming a LAFA and delay in releasing the revised TNC Access for All Program Overview and Requirements, staff were not able to seek Board approval to submit the application by the May 3, 2021 deadline. Instead, staff submitted a letter stating Metro's intent to serve as the LAFA for Los Angeles County

and provided the certification that the CPUC required from LAFA applicants to comply with its TNC Access for All Program Overview and Requirements. Staff did not submit the notarized affidavit that the CPUC required from LAFA applicants, but stated in the letter of intent that it would do so contingent on the approval by the Metro Board of a resolution (Attachment A) at its regular meeting that is scheduled for June 24, 2021. The CPUC requires the Chair of the Board of Directors to sign the resolution.

Equity Platform

The staff recommendation supports access to opportunities, particularly the third pillar ("Focus and Deliver") of Metro's Equity Platform. It supports providing better access to jobs, education, and other opportunities for persons with disabilities who need a WAV capable of transporting their non-folding motorized wheelchairs, scooters or other mobility devices.

DETERMINATION OF SAFETY IMPACT

Approval of this item will have no direct impact on the safety of Metro customers or employees.

FINANCIAL IMPACT

All of the recommended actions will be fully funded through the TNC Access for All Fund. CP&D and OMB have agreed working on staffing and other needs during the FY 2022 Mid-Year Budget Adjustment to allow Metro to meet the CPUC's requirements due to its designation as the LAFA for Los Angeles County. No Metro funds will be required to manage, administer and oversee the program. The amount of funds required to fully support Metro's LAFA responsibilities will be below the 15% of the total for Los Angeles County available for such use, as allowed by the CPUC.

Impact to Budget

Approving the recommended actions will not impact our bus and rail operating and capital budgets, as TNC Access for All funds are not eligible for these purposes.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports achieving multiple goals outlined in the Vision 2028 Plan. More specifically, it supports Goal 1 to provide high-quality mobility options that enable people to spend less time travelling and Goal 3 to enhance communities and lives through mobility and access to opportunity.

ALTERNATIVES CONSIDERED

The Board may choose not to approve all or some of the recommended actions. Staff does not recommend this alternative because without Board approval, Metro cannot fulfill the role of Access for All Program LAFA for Los Angeles County. Absent Metro's designation, the CPUC will assign this responsibility to the Statewide Access Fund Administrator, therefore relinquishing the authority of the Board over the use of Los Angeles County's share of net revenue from the Access for All Fund.

NEXT STEPS

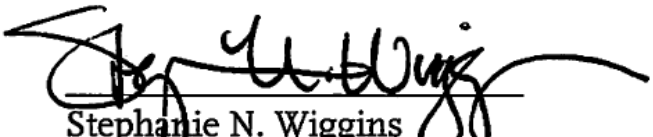
With Board approval of the recommendation, staff will complete the application process to become the Access for All Program LAFA for Los Angeles County. Staff will submit the Board resolution and the notarized affidavit that the CPUC requires from LAFA applicants. Contingent on approval of staffing and other needs through the FY 2022 Mid-Year Budget Adjustment, staff will also establish a task force made up of members of the AAC, LTSS, BOS and others stakeholders to develop the guidelines for Los Angeles County's Access for All Program that will be presented to the Board of Directors for approval during the second half of FY 2022 . Staff will also apprise the Board on the CPUC's decision on the Track 4 proceeding as it relates to Metro's administration of the Access for All Program for Los Angeles County.

ATTACHMENTS

Attachment A - Resolution Authorizing to Serve as the LAFA for Los Angeles County

Prepared by: James Andrew, Transportation Planning Manager, Countywide Planning & Development, (213) 922-2086
Ashad Hamideh, Senior Director, Countywide Planning & Development, (213) 922-5539
Wil Ridder, Executive Officer, Countywide Planning & Development, (213) 922-2887
Laurie Lombardi, Senior Executive Officer, Countywide Planning & Development, (213) 418-3251

Reviewed by: James de la Loza, Chief Planning Officer, (213) 922-2920



Stephanie N. Wiggins
Chief Executive Officer

ATTACHMENT A

Resolution No. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY AUTHORIZING THE EXECUTION OF THE CERTIFICATION TO SERVE AS THE LOCAL ACCESS FUND ADMINISTRATOR (LAFA) FOR THE ACCESS FOR ALL PROGRAM FOR THE COUNTY OF LOS ANGELES

WHEREAS, the Los Angeles County Metropolitan Transportation Authority (LACMTA) is an eligible County Transportation Commission and may receive state funding from the Access For All Program to administer a funding program for local Access Providers for on-demand wheelchair accessible vehicle (WAV) transportation projects; and

WHEREAS, the statutes related to state-funded transit projects require a local or regional administering agency to abide by various regulations; and

WHEREAS, Senate Bill 1376 (2018) designated the California Public Utilities Commission (Commission) as the administrative agency for the Access For All Program; and

WHEREAS, the Commission has developed the Access for All Program Overview & Requirements for Access Fund Administrators (AFAs), for the purpose of selecting Local AFAs (LAFAs), and administering and distributing Access Funds to eligible local Access Providers of on-demand WAV transportation; and

WHEREAS, the Los Angeles County Metropolitan Transportation Authority authorizes William Ridder to execute required documents and any amendments thereto; and

WHEREAS, the Los Angeles County Metropolitan Transportation Authority wishes to serve as the LAFA for the County of Los Angeles.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority that as the Access Fund recipient, LACMTA agrees to comply with all conditions and requirements set forth in the Certification document and applicable statutes, regulations, and Program Requirements for the Access for All Program.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that William Ridder be authorized to execute all required documents of the Program and any amendments thereto with the Commission.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority that it hereby authorizes the Los Angeles County Metropolitan Transportation Authority to serve as the LAFA of the Access for All Program for the County of Los Angeles.

PASSED AND ADOPTED by the governing board of the Los Angeles County Metropolitan Transportation Authority on this 24th day of June 2021.

_____
ERIC GARCETTI
Chair, LACMTA Board

Attested by:

_____
Director, LACMTA Board

CERTIFICATION

The undersigned, duly qualified and acting as the Clerk of the Los Angeles County Metropolitan Transportation Authority, certifies that the foregoing is a true and correct representation of the Resolution adopted at a legally convened meeting of the Board of Directors of the Los Angeles County Metropolitan Transportation Authority held on Thursday, June 24, 2021.

_____
COLLETTE LANGSTON
LACMTA Board Clerk

DATED:
(SEAL)

TRANSPORTATION NETWORK COMPANIES ACCESS FOR ALL PROGRAM FUND ADMINISTRATOR FOR LOS ANGELES COUNTY

Executive Management Committee

June 17, 2021

Metro

Recommendation

- **ADOPT a resolution authorizing Metro to serve as the Local Access Fund Administrator (LAFA) for Los Angeles County**
  - Of revenue generated by the Access for All Program of the California Public Utilities Commission (CPUC).
  - From the fee that Senate Bill (SB) 1376 requires Transportation Network Companies (TNCs) to pay, as determined by the CPUC, for each trip originating in LA County.
  - To support on-demand wheelchair accessible vehicle (WAV) service in LA County.

- **AUTHORIZE the CEO or their designee to submit an application to pursue a designated status as the LAFA for Los Angeles County**

Metro

Issue

- **Senate Bill 1376 signed into California law in September 2018**
  - Requires the CPUC to establish a program to improve the accessibility of persons with disabilities to on-demand transportation services requested through online-enabled applications or platforms.
  - Applies to TNC service (e.g., Uber, Lyft, etc.) that the CPUC regulates.
- **The CPUC released the application for becoming a LAFA on April 2, 2021**
  - Requires submitting a Board resolution authorizing the agency to serve as the county's LAFA by July 9, 2021.
- **Board approval needed to complete the CPUC's application process**
  - Allows Metro to be the LAFA for Los Angeles County for each CPUC annual funding cycle (through 2027), or until it decides to not continue this role.

Metro

Background

- **Focus is on users who need a WAV capable of transporting their non-folding motorized wheelchairs, scooters or other mobility devices.**
- **Three CPUC "track" proceedings approved to date (fourth track pending).**
- **TNCs now pay a fee of $0.10 (twice the minimum required by SB 1376) to the CPUC for each trip originating in each county statewide.**
- **LAFAs can use up to 15 percent of the amount the CPUC allocates to each county each year to cover their administrative expenses.**
- **TNCs can submit offset and/or exemption requests to the CPUC for approval.**
  - Reduce the amount available to LAFAs for "access providers" & administration.

Metro

Funding Availability for Los Angeles County

- **Approx. $6.6 million for Los Angeles County for the 2021 Funding Year**
  - About 31 percent of the $21.5 M available for all counties statewide.
  - Net of revenue collected July 2019 - June 2020 and CPUC approved TNC offsets.

- **Metro can use up to 15 percent of the amount the CPUC allocates to Los Angeles County each year to cover their administrative expenses.**

- **TNC offsets and/or exemptions may reduce the amount available to Metro for "access providers" & administration in future CPUC Funding Years.**

- **Revenue for future funding cycles contingent on:**
  - TNC demand post COVID-19 coronavirus pandemic.
  - TNC offsets and/or exemptions approved by the CPUC for claims for expenses. and/or for meeting the levels of service specified in the CPUC's rulemaking.

Metro

Next Steps

- **With Board approval of the recommendation, staff will complete the application process to become the LAFA for Los Angeles County**
  - Otherwise, will be assigned by the CPUC to Statewide Access Fund Administrator.

- **Contingent on approval of staffing and other needs for Metro to fulfill its LAFA responsibilities through the FY 2022 Mid-Year Budget Adjustment:**
  - Continue outreach & establish a task force to develop program guidelines.
  - Apprise the Board on the outcome of the CPUC's Track 4 and other proceedings.
  - Seek Board approval for Los Angeles County's Access for All Program Guidelines.
  - Procure "access providers" to implement WAV service.

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Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

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Board Report

File #: 2021-0432, **File Type:** Informational Report **Agenda Number:** 42.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: FARELESS SYSTEM INITIATIVE (FSI) UPDATE JUNE 2021

ACTION: ORAL REPORT

RECOMMENDATION

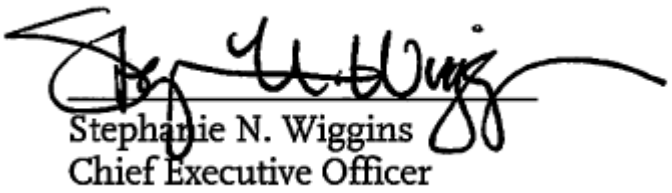
RECEIVE oral report on Fareless System Initiative (FSI) Update.

ATTACHMENTS

Attachment A - File # 2021-0372 Approved Motion on Fareless System Initiative (FSI) May 2021

Prepared by: Devon Deming, Interim Deputy Executive Officer, FSI (213) 922-7957

Reviewed by:
Elba Higueros, Chief Policy Officer, OCEO, (213) 922-6820



Stephanie N. Wiggins
Chief Executive Officer

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2021-0372, **File Type:** Motion / Motion Response **Agenda Number:** 45.

REVISED
REGULAR BOARD MEETING
MAY 27, 2021

Motion by:

DIRECTORS GARCETTI, MITCHELL, AND KREKORIAN

Fareless System Initiative

Metro's Fareless System Initiative (FSI) is one of the most transformative efforts Metro can take to help Los Angeles County emerge from the pandemic, advance equity, reduce transportation emissions, simplify students' return to school, and increase ridership.

The pandemic has hit students hard. Once the Department of Public Health and schools deem it safe for students to fully return to in-person learning, Metro, municipal operators (munis), and school districts should do everything possible to make the transition back effortless for these families. Studies across the country have shown that the lack of access to transportation is a barrier to student attendance and, therefore, academic success.

Moreover, Metro riders' median household income is $19,325 systemwide, with approximately 70 percent of Metro riders considered low-income under federal Department of Housing and Urban Development definitions. Many of our riders depend on Metro to reach their jobs as essential workers, and during the pandemic they suffered unavoidable financial impacts. Fareless transit would alleviate some of this burden, helping Los Angeles County get back on its feet.

As the FSI pilot has been developed, the following items remain to be finalized:

1. An efficient implementation process, as well as agreements with the school districts, needs to be put in place to distribute fareless K-12 and Community College student passes.
2. A final funding plan needs to be created.
3. A key concern of municipal operators is the continuation of existing funding agreements with community colleges. These funding agreements have, in many cases, taken years to negotiate. While FSI remains a pilot, these agreements and processes should be kept in place.
4. A mission statement and goals are necessary to help communicate the need for this program.
5. The existing FSI Task Force that developed the pilot should be re-formed to focus on implementation.

Board action is required to ensure these key areas of risk can be addressed and to provide clarity on

FSI's advancement and next steps.

SUBJECT: FARELESS SYSTEM INITIATIVE

RECOMMENDATION

APPROVE Motion by Directors Garcetti, Mitchell, and Krekorian that the Board direct the Chief Executive Officer to implement the Fareless System Initiative, subject to a final financial plan and while pursuing cost-sharing agreements.

WE FURTHER MOVE that the Board direct the Chief Executive Officer to:

Administrative Coordination

A. Develop strategies to streamline and simplify the eligibility process for participants, striving to remove as many barriers to entry as possible;

    1. Include an evaluation of a self-attestation process for low-income riders;

B. Partner with school districts on administrative coordination to enable availability at pilot launch to all LA County school and community college districts (based on each district's interest), including but not limited to any required Memoranda of Understanding or TAP coordination;

Funding

C. In partnership with implementation partners and key stakeholders, pursue and support federal and state opportunities and legislation to fund the Fareless System Initiative, both the pilot phase and any permanent program (should the Board decide to continue past the proposed pilot period), including but not limited to the federal Freedom to Move Act;

D. Pursue reasonable cost-sharing agreements with school districts;

    1. Seek to take advantage and leverage any existing student transportation fee programs (e.g., student-approved LACCD fees);

    2. Seek to preserve existing funding agreements between school districts and transit operators;
        a. Wherever municipal operators have existing fareless agreements with community college districts, consider accepting muni student transit passes on Metro for the duration of the pilot;

    3. Seek new funding agreements for districts without any existing discounted or fareless student pass programs (e.g., U-Pass);

E. Consider pursuing private funding opportunities, including but not limited to philanthropic partnerships;

Follow-Up

F. Report to the Board monthly on the development, launch, and performance of the Fareless System Initiative. The first update should include:

1. A mission statement and goals for the FSI pilot;

2. Lists of interested municipal operators, school districts, and community college districts;

3. An update on the refined FSI financial plan; and

4. Identification of a cross-departmental implementation team.

HAHN AMENDMENT: Direct the Chief Executive Officer to prepare a financial plan for the implementation of a Fareless System Initiative that meets the conditions provided below to the Board's satisfaction:

1. Municipal and local operators that choose to participate will be fully included and provided the same type of fare subsidy as Metro transit operations, in order to ensure a seamless rider experience regardless of geographic location or transit provider;

2. The initiative is funded without reducing existing transit operations or state of good repair expenditures or by using regional funding typically committed to bus and rail transit operations or intended for the capital program;

3. Opportunities to expand or adjust existing fare subsidy programs to maximize community benefit have been studied and presented to the Board; and,

4. An initiative can be scaled and/or targeted in a manner that best aligns with Metro's Equity Platform, adopted by the Board in March 2018.

MITCHELL AMENDMENT: Direct Metro CEO to Continue the current fare collection policy in perpetuity until the Metro Board is satisfied with a financial plan for Fareless.

BONIN AMENDMENT:

1. Report back in the financial plan with information on the costs, including administration, technology, and enforcement, of the proposed pilot program compared to a universal fare-free system.

2. Include in the overall final program evaluation:

   a. Reach of the program, including student and low-income participation rates.

   b. Effectiveness of the program in improving mobility, increasing student attendance and performance, shifting travel behavior, reducing automobile use, and increasing transit ridership.

c. The net cost of the program and cost per rider.

SOLIS AMENDMENT: Report back on the feasibility of using the Federal American Rescue plan funding for the pilot.

Fareless System Initiative (FSI) Update
Executive Management Committee
Thursday, June 17, 2021

Devon Deming
Interim Deputy Executive Officer
Fareless System Initiative (FS)
demingd@metro.net
(213) 978-7957

Metro

Implementation Team

FSI Implementation is an agency-wide initiative and will require support from every department.

- CEO appointed Devon Deming as Interim DEO on June 1
- FSI Implementation reports to OCEO

<u>Phase 1 Implementation Team Includes:</u>

- Operations (including Service Planning)
- Finance (OMB and TAP)
- Communications (Reduced Fare/Customer Care, Community Relations, Marketing, Government Relations, and Public Relations)

Program Goals (Phase 1)

- Phase 1 (K-14)
  - To make access to transit fareless for all K-12 and community college students in LA County through cost-sharing partnerships with districts (school and community college) and transit agencies.
  - Feasible funding plan for Phase 1
  - Program could start as early as August 2021 for at least 18-month pilot

K-12 District Partnerships: Status

Proposed cost-sharing for District K-12 Partnerships would be $3 per student per year for all students in district and would include:

- Distribution of free TAP Cards through District
- Unlimited rides on all participating transit agencies in LA County

We are surveying districts, conducting online information sessions, and one-on-one meetings to reach as many districts as possible quickly. In preliminary meetings with school districts, this $3 proposal has been well-received.

K-12 Launch

- K-12 Pilot (Preliminary)
  - All K-12 TAP cards (rider class) would be recognized by the Metro system to allow students to board without requiring fare to be loaded on the card (same as LADOT DASH to Class)
  - 40,000 existing K-12 TAP cards would automatically be eligible
  - 500,000 additional K-12 cards available for distribution through Districts and more on order
  - Schools would be required to track distribution for school purposes, but not share any student information with Metro
  - Simple online registration process for performance data

Community College Launch

- Community College Launch (Preliminary)
  - Currently, 18 out of 20 Community Colleges have existing cost-sharing agreements with transit agencies
    - Cerritos College has verbally agreed to participate
    - College of the Canyons pending meeting
  - Proposed cost sharing is based on the muni/college agreements already in place
  - Metro's U-Pass program would need to transition from "Opt-In" to "Opt-Out", which would require contract amendments for existing schools. This is recommended to streamline the programs and to be consistent with the muni/college agreements

Status of Phase 1 Funding Plan

- Three school districts interested in cost-sharing
- $100,000 funding from already-planned CARB STEP mobility grant benefits FSI with same technical infrastructure.
- Evaluating if $80 Million to defease bonds can be shifted to Phase 2
- Calculating lost fare revenue estimate for Metro
- Evaluating financial impact of LACMOA/LTSS request to cost-share 50% of lost fare revenue up to 2019 NTD Ridership levels
- Currently evaluating the use of Federal ARPA funds, and any other funding

Next Steps

- Continued outreach to all stakeholders and finalization of Phase 1 funding plan
- If key deal terms are finalized per May Board Motion, then a written board report will be agendized for full Board consideration at its meeting on June 24th

Fareless System Initiative

Fact Sheet
April 2021

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2021-0363, **File Type:** Informational Report **Agenda Number:** 43.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: DEVELOP A $3.5B FUNDING PLAN TO SUPPORT THE METRO BOARD MOTION FOR ZERO EMISSION CONVERSION BY 2030

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE status report on programming of fund sources to meet the 2030 goal for the Zero Emission Bus (ZEB) Program with a preliminary program cost estimate of $3.53 billion comprised of $2.0B for Battery Electric Buses (BEB) and $1.5B for Charging Infrastructure.

ISSUE

In April 2016, Metro's Board of Directors passed a motion to convert Metro's bus operations from CNG to Zero Emissions by 2030. In December 2018, the California Air Resources Board (CARB) issued the Innovative Clean Transit (ICT) regulation which requires all California public transit agencies to transition from conventional fueled buses to zero emission buses by 2040. In March 2021, staff presented the ZEB Rollout Plan (Attachments A & B: Item 2020-0636) which presented a phased implementation plan for the Battery Electric Buses to meet a 2030 ZEB conversion goal. With this goal, bus deliveries and expenditures are compressed resulting in expenditure demands exceeding available constrained funding sources. This report outlines the funding plans necessary to reduce potential delay risks due to limited budget allocations, constrained funding sources, limited personnel to manage the work, and long construction lead times.

BACKGROUND

Metro currently operates a fleet of approximately 2400 CNG buses of various lengths from ten (10) bus divisions. To transition to 100% Zero Emissions Bus operations Metro will have to address several challenges. Foremost is development of a funding plan that supports accelerated delivery of Zero Emission Bus conversion which includes, but is not limited to, Utility Upgrades from Southern California Edison (SCE) and Los Angeles Department of Water and Power (LADWP), Charging Infrastructure Installations, Battery Electric Bus Procurements, and Service Planning in line with BEB performance (NextGen).

As detailed in Figure-1, below, the Rough Order of Magnitude (ROM) cost to transition to 100% ZEB Operations is approximately $3.53B. Over a 10-year period, this is an average of $350M per year. In recent years Metro's bus capital expenditures have averaged approximately $190M. Therefore, Metro will need to identify funding sources to address the gap of approximately $160M per year. This is a significant challenge. Even as more monies become available, there is growing competition for new and existing funds.

Figure-1

Division	Bus Qty	Infrastructure		En-Route	Buses	Total[2]
		Min[1]	Max[2]			
1	171	$70.9M	$100.1M	$14.2M	$150.8M	$265.1M
2	169	$67.3M	$95.1M	$16.8M	$149.0M	$261.0M
3	151	$62.6M	$88.4M	$13.0M	$133.2M	$234.6M
5	167	$66.5M	$94.0M	$8.4M	$147.3M	$249.6M
7	240	$101.4M	$143.3M	$11.1M	$211.6M	$366.1M
8	358	$134.0M	$189.3M	$16.7M	$315.7M	$521.7M
9	176	$65.9M	$93.1M	$17.8M	$155.2M	$266.1M
10	175	$65.5M	$92.5M	$4.5M	$154.3M	$251.4M
13	316	$123.4M	$174.3M	$7.1M	$278.7M	$460.1M
15	245	$93.7M	$132.3M	$17.6M	$216.0M	$366.0M
18	185	$70.7M	$99.9M	$27.4M	$163.1M	$290.4M
Totals	**2,353**	**$921.9M**	**$1.30B**	**$154.7M**	**$2.07B**	**$3.53B**

1. Baseline BEB Infrastructure Only
2. Baseline Infrastructure + On-Site Storage + Solar

DISCUSSION

With the estimated cost of the ZEB Program identified as part of this Board item the financial planning can be implemented and adopted as part of the planned 2021 Short-Range Transportation Plan (SRTP). Staff will program future local, State, and Federal funding into the SRTP, and when made available, pursue grant applications like Low Carbon Transit Operations Program (LCTOP) and Transit and Intercity Rail Capital Program (TIRCP) to accumulate funding resources for the ZEB Program.

Future State or Federal Funding

Should additional State or Federal funding arise prior to the adoption of the SRTP, which may occur through the FY22 State budget, a new multi-year transportation bill (e.g., renewal of the FAST Act) or passage of the Biden American Jobs Plan in some form, the additional funding can be used for the ZEB Program and mitigate the funding need of competing Metro projects and programs.

Multi-Year Financial Impact

The Board adopted a comprehensive multi-year funding plan as part of the September 2020 Long Range Transportation

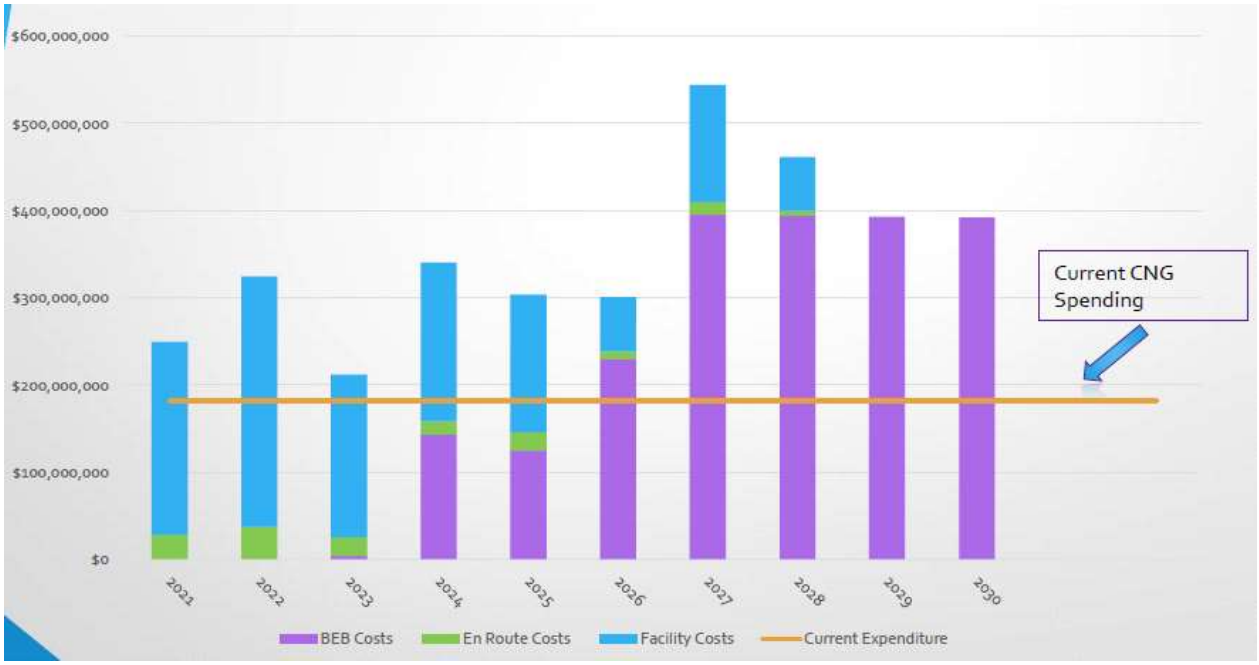
Plan (LRTP). The LRTP financial forecast identified funding for all planned Metro capital and operating costs, including bus replacement. The LRTP includes a replacement plan for the CNG fleet at a cost of $1.856 billion from FY 20 through FY30 and reflects existing bus purchase contract deliveries. However, the cost for BEB and Charging Infrastructure installations were not included. Per Figure-1, the estimated cost of the ZEB Program is $3.53 billion, and funding for this program may add at least $1.674 billion of additional costs to the SRTP through 2030, excluding sunk costs of the CNG buses that have already been delivered since FY20.

The 2021 SRTP is currently in development and will be presented to the Board for adoption later this year. Funding will be identified in the SRTP for the ZEB Program and is expected to come from capital and operations-eligible funding that is currently programmed for the CNG replacement, including FTA Section 5307, Congestion Mitigation and Air Quality Program, Proposition C 40% Discretionary, Transportation Development Act, and the State Regional Improvement Program. Due to the magnitude of the cost of the BEB and Charging Infrastructure, the larger State grant programs including the TIRCP may be identified.

Per Figure-2, annual shortfalls are anticipated in funding the $3.53B program. Bridging this funding gap requires a prioritization of the agency's ZEB capital program to meet the stretch goals to be completed by end of this decade. The higher incremental cost of the ZEB Program may require funding that is currently programmed for competing Metro priorities, including preventive maintenance, discretionary transit capital, midlife, and other state-of-good-repair needs. The programming of TIRCP to the ZEB Program may reduce the expected amount of State grant funding available for the major rail capital projects in the Measure M Expenditure Plan.

There is a likelihood that there will be unforeseen costs for the ZEB Program as with all projects undertaken of this scale. An example could be additional spending to address the limited range of BEB and the effectiveness and availability of charging technology. Also, the funding plan will require that Metro is successful in securing competitive grants.

Figure-2



DETERMINATION OF SAFETY IMPACT

Board approval of this item will directly contribute to improving the air quality in the Los Angeles basin and therefore will have a positive safety impact.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

This item supports the following Strategic Goals: 1) Provide high-quality mobility options that enable people to spend less time traveling, 2) Provide responsive, accountable, and trustworthy governance within the Metro organization, 3) Enhance communities and lives through mobility and access to opportunity, and 4) Transform LA County through regional collaboration and national leadership.

NEXT STEPS

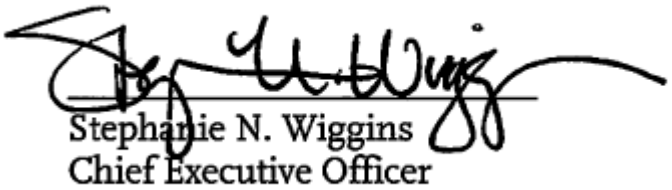
Metro will commence the development of a funding plan as part of the 2021 SRTP for the ZEB Program and identify the funding sources needed for the $3.53B program estimate.

ATTACHMENTS

Attachment A: 2020-0636 March 2021 ZEB Rollout Plan
Attachment B: 2020-0636 March Presentation

Quintin Sumabat, DEO, Vehicle Engineering & Acquisition, (213) 922-4922
Jesus Montes, Sr. EO, Vehicle Engineering & Acquisition, 213-418-3277

Debra Avila, Chief Vendor/Contract Management Officer, (213) 418-3051
James de la Loza, Chief Planning Officer, (213) 922-2920



Stephanie N. Wiggins
Chief Executive Officer

Los Angeles County Metropolitan Transportation Authority

Final
Rollout Plan

Prepared for:

California Air Resources Board

Prepared by:

ZEBGO Partners

444 South Flower Street
Suite 800
Los Angeles, California 90071

March 2021

TABLE OF CONTENTS

Appendices

List of Tables

List of Figures

Acronyms and Abbreviations

BEB	Battery-Electric Bus
Board	Metro Board of Directors
BRT	Bus Rapid Transit
CARB	California Air Resource Board
CMF	Central Maintenance Facility
CNG	Compressed Natural Gas
DAC	Disadvantaged Communities
FCEB	Fuel Cell Electric Bus
ICT	Innovative Clean Transit
kW	Kilowatt
LADWP	Los Angeles Department of Water and Power
MW	Megawatts
OEM	Original Equipment Manufacturer
RFP	Request for Proposal
SBE	Standard Bus Equivalent
SCE	Southern California Edison
SP	Strategic Plan
ZE	Zero-Emission
ZEB	Zero-Emissions Bus(es)

E.1 ROLLOUT PLAN SUMMARY

Agency Background	
Transit Agency's Name	Los Angeles County Metropolitan Transportation Authority (Metro)
Mailing Address	One Gateway Plaza Los Angeles, California 90012-2952
Transit Agency's Air District	South Coast Air Quality Management District
Transit Agency's Air Basin	South Coast Air Basin
Total number of buses in Annual Maximum Service[1]	1,890[2]
Urbanized Area	Los Angeles – Long Beach – Anaheim, CA
Population of Urbanized Area[3]	12,150,996
Contact information of general manager, chief operating officer, or equivalent	James T. Gallagher Chief Operations Officer 213.418.3108 gallagherj@metro.net
Rollout Plan Content	
Is your transit agency part of a Joint Group[4]	No
Is your transit agency submitting a separate Rollout Plan specific to your agency, or will one Rollout Plan be submitted for all participating members of the Joint Group?	N/A
Please provide a complete list of the transit agencies that are members of the Joint Group (optional)	N/A
Contact information of general manager, chief operating officer, or equivalent staff member for each participating transit agency member	N/A
Does Rollout Plan have a goal of full transition to ZE technology by 2040 that avoids early retirement of conventional transit buses?	Yes
Please explain how your transit agency plans to avoid potential early retirement of conventional buses in order to meet the 2040 goal	Staff is evaluating the pandemic's impact to service, ridership, and available funding. However, sufficient time appears to be available to preclude the need for early retirement of buses.

[1] The ICT regulation defines "Annual Maximum Service" (13 CCR § 2023(b)(3)) as the number of buses in revenue service that are operated during the peak season of the year, on the week and day that maximum service is provided but excludes demand response buses.
[2] This is based on December 2018 (directly operated and contracted) service levels.
[3] As last published by the Census Bureau before December 31, 2017
[4] The ICT regulation defines a Joint Zero-Emission Bus Group or Joint Group (13 CCR § 2023.2) as two or more transit agencies that choose to form a group to comply collectively with the zero-emission bus requirements of section 2023.1 of the ICT regulation.

Rollout Plan Development and Approval	
Rollout Plan's approval date	03/25/21
Resolution No.	2020-0636
Is copy of Board-approved resolution attached to the Rollout Plan?	Yes (Appendix A)
Contact for Rollout Plan follow-up questions	Marc Manning Senior Director, Vehicle Engineering & Acquisition 213.392.6896 Manningm@metro.net
Who created the Rollout Plan?	Consultant
Consultant	ZEBGO Partners

E.2 EXECUTIVE SUMMARY

In accordance with the California Air Resource Board's (CARB) Innovative Clean Transit (ICT) regulation, the following report serves as Los Angeles County Metropolitan Transportation Authority's (Metro) Rollout Plan to transition its bus fleet to 100 percent zero-emission (ZE) by 2040.

E.2.1 CARB's Innovative Clean Transit Regulation

CARB's ICT regulation requires all public transit agencies in the State of California to transition from conventional buses (compressed natural gas, diesel, etc.) to ZE buses (battery-electric or fuel cell electric) by 2040. The regulation requires a progressive increase of an agency's new bus purchases to be zero-emission buses (ZEBs) based on fleet size. By 2040, CARB requires all transit agencies in the state to be operating only ZEBs.

To ensure that each agency has a strategy to comply with the 2040 requirement, the ICT regulation requires each agency, or a coalition of agencies, to submit a ZEB Rollout Plan before purchase requirements take effect. The Rollout Plan is considered a living document and is meant to guide the implementation of ZEB fleets and help transit agencies work through many of the potential challenges and explore solutions. Each Rollout Plan must include a number of required components (as outlined in the Rollout Plan Guidelines) and must be approved by the transit agency's governing body through the adoption of a resolution, prior to submission to CARB.

Metro must comply with the following requirements under the ICT regulation:

- July 1, 2020 – Board-approved Rollout Plan must be submitted to CARB[5]
- January 1, 2023 – 25 percent of all new bus purchases must be ZE
- January 1, 2026 – 50 percent of all new bus purchases must be ZE
- January 1, 2029 – 100 percent of all new bus purchases must be ZE
- January 1, 2040 – 100 percent of fleet must be ZE
- March 2021 – March 2050 – Annual compliance report due to CARB

E.2.2 Zero-Emission Bus Technologies

According to the ICT regulation, a ZEB is a bus with zero tailpipe emissions and is either a battery-electric bus (BEB) or a fuel cell electric bus (FCEB).

BEBs depend on a system to store and retrieve energy much as cars and trucks need fuel. BEBs have multiple battery packs that power an electric motor, resulting in ZE. Similar to many other battery-powered products, BEBs must be charged for a period of time to be operational. Currently, BEBs can be charged at the facility or in-service (on-route charging) via a number of connectors and dispensers.

A FCEB uses hydrogen and oxygen to produce electricity through an electrochemical reaction to power the propulsion system and auxiliary equipment. This ZE process has only water vapor as a byproduct. FCEBs can replace diesel or compressed natural gas (CNG) fuel buses without significant changes to operations and service and functions as a resilient backup alternative in case of natural disaster. The

[5] Due to the impacts of COVID-19, CARB provided an extension to all large transit agencies in California, upon request. Metro requested and was granted an extension to submit the Rollout Plan by December 31, 2020. In October 2020, Metro requested and was granted another extension to accurately capture the results of the recently released NextGen Plan and other service- and market-related updates. Metro now will submit its Board-approved Rollout Plan to CARB by March 2021.

fuel cell is generally used in conjunction with a battery, which supplements the fuel cell's power during peak loads and stores electricity that is recaptured through regenerative braking, allowing for better fuel economy.

Metro's past and ongoing ZEB analysis has found that BEB adoption is the ZEB technology that best aligns with Metro's 2030 ZEB goals. This is in a large part due to the market of BEBs in terms of technological advancement, costs, and availability. While FCEBs are promising and have many potential benefits (as compared to both CNG and BEB), unpredictability in operation costs and a limited supply chain makes it an unviable option at this time, especially considering Metro's aggressive ZEB goals. However, Metro will continue to monitor FCEB advancements and consider the technology in future applications.

E.2.3 Metro's Zero-Emission Bus Efforts

Metro is already embracing the prospects of a ZE future and is taking multiple steps to not only meet the requirements of CARB's ICT regulation, but to also provide a cleaner and more sustainable future for the communities that it serves. These efforts include:

- **Metro's Strategic Plan to ZEB Transition.** In 2017, the Metro Board endorsed staff's Strategic Plan for the transition to ZEBs. The first phase is to convert the Orange Line to ZEBs by 2020 and the Silver Line as soon as feasible, thereafter. The second phase involves the creation of a ZE Master Plan that would evaluate the entire Metro bus system and map out the best strategy and anticipated cost to convert to ZE operation.
- **BEB and Infrastructure Investments.** Shortly after the Board's endorsement of the 2017 Strategic Plan, Metro awarded three ZEB contracts for the electrification of the Orange and Silver Lines; two with BYD for five 60-foot ZEBs intended for the Orange Line and 60 40-foot ZEBs for the Silver Line, and one with New Flyer for 40 60-foot ZEBs for the Orange Line. To support these BEBs, Metro is in the process of installing 10 plug-in chargers at Division 8 and eight on-route chargers to support the Orange Line's transition. In September 2019, Metro's Board approved exercising the options of 40 additional BYD 40-foot ZEBs. With this exercise, Metro has plans to deploy 145 BEBs.
- **ZEB Program Master Plan.** In July 2018, Metro awarded "ZEBGO", a joint venture of multiple industry experts to produce a Master Plan and action-ready RFPs to transition to all ZEBs by 2030 – an ambitious plan that will guide Metro in adopting all ZEBs - 10 years before the ICT regulation requires.
- **NextGen Study.** While not directly tied to ZEB efforts, Metro is currently restructuring existing service to better meet the needs of current and future riders. The NextGen Bus Study will evaluate a number of alternatives and strategies to improve service, which may include more frequent service and shorter headways. This study is ongoing and is being coordinated with Metro's ZEB Master Plan efforts.

E.2.4 Metro's Path to an All-Zero-Emission Fleet

The Rollout Plan identifies a strategy for Metro to procure and operate an all-ZEB fleet by 2030 – ten years before the ICT regulation requires. In accordance with the Rollout Plan Guidance, this document provides an overview of a number of key components to Metro's ZEB transition, including fleet acquisitions, schedule, training, and funding considerations. As previously mentioned, Metro is currently studying and has a goal of transitioning to all ZEBs by 2030. Therefore, there are no anticipated issues with meeting the ICT regulation's 2040 requirement.

Due to the rapidly evolving nature of ZEB technologies, it is possible that the findings and recommended approaches in this report will be outdated when it is time for implementation. The information in this Rollout Plan is informed and based on December 2018 service levels. This information is used because it represents the fleet under typical operating conditions. Since then, there have been a number of special projects, including bus bridges, that may skew the fleet size and division requirements.

It should also be noted that COVID-19 has caused unprecedented losses in Metro's revenue through both the loss of fares from diminished ridership and loss of sales tax revenue from a reduction in Los Angeles consumer spending. For these reasons, Metro has reduced service and operations and is still evaluating the long-term ramifications on the system and the agency's capital projects and goals. Metro will proceed with planning and will adjust as the results from COVID-19 impacts stabilize and trends are more predictable.

The following subsections provide a brief summary of the Rollout Plan.

E.2.4.1 Baseline Conditions

As of December 2018, Metro currently operates a fleet approximately 2,230 buses out of 11 divisions. Another 165 buses are leased to contractors to operate Metro routes. Table E.2-1 summarizes each division and its respective fleet.

Table E.2-1. Summary of Existing Divisions and Baseline Fleet

Div.	Address	Operator	Fuel Type	Main Functions	32' Buses	40' Buses	45' Buses	60' Buses	Total Buses	Total Buses (SBE #)
1	1130 E. 6th St, Los Angeles	Metro	CNG	O&M	-	132	35	22	189	207
2	720 E. 15th St, Los Angeles	Metro	CNG	O&M	-	172	-	-	172	172
3	630 W. Ave 28, Los Angeles	Metro	CNG	O&M	-	86	91	-	177	196
5	5425 Van Ness Ave, Los Angeles	Metro	CNG	O&M	-	134	7	52	193	221
7	8800 Santa Monica Bl. W.Hollywood	Metro	CNG	O&M	-	148	80	5	233	252
8	9201 Canoga Ave, Los Angeles	Metro	CNG	O&M	-	61	107	34	202	241
9	3449 Santa Anita Ave, El Monte	Metro	CNG	O&M	-	161	62	-	223	236
10	742 N. Mission Rd, Los Angeles	Metro	CNG	O&M	-	69	13	69	151	189
13	920 N. Vignes St, Los Angeles	Metro	CNG	O&M	-	56	14	93	163	213
15	11900 Branford St, Los Angeles	Metro	CNG	O&M	-	82	109	50	241	288
18	459 W. Griffith St, Gardena	Metro	CNG	O&M	-	74	116	62	252	307
278	Stored at D10 or CMF	Metro	CNG	Training	-	31	1	-	32	33
								Directly Operated Subtotal	2,228	2,555
95	14913 E. Ramona Bl Baldwin Park	Transdev	CNG	O&M	16	18	-	-	34	31
97	21222 S. Wilmington Ave, Carson	MV Transit	Diesel/CNG	O&M	5	70	-	-	75	74
98	1611 Naud St, Los Angeles	Southland	CNG	O&M	29	27	-	-	56	50
								Contracted Subtotal	165	155
								Fleet Total	**2,393**	**2,710**

Source: ZEBGO, 2018

Note: Division 10 has been repurposed. It will not being used for revenue service except for the temporary relocation of buses during ZEB retrofits. Also, the diesel buses at Division 97 have subsequently been replaced with CNG buses.

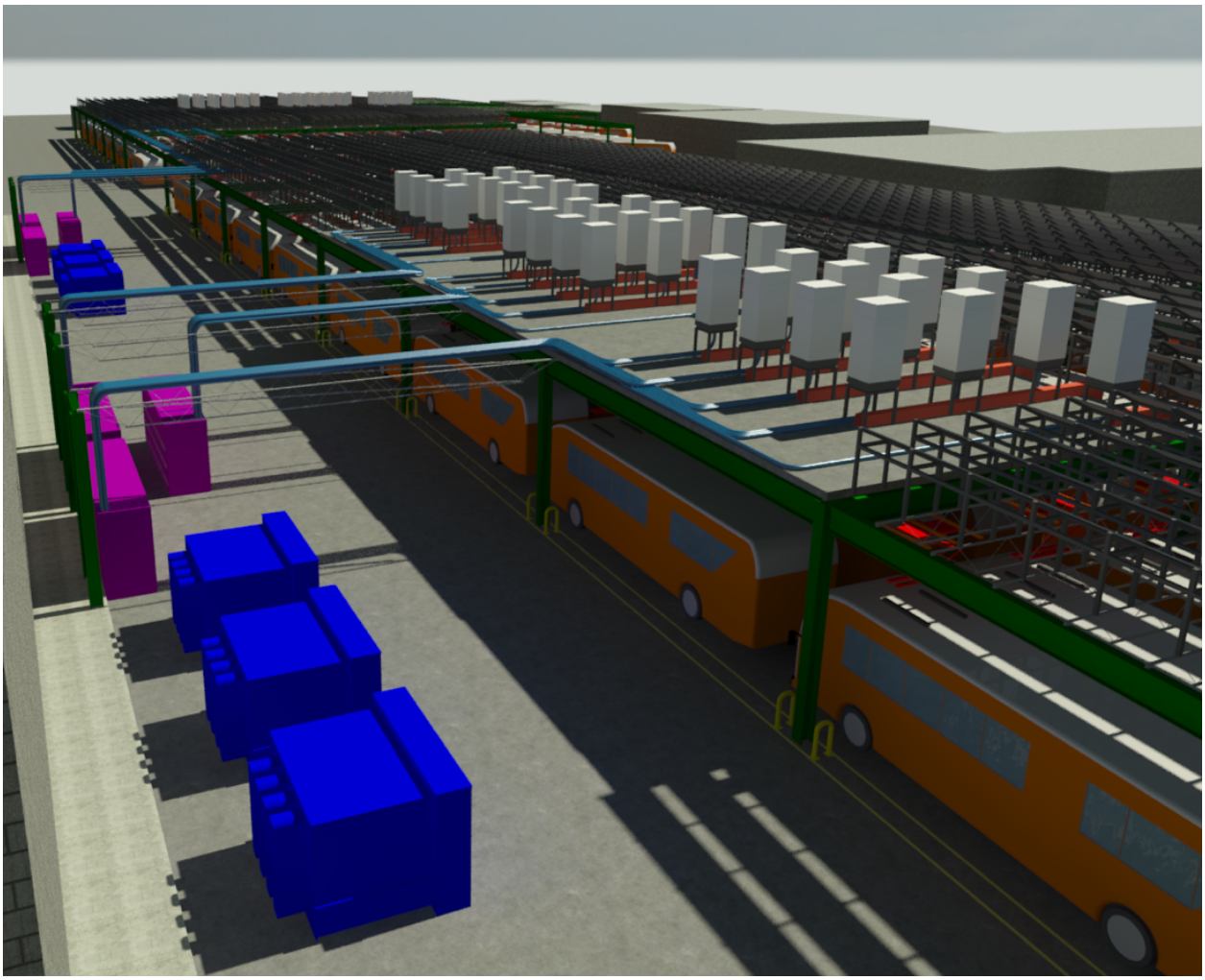
E.2.4.2 Proposed Zero-Emission Implementation Strategy

To achieve ZEB goals, Metro will adopt an inverted pantograph solution at both divisions and strategic layover locations (on-route charging). This technology (Figure E.2-1 and Figure E.2-2) will maximize space and safety of personnel due to the reduced interaction between staff and electrified equipment. These pantographs will be connected to chargers that vary in power. At this time, division-based chargers are expected to be provide 150 kilowatts (kW) of power in a "one to many" orientation (i.e., one charger energizes more than one dispenser), and on-route chargers will provide power in excess of 300 kW.

Figure E.2-1. North Hollywood Station On-Route Charger

Source: Los Angeles County Metropolitan Transportation Authority, July 2020

Figure E.2-2. General Layout of Division Charging Infrastructure



Source: ZEBGO, December 2019

E.2.4.3 Phasing and Construction

To maintain Metro's transition schedule, the availability of buses, construction schedule adherence, and utility enhancements will all have to be aligned.

Metro's transition will be accomplished in multiple on-site construction stages across three phases (periods). These "stages" are segments of the division that will be temporarily shut down to install the necessary BEB-supporting infrastructure. The buses that would normally occupy the staging space will be temporarily relocated on-site or to a neighboring division or facility. This approach will ensure that construction and normal operations can proceed concurrently. This construction method avoids the complete shutdown of the division undergoing improvements, which reduces the risks of service impacts. The number of stages and number of buses that need to be temporarily relocated during each stage vary based on a division's layout, existing fleet, and additional capacity.

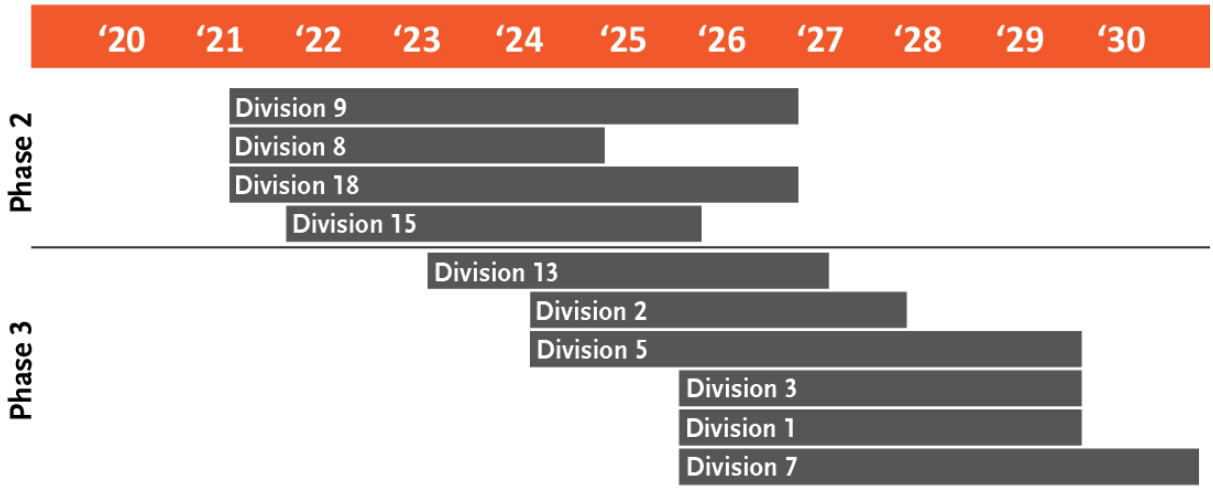
"Phases" are essentially classifications of when and how these divisions are grouped. Phase 1 of the transition is currently underway with the electrification of the Orange and Silver Lines. The remaining two phases are grouped based on a division's space availability and dependency on other divisions for temporary bus relocation. Phase 2 generally consists of "independent" divisions, divisions that have

available space to relocate its buses on-site during staged construction or are in close proximity to a division that does, and Phase 3, consists of "dependent" divisions, divisions that are dependent on other divisions for temporary bus storage or service.

As technology advances, Metro will make adjustments to maximize utility and cost feasibility. This will have direct impacts on the implementation schedule.

Figure E.2-3 presents the preliminary transition schedule. These activities include supplying additional power to the division, which includes utility applications, design, and construction, and the procurement, design, and construction of on-site charging equipment.

Figure E.2-3. LA Metro's Preliminary Transition Schedule



Source: ZEBGO, January 2021
Note: Division 10 will not be retrofitted to accommodate ZEBs. Division 10 will primarily be used for temporary storage and bus relocations during the transition.

E.2.4.4 Start-Up and Scale-Up Issues

To meet ICT deadlines, there are several challenges and opportunities that Metro has identified. The following briefly described some of the challenges that Metro faces for its transition:

- **Technological adaptation**. Currently, Metro is modeling and planning for a transition based on the baseline service and existing ZEB technology. With 2030 and 2040 deadlines looming, it is difficult to anticipate future technological enhancements and changes, such as improved batteries and chargers. Slight changes in these technologies could improve bus ranges, in turn, reducing costs. Metro will monitor these changes as it would be counterproductive to invest in technologies that will soon be outdated.
- **Costs.** Adoption of ZEBs has many benefits, including potential lifecycle cost savings. However, the investment required for capital and change management will be very expensive. Metro will have to be creative with funding mechanisms and sources to ensure that the transition to ZEB will not be detrimental to its operations and service.
- **Market Production Factors.** The ICT regulation will put a lot of pressure on OEMs to produce ZEBs at unprecedented rates. However, it is not only California that is interested in converting to ZEBs.

Legislative changes, such as the ICT regulation, will make it challenging to meet ZEB goals for agencies if the supply of buses cannot meet the demand.

- **Phasing and Transition.** Maintaining service and adhering to ICT regulation purchase requirements, all while managing on-site construction, facility rebuilds, temporary bus relocations, bus procurements, and utility enhancements introduces a lot of risk to the Metro's program. If one element of this transition doesn't go as planned, there will be implications for other components of the program.
- **Utility Upgrades.** Metro's divisions are currently under the jurisdiction of two utilities and its potential on-route charging locations are under nine. These utilities have different rate structures and protocols to apply for and receive additional power. How each utility is regulated, whether municipal or private, also dictates procedural requirements. These nuances will make it challenging to plan for due to the variances in schedule and procedure.
- **Managing Power Demand.** The transition to BEBs will require strategies to ensure that Metro can utilize power in the most cost-efficient way. Metro is currently doing this via utility negotiations and demand modeling to determine methods to reduce peak demand.
- **Uncertainty due to COVID-19.** COVID-19 has impacted all facets of the global economy, transit is not an exclusion. During the pandemic, ridership and revenues have plummeted and caused major shortfalls in Metro's budget which has impacted capital programs and operations. At this time, it is unclear what short- and long-term impacts will be for service. There is a possibility that service ridership levels may not return to previous levels resulting in changes to procurement and funding. Metro will continue to analyze trends to determine changes and plans.

E.2.4.5 Next Steps

The process to transition to ZEBs should and will be iterative to minimize risk, but also to accommodate new developments in a rapidly evolving market. Metro will use the information outlined in the Master Plan to identify and further refine the following:

- **Solutions to complete service if technology does not advance as forecasted.** Approximately 31 percent of Metro's baseline bus blocks travel further than 150 miles per day – a range that exceeds current batteries' capabilities. In order to meet 100% service completion, Metro will have to consider other solutions, including investing in additional on-route charging, filing for exemptions under the ICT regulation, purchasing additional buses, or restructuring service to suit technological limitation.
- **Costs refinement.** Construction, capital, operating, and maintenance costs vary based on a number of factors. It will be important to get an understanding of the up-front and lifecycle costs and savings of investing in ZEBs. Staff continues to develop cost estimates and Metro will need to revisit these estimates to determine if pricing has changed and make adjustments to procurements, as needed.
- **Explore collaboration opportunities.** Metro can continue to maximize outcomes by engaging with other regional and local agencies. Best practices, lessons learned, and cost-sharing among agencies will provide net benefits for Metro and partner agencies.
- **Continue to engage utilities**. Whether adopting BEBs or FCEBs, there is a good chance that the amount of power at the division is either insufficient or needs to be adapted to these new technologies. While procuring buses and installing chargers may be relatively straightforward, the process and protocols associated with electrical enhancements on the utility side can be complex. Therefore, it is essential that Metro continues to coordinate with electric utility providers to ensure critical deadlines are met.

1 INTRODUCTION

In accordance with the California Air Resource Board's Innovative Clean Transit regulation, the following report serves as Los Angeles County Metropolitan Transportation Authority's (Metro) Rollout Plan to transition its bus fleet to 100 percent zero-emission (ZE) by 2040.

1.1 Innovative Clean Transit Regulation

The California Air Resource Board's (CARB) Innovative Clean Transit (ICT) regulation became effective October 1, 2019 and requires all public transit agencies in the state to transition from conventional buses (compressed natural gas (CNG), diesel, etc.) to ZE buses (battery-electric or fuel cell electric) by 2040. The regulation requires a progressive increase of an agency's new bus purchases to be zero-emission buses (ZEBs) based on its fleet size. By 2040, CARB expects all transit agencies in the state to be operating only ZEBs.

To ensure that each agency has a strategy to comply with the 2040 requirement, the ICT regulation requires each agency, or a coalition of agencies ("Joint Group"), to submit a ZEB Rollout Plan ("Rollout Plan") before purchase requirements take effect. The Rollout Plan is considered a living document and is meant to guide the implementation of ZEB fleets and help transit agencies work through many of the potential challenges and explore solutions. Each Rollout Plan must include a number of required components (as outlined in the Rollout Plan Guidelines) and must be approved by the transit agency's governing body through the adoption of a resolution, prior to submission to CARB.

According to the ICT regulation, each agency's requirements are based on its classification as either a "Large Transit Agency" or a "Small Transit Agency". The ICT defines a Large Transit Agency as an agency that operates in the South Coast or the San Joaquin Valley Air Basin and operates more than 65 buses in annual maximum service or it operates outside of these areas, but in an urbanized area with a population of at least 200,000 and has at least 100 buses in annual maximum service. A Small Transit Agency is an agency that doesn't meet the above criteria.

As a "Large Transit Agency" Metro must comply with the following requirements under the ICT regulation:

- July 1, 2020 – Board-approved Rollout Plan must be submitted to CARB[6]
- January 1, 2023 – 25 percent of all new bus purchases must be ZE
- January 1, 2026 – 50 percent of all new bus purchases must be ZE
- January 1, 2029 – 100 percent of all new bus purchases must be ZE
- January 1, 2040 – 100 percent of fleet must be ZE
- March 2021 – March 2050 – Annual compliance report due to CARB

[6] Due to the impacts of COVID-19, CARB provided an extension to all large transit agencies in California, upon request. Metro requested and was granted an extension to submit the Rollout Plan by December 31, 2020. In October 2020, Metro requested and was granted another extension to accurately capture the results of the recently released NextGen Plan and other service- and market-related updates. Metro now will submit its Board-approved Rollout Plan to CARB by March 2021.

1.2 Metro's Background

Metro serves as transportation planner, coordinator, designer, builder, and operator for one of the country's largest, most populous counties. More than 9.6 million people – nearly one-third of California's residents – live, work, and play within Metro's 1,433-square-mile service area.

As of December 2018, Metro directly and indirectly operates approximately 2,400 buses on 165 routes. In that same time period, directly operated Metro lines served approximately 17.3 million riders, per day.

1.3 Metro's Existing ZEB Plans, Procurements, and Projects

As early as 1993, Metro has adopted policies that commit the agency to using alternative energy buses. Pursuant to this vision, Metro successfully transitioned the second largest bus fleet in North America from all-diesel to CNG in 2011 and has continued to commit to innovative technologies and strategies to further reduce its carbon footprint. The conversion to ZEBs is the next step in Metro's future and it has the opportunity to further improve the air quality for Los Angeles residents and visitors in the future.

The transition to a ZEB fleet has been a goal of Metro even before the ICT regulation was adopted. In July 2017, the Metro Board endorsed staff's Strategic Plan for the transition to ZEBs. The first phase in the Strategic Plan is to convert the Metro Orange Line to ZEBs by 2020 and the Metro Silver Line as soon as feasible, thereafter. The second phase involves the creation of a ZE Master Plan that would evaluate the entire Metro bus system and map out the best strategy and anticipated cost to convert to an all-ZE operation.

Shortly after the Board's endorsement of the 2017 Strategic Plan, Metro awarded three ZEB contracts for the electrification of the Orange and Silver bus rapid transit (BRT) lines; two with *BYD* for five 60-foot ZEBs intended for the Orange Line, 60 40-foot ZEBs intended for the Silver Line; and one with *New Flyer* for 40 60-foot ZEBs intended for the Orange Line.

In September 2019, Metro's Board approved exercising the options of 40 additional BYD 40-foot ZEBs. With this exercise, Metro has plans to deploy 145 BEBs.

1.3.1 ZEB Program Master Plan

In July 2018, Metro awarded "ZEBGO" a joint venture of multiple industry experts to produce a Master Plan and action-ready RFPs to transition to all ZEBs by 2030. As part of this plan, ZEBGO is responsible for providing the following services:

- Industry Outreach
- Inventory of Metro Operations
- Assessment of Best Industry Practices
- Evaluation of Compliance with Existing Standards and Codes
- Support Negotiation of Rate Structures with Utilities
- Analyses/System Modeling and Phasing Options
- Development of Technical Specifications for ZEBs and Facilities
- Development of Action-Ready Request for Proposals (RFPs)

ZEBGO's efforts are still ongoing and many of its findings inform the Rollout Plan. The Master Plan's work is iterative and will continue beyond the Rollout Plan submission deadlines. Therefore, some of the information outlined in this report may be superseded based on technological advancements and new information and data.

1.3.2 NextGen Bus Study

In 2018, Metro also began the process of restructuring existing service to better meet the needs of current and future riders. The NextGen Bus Study will evaluate a number of alternatives and strategies to improve service, which may include more frequent service and shorter headways. This project is in now in the implementation phases, and its bus assignments and service blocks will be coordinated with Metro's ZEB Master Plan efforts.

1.4 Rollout Plan Approach

The Rollout Plan identifies a strategy for Metro to procure and operate an all-ZEB fleet by 2030 – 10 years before the ICT regulation requires. In accordance with the Rollout Plan Guidance, this document provides an overview of a number of key components to Metro's ZEB transition, including fleet acquisitions, schedule, training, and funding considerations. As previously mentioned, Metro is currently studying and has a goal of transitioning to all ZEBs by 2030. Therefore, there are no significant concerns with meeting the ICT regulation's 2040 requirement. Due to the rapidly evolving nature of ZEB technologies, it is possible that the findings and recommended approaches in this report will be outdated when it is time for implementation. For that reason, Metro continues to evaluate technologies and strategies beyond 2030, when a fully operational ZEB fleet is anticipated. Those areas of current study will be indicated, where applicable.

The information in this Rollout Plan is informed and based on December 2018 operations. This information is used because it represents the fleet under typical operations. Since then, there have been a number of special projects, including bus bridges, that may skew the fleet size and division requirements. The Master Plan, however, will make use of the most recent information available in anticipation of the release of the NextGen Bus Study, which will provide the foundation for the final version of Metro's Master Plan.

It should also be noted that COVID-19 has caused unprecedented losses in Metro's revenue through both the loss of ridership and a reduction in sales tax revenue. For these reasons, Metro has reduced service and operations and is still evaluating and forecasting the long-term ramifications on the system and the agency's capital projects and goals. That said, how COVID-19 impacts Metro's electrification goals is still unclear, however, Metro will continue to proceed with planning and adjust as needed once COVID-19 is stabilized and trends are more predictable.

1.5 Rollout Plan Structure

In accordance with CARB's Rollout Plan Guidance, Metro's Rollout Plan includes all required elements. The required elements and corresponding sections are detailed below:

- Transit Agency Information (Section 1: Rollout Plan Summary)
- Rollout Plan General Information (Section 1: Rollout Plan Summary)
- Technology Portfolio (Section 4.2: Technology Portfolio)
- Current Bus Fleet Composition and Future Bus Purchases (Section 4: Fleet Acquisitions)
- Facilities and Infrastructure Modifications (Section 5: Facilities and Infrastructure Modifications)

- Providing Service in Disadvantaged Communities (Section 6: Disadvantaged Communities)
- Workforce Training (Section 7: Workforce Training)
- Potential Funding Sources (Section 8: Costs and Funding Opportunities)
- Start-up and Scale-up Challenges (Section 9: Start-up and Scale-up Challenges)

2 FLEET AND ACQUISITIONS

The following section provides an overview of Metro's baseline conditions, planned purchases, and description of how Metro will meet the requirements of the ICT regulation.

2.1 Baseline Bus Fleet

As of December 2018, Metro directly operates 2,228 buses (2,555 standard bus equivalents [SBEs]).[7] An additional 165 SBEs are indirectly operated through contracted services. Metro, as the owner of these buses, will work with contractors to ensure that these buses are replaced and that the owners of the facilities establish plans and support infrastructure pursuant to the ICT regulation. Metro's fleet consists of a mixture of 40-foot, 45-foot, and 60-foot CNG buses.[8] Table 2-1 and Table 2-2 presents a summary of Metro's directly operated bus fleet and contracted bus fleet, respectfully.

Table 2-1. Summary of Directly Operated Bus Fleet (Baseline Conditions)

Manufacturer	Series	Fuel Type	Length	In-Service Year	Bus Type	No. of Buses	No. of Buses (SBE)
New Flyer	3850-4199	CNG	40'	2015	Standard	143	143
				2016		188	188
	5300-5522	CNG	40'	2001	Standard	183	183
	5600-6149	CNG	40'	2014	Standard	306	306
				2015		202	202
NABI	7000-7214	CNG	40'	2000	Standard	5	5
	7300-7514	CNG	40'	2001	Standard	24	24
	7525-7599	CNG	40'	2005	Standard	70	70
	7600-7949	CNG	40'	2002	Standard	85	85
	8000-8099	CNG	45'	2004	Standard	39	47
				2005		48	58
				2006		11	14
	8100-8359	CNG	45'	2009	Standard	130	156
				2010		129	155
	8360-8400	CNG	45'	2009	Standard	41	50
	8401-8491	CNG	45'	2010	Standard	29	35
				2011		53	64
				2012		6	8
	8500-8649	CNG	45'	2012	Standard	33	40

[7] SBEs were determined by applying a 1:1 ratio for 40-foot buses, 1:1.2 ratio for 45-foot buses, and 1:1.5 ratio for 60-foot buses, all values were rounded up to the next whole number.
[8] One 65-foot bus operates from Division 8

Manufacturer	Series	Fuel Type	Length	In-Service Year	Bus Type	No. of Buses	No. of Buses (SBE)
				2013		116	140
	9200-9399	CNG	60’	2005	Articulated	84	126
				2006		112	168
	9400-9494	CNG	60’	2006	Articulated	40	60
				2007		55	83
	9495-9495	CNG	65’	2007	Articulated	1	2
	9500-9594	CNG	60	2007	Articulated	78	117
				2008		17	26
					Total Buses	**2,228**	**2,555**

Source: Los Angeles County Metropolitan Transportation Authority, December 2018

Table 2-2. Summary of Contracted Bus Fleet (Baseline Conditions)

Manufacturer	Series	Fuel Type	Length	In-Service Year	Bus Type	No. of Buses	No. of Buses (SBE)
New Flyer	3850-4199	CNG	40’	2015	Standard	3	3
				2016		16	16
	5300-5522	CNG	40’	2001	Standard	10	10
	5600-6149	CNG	40’	2014	Standard	38	38
Orion	11001-11067	Diesel*	40’	2001	Standard	35	35
NABI	7600-7949	CNG	40’	2002	Standard	13	13
	3100-3149	CNG	32’	2010	Standard	50	40
					Total Buses	**165**	**155**

Source: Los Angeles County Metropolitan Transportation Authority, December 2018
*The diesel buses at have subsequently been replaced with CNG buses.

2.2 Technology Portfolio

Metro’s past and ongoing analysis has found that BEBs are the most suitable technology to meet ZEB goals. This is in a large part due to the market of BEBs in terms of technological advancement, costs, and availability. While FCEBs are promising and have many potential benefits as compared to both CNG and BEB, unpredictability in operation costs and a limited supply chain makes it an unviable option at this time, especially considering Metro’s aggressive ZEB goals. However, Metro will remain open for potential future FCEB integration into its fleet.

2.3 Existing ZEB Procurements and Projects

Metro has taken and is taking several steps to ensure that it is in the best position to meet the Board's 2030 ZEB goal. As mentioned, Metro's Board envisions the fleet transition in two phases. Phase 1 will focus on the conversion of the Orange and Silver BRT Lines to ZEB by 2020 and 2021, respectively, and Phase 2 will convert the rest of the fleet.

To date, Metro has approved the procurement of 145 BEBs. Table 2-3 presents Metro's existing BEB procurements and Table 2-4 details Metro's existing chargers both installed and under construction.

To support these buses, multiple enhancements have been initiated or completed at divisions and stops that serve these lines. For instance, at Division 8, which serves the Orange Line, Metro has coordinated with the utility, the Los Angeles Department of Water and Power (LADWP), to add additional electrical capacity, and ABB, a charger manufacturer, to construct 10 150-kW plug-in chargers to support overnight and midday charging. There is also ongoing construction for on-route chargers at three locations along the Orange Line's route. These on-route chargers range from 450-kW to 600-kW are based on the Society of Automotive Engineers (SAE) pantograph charging standard, J3105-1. The Orange Line is anticipated to be fully electrified by the end of 2020.

The Silver Line and the divisions and stations that serve it - Division 9, Division 18, and El Monte and Harbor Gateway Transit Centers - are all currently being analyzed and designed to determine the most suitable chargers. The Silver Line is anticipated to be electrified by 2021.

Table 2-3. Existing BEB Procurements

OEM	Model	Battery (kWh)	Length (ft.)	Route	No. of Buses	No. of Buses (SBE)
New Flyer	XE60	320	60	Orange	40	60
BYD	K11	610	60	Orange	5	8
BYD	K9	348	40	Silver	60	60
BYD	K9	348	40	TBD	40	60
Total					**145**	**168**

Source: Los Angeles County Metropolitan Transportation Authority, December 2019

Table 2-4. Existing ZEB Chargers

Location	Quantity	OEM	Power (kW)	Type	Status
Division 1	5	BYD	100	Plug-In	Installed
Division 8	10	ABB	150	Plug-In	2 Installed 8 in Procurement
Canoga Station	2	Siemens	450-600	Pantograph	Commissioning
North Hollywood Station	4	Siemens	450	Pantograph	In Operation
Chatsworth Station	2	Siemens	450-600	Pantograph	Under Construction

Source: Los Angeles County Metropolitan Transportation Authority, December 2020

2.4 Procurement Schedule

Based on initial analysis, all new bus purchases will be ZEB starting in 2022 – seven years before the ICT regulation requires. Early retirement should not be an issue pursuant to the ICT regulation based on Metro's future purchases, however, Metro is still evaluating strategies to avoid early retirement pursuant to its 2030 goals.

As previously indicated, Metro also leases approximately 165 buses to contractors to provide service on Metro routes – Metro does not own or operate the facilities where these buses are stored. That said, Metro will continue to provide buses and coordinate with contractors as facility master plans are developed. At this time the schedule and approach for these facilities' upgrades are under development.

Table 2-5 summarizes Metro's anticipated procurements through 2040. In September 2019, the Metro Board granted approval to execute 369 bus options (40 BEB and 329 CNG) to cover Metro's fleet needs (pre-pandemic) until 2022. This table is built off of the assumption that BEBs/battery capacities will be available to meet Metro's service block ranges so that a 1:1 replacement ratio is achievable. Years 2023, 2026, and 2029, are highlighted because these indicate when Metro's new purchases should be 25 percent, 50 percent, and 100 percent ZEB, respectively, in accordance with the ICT regulation.

Table 2-5. Summary of Future Bus Purchases (through 2040)

Year	Total Buses (SBE)	Zero-Emission Buses				Conventional (CNG) Buses			
		No.	Pct.	Bus Type	Fuel Type	No.	Pct.	Bus Type	Fuel Type
2022	-	-	-	-	-	-	-	-	-
2023	4	4	100%	40'/60'	BEB	-	-	-	-
2024	156	156	100%	40'/60'	BEB	-	-	-	-
2025	140	140	100%	40'/60'	BEB	-	-	-	-
2026	259	259	100%	40'/60'	BEB	-	-	-	-
2027	259	259	100%	40'/60'	BEB	-	-	-	-
2028	259	259	100%	40'/60'	BEB	-	-	-	-
2029	259	259	100%	40'/60'	BEB	-	-	-	-
2030	259	259	100%	40'/60'	BEB	-	-	-	-
2031	-	-	-	-	-	-	-	-	-
2032	393	393	100%	40'/60'	BEB	-	-	-	-
2033	364	364	100%	40'/60'	BEB	-	-	-	-
2034	-	-	-	-	-	-	-	-	-
2035	4	4	100%	40'/60'	BEB	-	-	-	-
2036	156	156	100%	40'/60'	BEB	-	-	-	-
2037	140	140	100%	40'/60'	BEB	-	-	-	-
2038	259	259	100%	40'/60'	BEB	-	-	-	-

Year	Total Buses (SBE)	Zero-Emission Buses				Conventional (CNG) Buses			
		No.	Pct.	Bus Type	Fuel Type	No.	Pct.	Bus Type	Fuel Type
2039	259	259	100%	40'/60'	BEB	-	-	-	-
2040	259	259	100%	40'/60'	BEB	-	-	-	-

Source: ZEBGO, 2020

2.4.1 ZEB Range Requirements and Costs

Approximately 31 percent of Metro's bus blocks travel more than 150 miles per day – a range that exceeds current batteries' capabilities. To reduce impacts to service, Metro intends to apply a number of strategies to meet service (range) requirements, including the investment in on-route chargers, additional bus purchases, battery/charging management systems, and solar and battery storage. In future ZEB applications, Metro will also consider FCEBs, especially if battery technology doesn't advance as forecasted.

2.4.2 Conversion of CNG Buses to ZEBs

A full fleet conversion to ZEBs by 2030 will require Metro to increase procurements by 848 buses. To address the increased capital costs associated with advanced procurements, the conversion of approximately 757 buses will be included in the procurement schedule.[9] Currently, conversions are anticipated to take place during the mid-life overhaul during the years 2027 and 2028, though this may be refined further to evenly distribute purchases across the transition period (Table 2-6).

Table 2-6. Summary of Future Bus Retrofits

Year	Number of Buses (SBE)	Bus/Conversion Type
2027	393	CNG to BEB
2028	364	CNG to BEB

Source: ZEBGO, 2020

[9] Addressing the 91-bus shortfall is currently being analyzed by Metro and will likely be addressed by additional procurements or retrofits (conversions).

3 FACILITIES AND INFRASTRUCTURE MODIFICATIONS

The following sections detail the planned charging strategies, infrastructure, detailed division improvements, and program schedule.

3.1 Facility Modifications

Metro's transition to ZE technologies, namely, BEB, will require several modifications and replacements to existing infrastructure and operations. This would include the decommissioning of CNG equipment, enhancements and expansions of electrical equipment, additional electrical capacity, and the installation of BEB gantries, chargers, dispensers, and other components. These changes will not only occur at 10 of Metro's directly-operated bus divisions – Division 10 will only be used for relocations during the transition - but also at select bus layover locations and transit centers that will function as on-route charging stations.

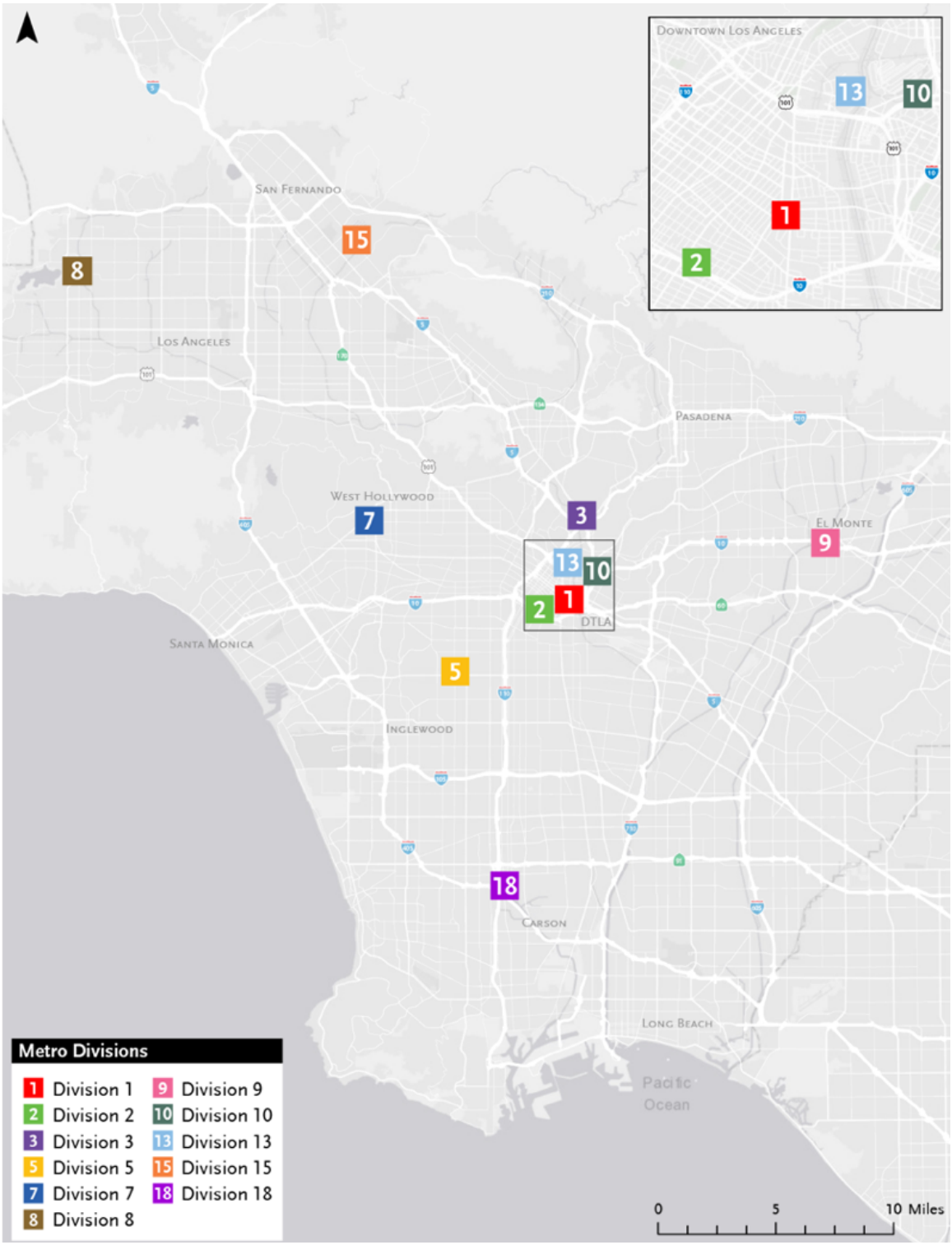
Figure 3-1 illustrates the location of Metro's divisions and Table 3-1 summarizes the modifications and schedules planned at 10 of Metro's bus divisions.

Table 3-1. Summary of Bus Division ZEB Improvements

Div.	Address	Main Functions	Planned ZEB Infrastructure	Service Capacity	Upgrades Req'd?	Estimated Construction Timeline
1	1130 E. 6th St, Los Angeles, CA	O&M	Inverted pantograph charging	189 buses	Yes	2025-2029
2	720 E. 15th St, Los Angeles, CA	O&M	Inverted pantograph charging	172 buses	Yes	2024-2027
3	630 W. Ave 28, Los Angeles, CA	O&M	Inverted pantograph charging	177 buses	Yes	2025-2029
5	5425 Van Ness Ave, Los Angeles, CA	O&M	Inverted pantograph charging	193 buses	Yes	2024-2029
7	8800 Santa Monica Bl. West Hollywood, CA	O&M	Inverted pantograph charging	233 buses	Yes	2025-2030
8	9201 Canoga Ave, Los Angeles, CA	O&M	Inverted pantograph charging	202 buses	Yes	2021-2024
9	3449 Santa Anita Ave, El Monte, CA	O&M	Inverted pantograph charging	223 buses	Yes	2021-2026
13	920 N. Vignes St, Los Angeles, CA	O&M	Inverted pantograph charging	163 buses	Yes	2023-2026
15	11900 Branford St, Los Angeles, CA	O&M	Inverted pantograph charging	241 buses	Yes	2021-2025
18	459 W. Griffith St, Gardena, CA	O&M	Inverted pantograph charging	252 buses	Yes	2021-2026

Source: ZEBGO, February 2020
Note: On-route charging will also be utilized to supplement division charging

Figure 3-1. Metro's Divisions



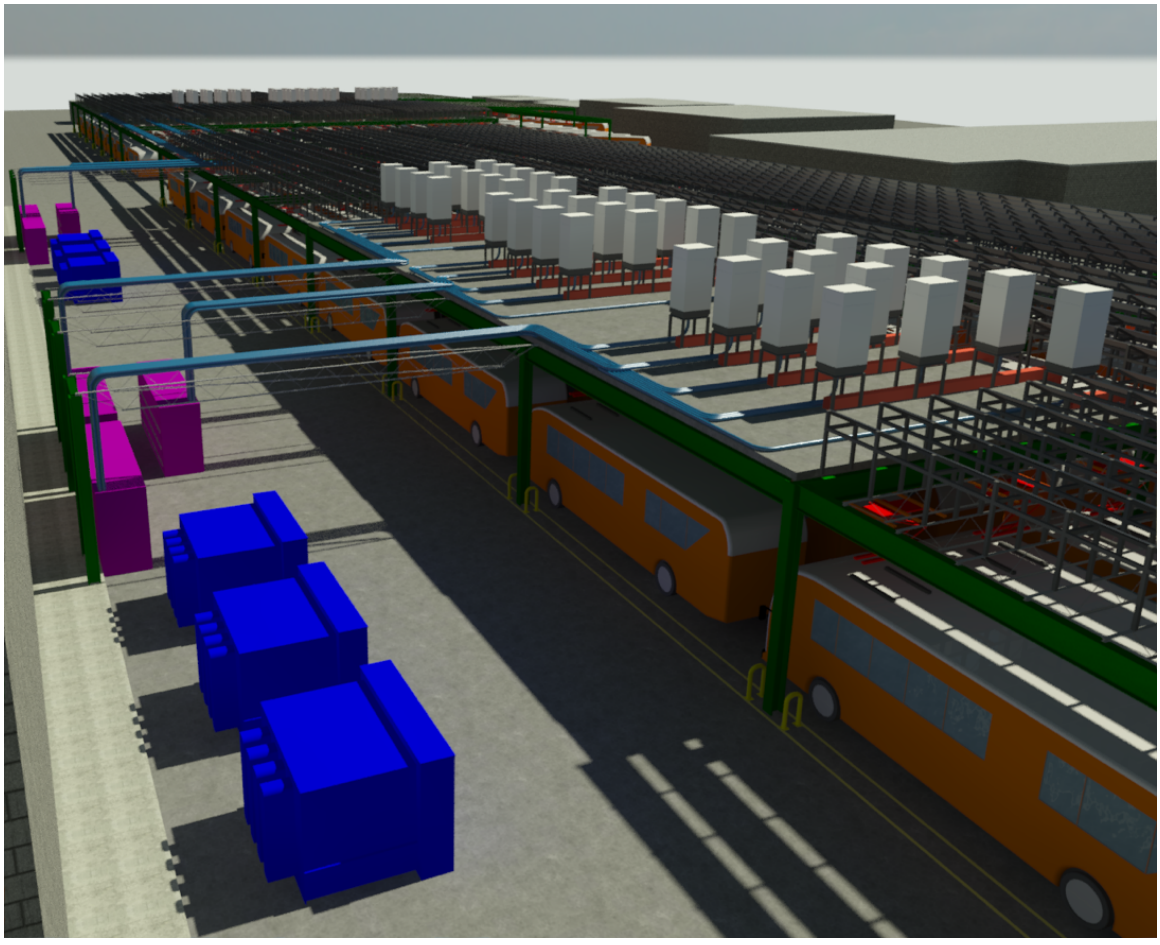
Source: ZEBGO, 2019

3.2 Division Charging Strategies and Infrastructure

All divisions will support DC inverted pantograph charging. In an effort to maximize space and cost savings via reduced demand charges, Metro is currently planning for a "one to many" 150-kW charger to dispenser ratio (one charger to more than one buses) for overnight charging. Metro will also integrate "fast charging lanes" at divisions to provide buses with the opportunity to "top off" during midday pull-ins and/or during servicing before connecting to the overnight "slow" chargers. These "fast charging lanes" will have chargers in excess of the 150-kW chargers. Individual division strategies are still being analyzed and may vary and change based on unique operating and service conditions. As technology develops, Metro will also consider other ratios and charging strategies which may impact the layout of each division.

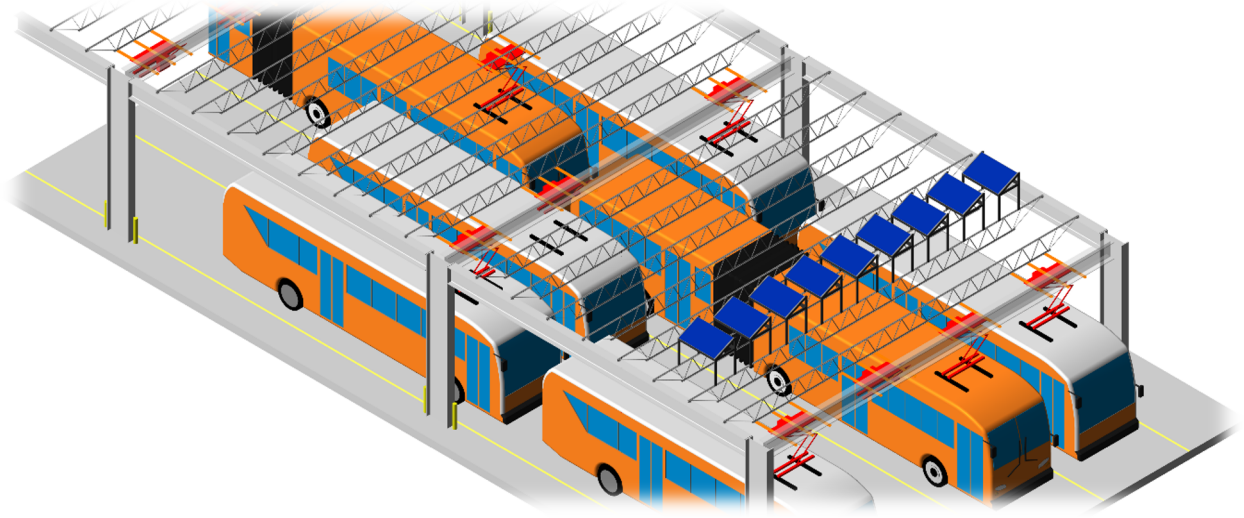
At the divisions, chargers, conduit, and associated pantographs will be supported by an overhead frame that will cover the surface of the bus parking tracks (Figure 3-2). This overhead strategy is due to the general constrained space at most of Metro's divisions. BEB charging infrastructure includes a number of charging cabinets, switches, switchgears, and transformers that require a considerable amount of space. This general design will be at divisions to maximize space and ensure compatibility with all procured BEBs.

Figure 3-2. General Layout of Division Charging Infrastructure



Source: ZEBGO, December 2019

Figure 3-3. Conceptual Division Pantograph-Charging



Source: ZEBGO, December 2019

3.3 On-Route Charging Strategies and Infrastructure

As mentioned, on-route charging is a consideration for Metro's ZEB transition. On-route charging will extend bus ranges, reduce peak demand (kW) at divisions, and serve as future-ready strategy as it is likely that charging during the day will eventually be more cost-competitive than charging at night due to an increasing availability of renewable power.

On-route charging facilities will also utilize DC inverted pantograph chargers. All on-route chargers are anticipated to be "high-powered" (in excess of 150-kW) to ensure that buses can receive more energy in a small period of time, typically during layovers. Metro is planning for up to 1.2 megawatts (MW) of power per SAE J-3105.

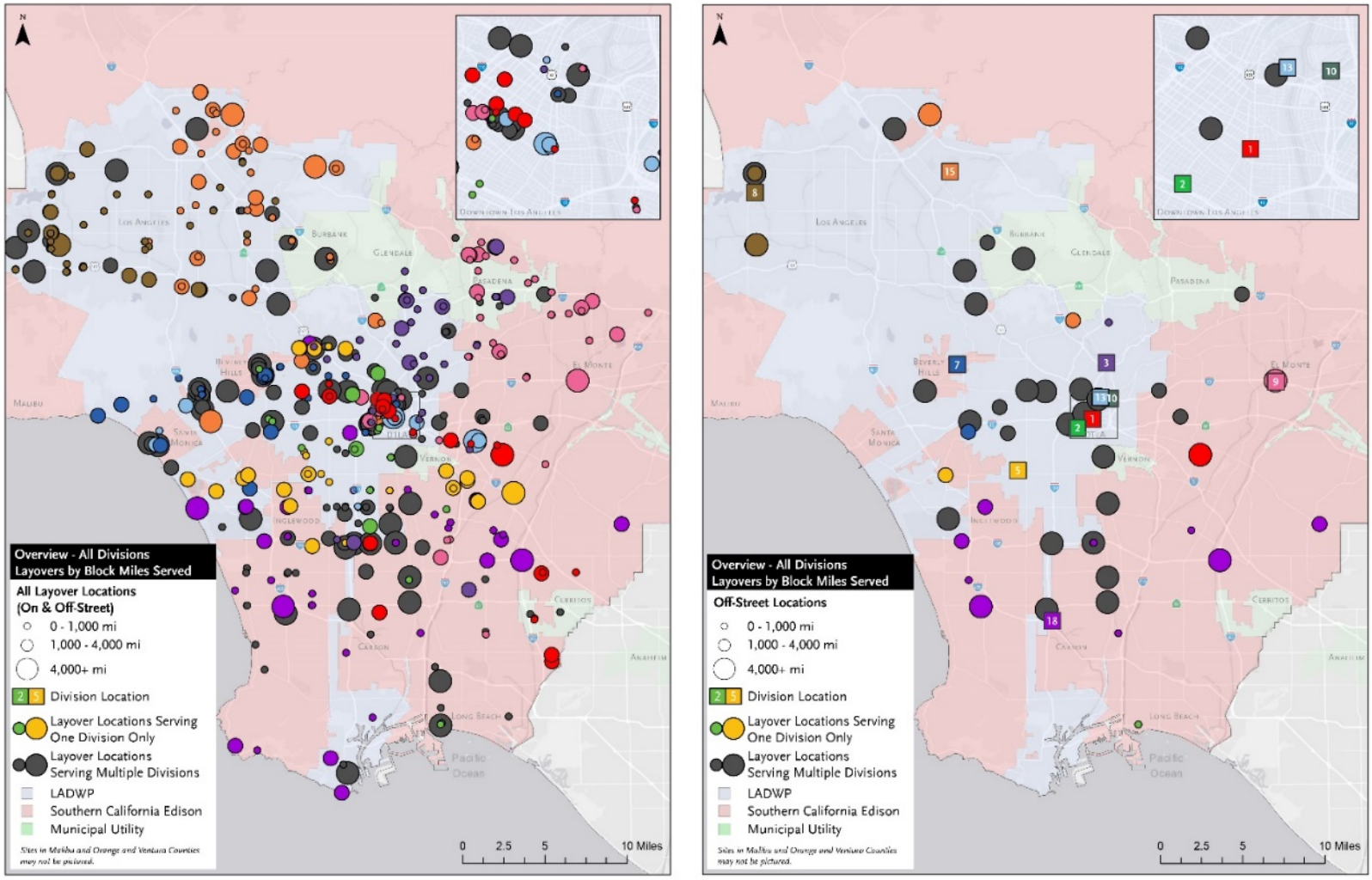
Figure 3-4. North Hollywood Station On-Route Charger

Source: Los Angeles County Metropolitan Transportation Authority, July 2020

On-route charging is most useful at endpoints or layover locations of trips. As of December 2018, Metro has 529 layover locations, of these, approximately 52 are considered ideal and deemed preliminarily feasible as on-route charging areas. These locations were based on the number of vehicles that layover, available space (for charging equipment), and its off-street orientation – for maintenance and safety issues, it was assumed that off-street locations would mitigate safety and vandalism issues with the public. Staff continues to refine modeling and related analysis at these locations to determine which ones will be candidates for implementation. It is assumed that all on-route locations will have 450 kW or greater chargers and will be pantograph-based to support Metro's fleet. It is likely that some of these will be at transit centers that are shared between other transit agencies. For that reason, Metro

is ensuring that an established charging standard is applied to promote future shared use. Figure 3-5 illustrates Metro's 529 layover and 52 potential on-route charging locations, respectively.

Figure 3-5. Metro's Layover Locations and Potential On-Route Charging Locations



Source: ZEBGO, December 2018

3.4 Phasing and Construction Staging

Adhering to the construction schedule and milestones will be critical because divisions' charging infrastructure construction and utility upgrades must be completed before buses are delivered, otherwise, the buses will not be able to operate. The following sections describes the order in which each division will be constructed (phased), and the work to be done on each division's site (staging).

3.4.1 Construction Phases

The prioritization of divisions' conversions will be based on a number of factors, however, space availability (i.e., divisions with more space can accept more buses on a temporary basis) is the most critical as it directly impacts the schedule and Metro's transition goal. It should be noted that the strategy that Metro plans to employ for facility construction will have minimal or no impact on service.

Staff has segmented the transition schedule into three distinct phases to accomplish both Metro and ICT requirements as presented in Table 3-2.

Table 3-2. Metro Transition and Construction Phases

Phase #	Description	Divisions
1	**On-Going Work** includes Metro's ongoing construction and ZEB-related work to transition the Orange and Silver Lines.	8, 9, and 18
2	**Independent Divisions** require few or no bus relocations for ZEB-related construction.	8, 9, 15, and 18
3	**Dependent Divisions** require the temporary relocation of buses to nearby divisions in order to make room for staged construction.	1, 2, 3, 5, 7, and 13

Source: ZEBGO, December 2018

Phase 1 – On-Going Work

Phase 1 is the full electrification of Metro's BRT services, the Orange and Silver Lines as shown in Table 3-2. Electrical enhancements and chargers are currently being installed at Division 8, along with on-route chargers at multiple stations. Concepts for Divisions 9 and 18 are currently under development to serve future BEBs.

Phase 1 is illustrated in Figure 3-6.

Figure 3-6. Phase 1: On-Going Work

Source: ZEBGO, December 2018

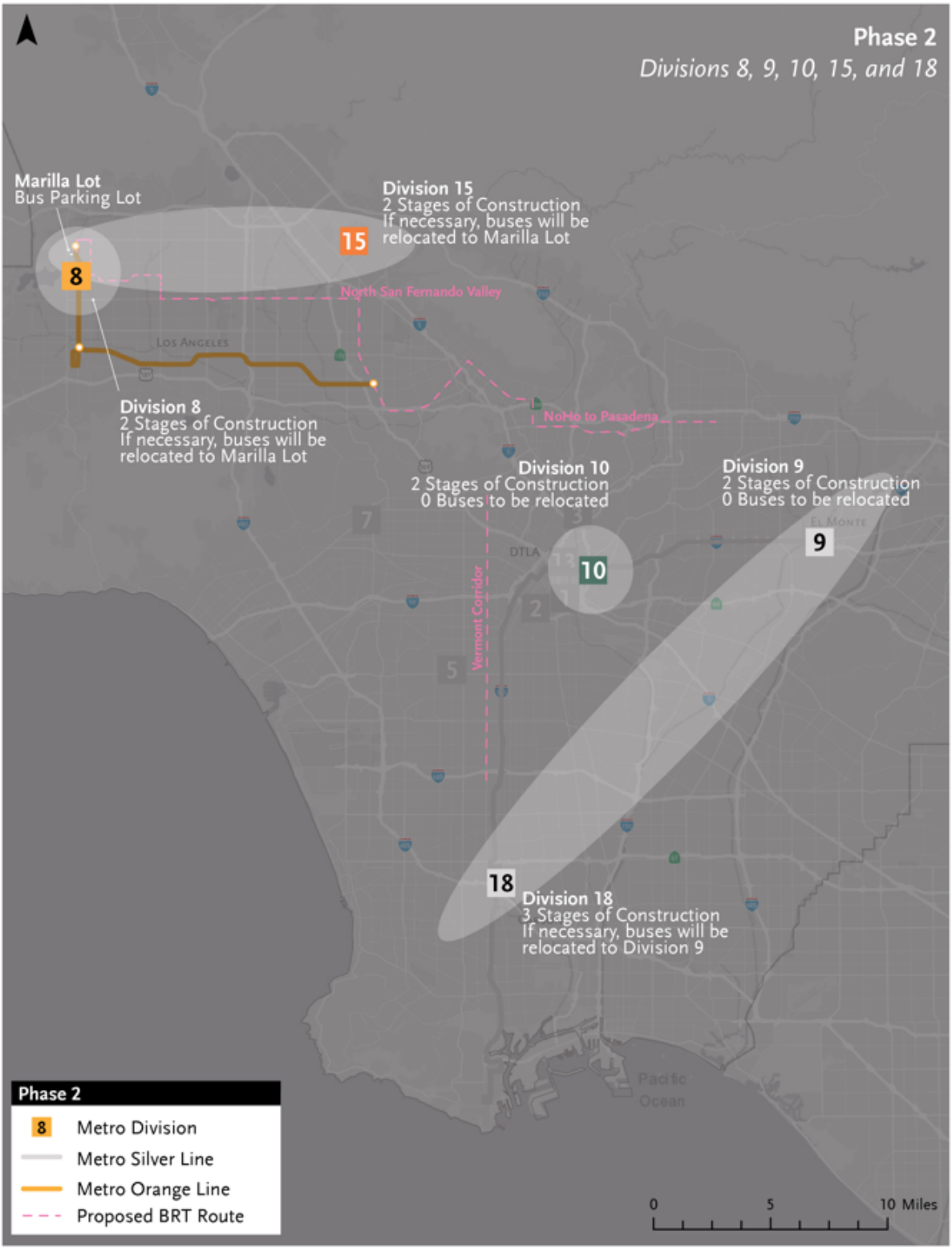
Phase 2 – Independent Divisions

Phase 2 consists of the conversion of Metro's remaining services, including all local, rapid, shuttle, and express routes. Due to adequate on-site space or adjacent Metro property, Divisions 8, 9, 15, and 18 are considered "independent divisions" because BEB infrastructure enhancements can largely be completed with no or minimal buses relocations. Initial work has begun on Division 9 and 18 due to Metro's Board approval of exercising the 40 additional BYD buses in September 2019.

Construction work will be done in stages, on-site, to allow on-going transit service and operations to continue without interruption. Buses can be shifted around on-site to vacate areas for electrification improvements while still operating all buses and serving all routes assigned to these divisions.

Phase 2 is illustrated in Figure 3-7.

Figure 3-7. Phase 2: Independent Divisions



Source: ZEBGO, December 2018
Note: Division 10 will not be retrofitted to accommodate ZEBs. Division 10 will primarily be used for temporary storage and bus relocations during the transition.

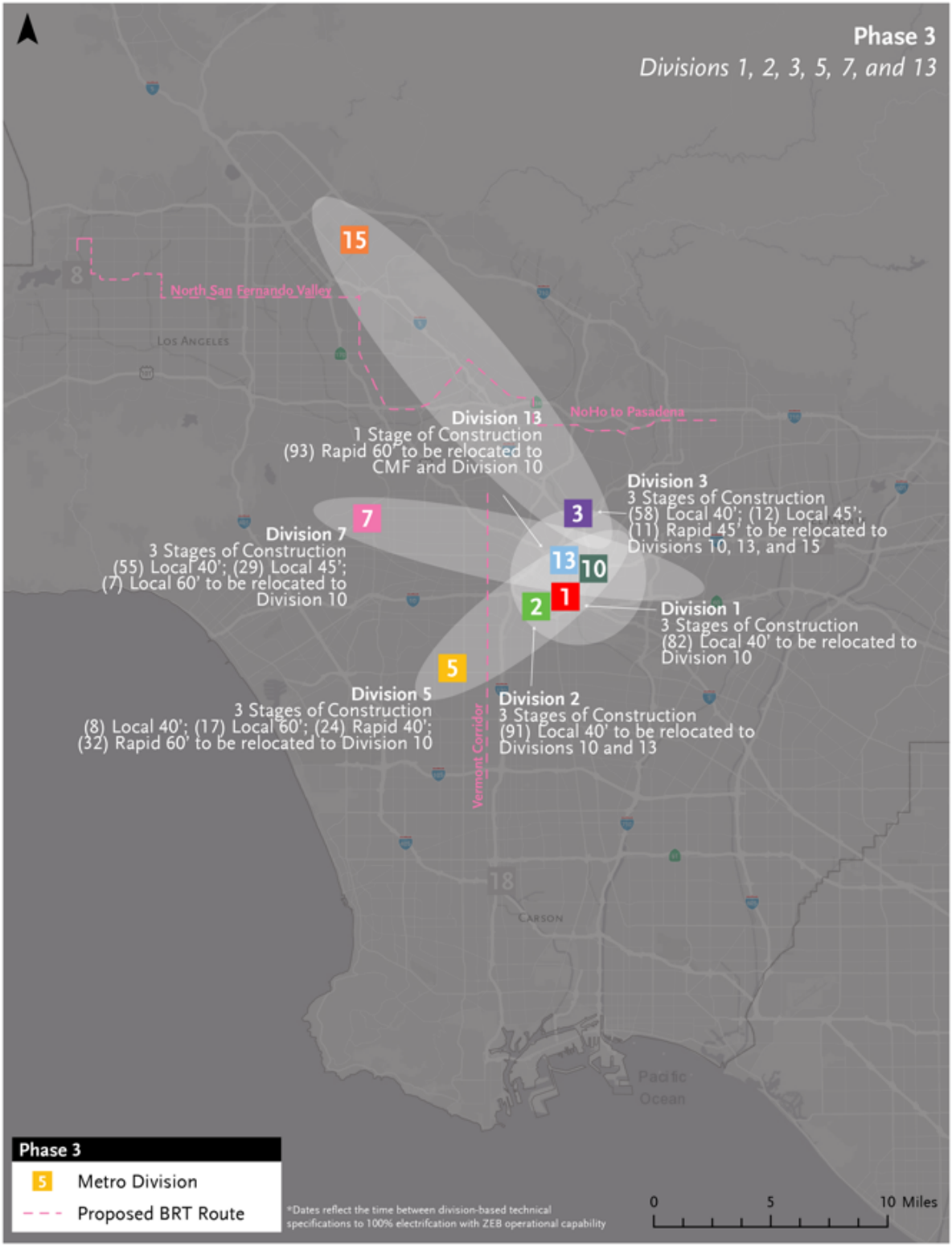
Phase 3 – Dependent Divisions

Phase 3 continues Phase 2 conversions by focusing on the remaining local, rapid, shuttle, and express routes. Due to space constraints, Divisions 1, 2, 3, 5, 7 and 13 are considered "dependent divisions" and will require portions of assigned fleets to be temporarily relocated to and operated from other divisions to allow portions of the site to be turned over for staged construction activities. Phase 3 will likely result in increased operational costs due to the increased deadhead miles incurred.

If one of the Phase 3 divisions is under construction while a portion of its fleet is temporarily relocated to Division 10, no other dependent division can be improved unless additional relocation storage space is identified and made available.

Phase 3 is illustrated in Figure 3-8.

Figure 3-8. Phase 3: Dependent Divisions



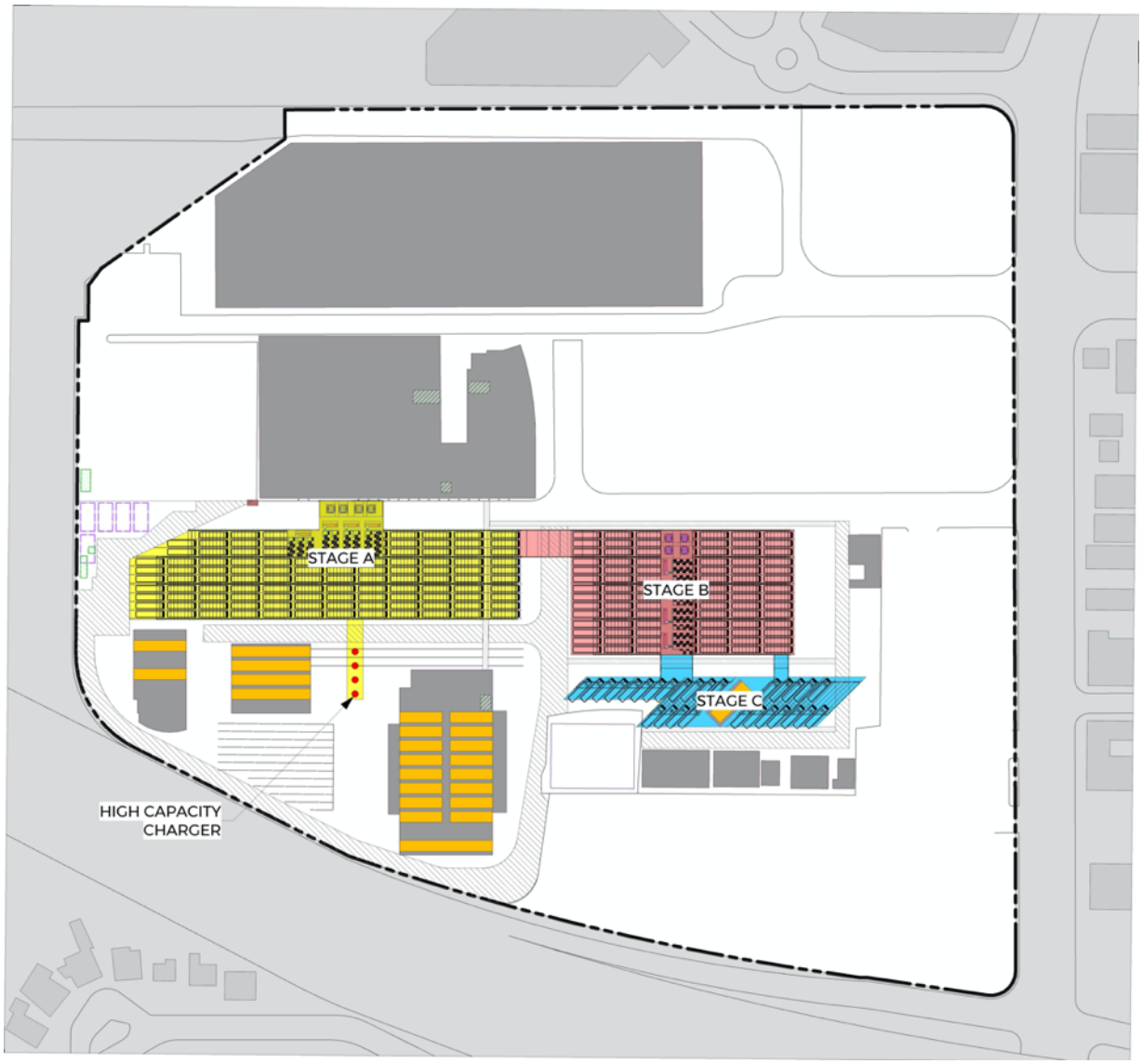
Source: ZEBGO, December 2018

3.4.2 On-Site Staging

Due to space constraints at each division, most divisions' ZEB infrastructure upgrades will be done in multiple on-site "stages" which will require the temporary relocation of buses to other divisions.

Each stage generally represents a natural break of bus parking at each division. For each stage, buses will be relocated for approximately six months so that BEB charging equipment can be installed. At the conclusion of the staged construction, buses can once again be parked there. Figure 3-9 provides an example of the stages of construction at Division 9.

Figure 3-9. Division 9 Staged Construction



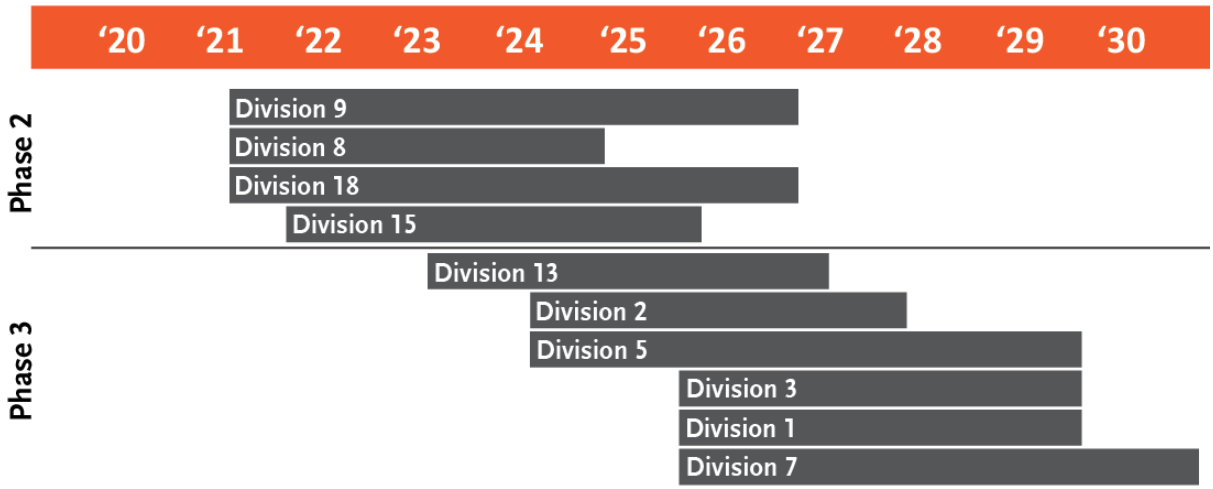
Source: ZEBGO, December 2018

3.5 Schedule and Adaptability

As previously discussed, Metro has a very aggressive ZE transition schedule. While the ICT regulation requires a full fleet conversion by 2040, Metro is planning on converting by 2030. To maintain this schedule, the availability of buses, construction schedule adherence, and utility enhancements will all have to be aligned. It should also be noted that as technology develops and new data is acquired, Metro will continue to make adjustments to maximize utility and cost feasibility. This will have direct impacts on the implementation schedule.

Figure 3-10 presents the preliminary transition schedule. These activities include electrification, design, and construction.

Figure 3-10. LA Metro's Preliminary Transition Schedule



Source: ZEBGO, January 2021
Note: Division 10 will not be retrofitted to accommodate ZEBs. Division 10 will primarily be used for temporary storage and bus relocations during the transition.

The following sections detail the existing conditions and planned modifications for 10 of Metro's 11 divisions. As noted previously, December 2018 service levels were used as a baseline. The number of existing buses on-site are based on the total (regardless of active or spare, or vehicle length). All divisions are able to accommodate at least the number of existing buses if converted to BEBs. Ongoing analysis and bus procurements will refine these numbers based on fleet mix and the advancement of battery technology.

3.5.1 Division 1

Existing Conditions

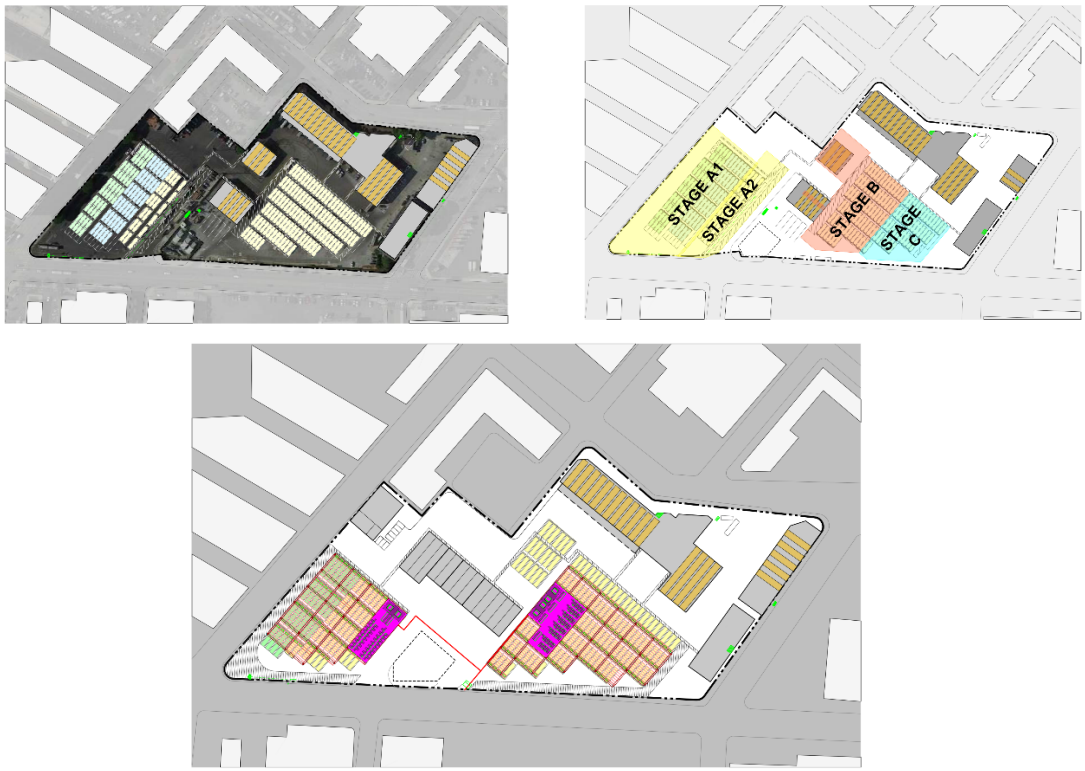
Division 1 is located at 1130 E. 6th Street in the City of Los Angeles. 189 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 1's fleet consists of 132 40-foot, 35 45-foot, and 22 60-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment. Five 100-kW BYD plug-in chargers are onsite (pre-ICT and Master Plan).

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 1. Based on preliminary demand modeling, approximately 12 MW of power will be needed from LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

Construction for Division 1 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Buses are anticipated to be temporarily stored at Division 10 during these stages. Ultimately, Division 1 is expected to have 66 150-kW and six 450-kW chargers and will be BEB-operational in 2029. Figure 3-11 illustrates the process that Division 1 will undergo towards full electrification.

Figure 3-11. Division 1 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.2 Division 2

Existing Conditions

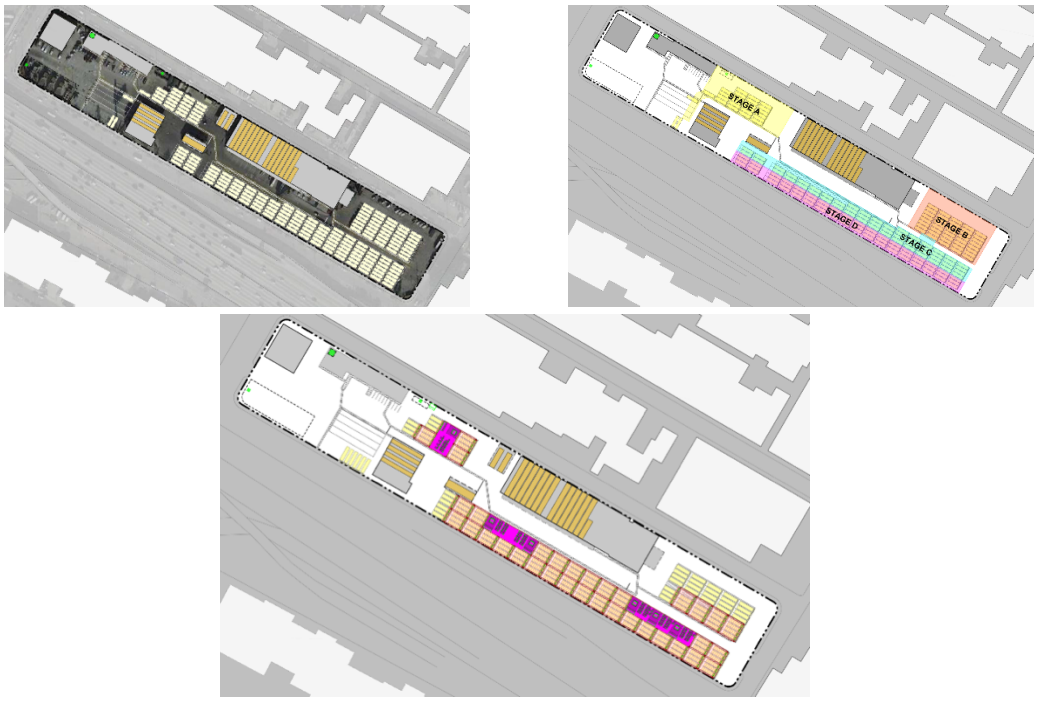
Division 2 is located at 720 E. 15th Street in the City of Los Angeles. 172 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 2's fleet consists of all 40-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses Division 2. Based on preliminary demand modeling, approximately 12 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

Construction for Division 2 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Buses are anticipated to be temporarily stored at Division 10 during these stages. Ultimately, Division 2 is expected to have 86 150-kW and four 450-kW chargers and will be BEB-operational in 2027. Figure 3-12 illustrates the process that Division 2 will undergo towards full electrification.

Figure 3-12. Division 2 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.3 Division 3

Existing Conditions

Division 3 is located at W. Avenue 28 in the City of Los Angeles. 177 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 3's fleet consists of 86 40-foot and 91 45-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 3. Based on preliminary demand modeling, approximately 13 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

Construction for Division 3 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Buses are anticipated to be temporarily stored at Division 10 during these stages. Ultimately, Division 3 is expected to have 89 150-kW and four 450-kW chargers and will be BEB-operational in 2029. Figure 3-13 illustrates the process that Division 3 will undergo towards full electrification.

Figure 3-13. Division 3 – Existing, Construction Staging, and Buildout

Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.4 Division 5

Existing Conditions

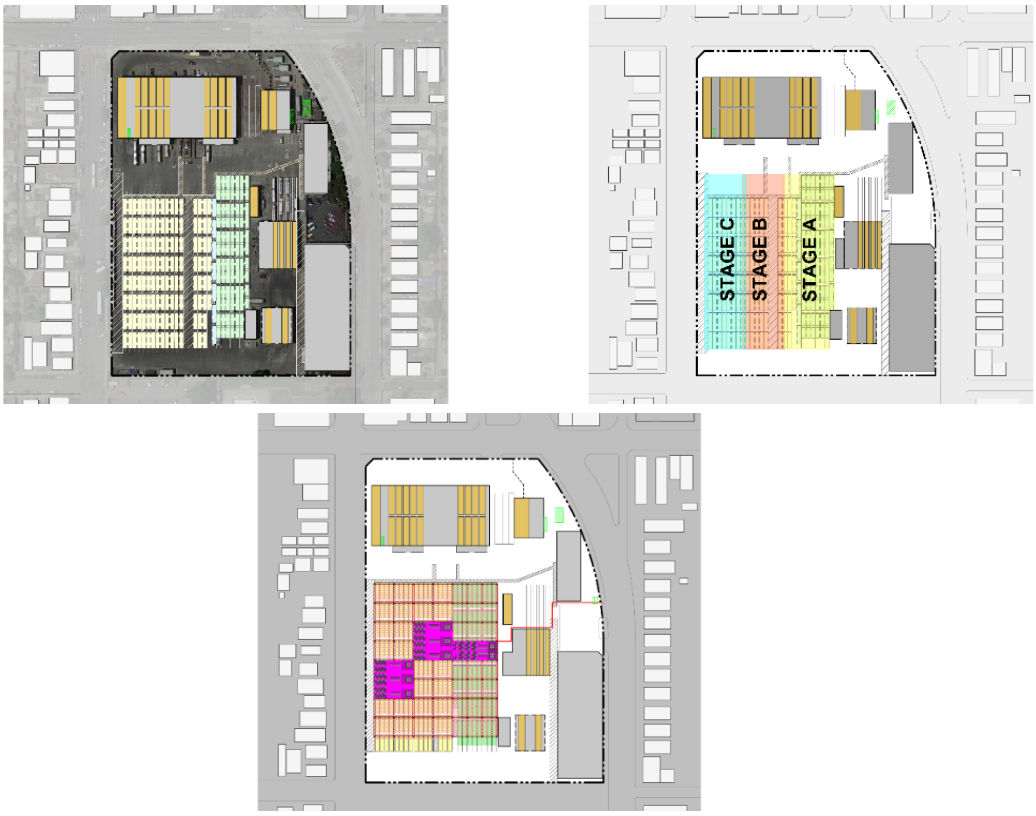
Division 5 is located at 5425 S. Van Ness Avenue in the City of Los Angeles. 193 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 5's fleet consists of 134 40-foot, seven 45-foot, and 52 60-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses Division 5. Based on preliminary demand modeling, approximately 14 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

Construction for Division 5 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Buses are anticipated to be temporarily stored at Division 10 during these stages. Ultimately, Division 5 is expected to have 97 150-kW and four 450-kW chargers and will be BEB-operational in 2029. Figure 3-14 illustrates the process that Division 5 will undergo towards full electrification.

Figure 3-14. Division 5 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.5 Division 7

Existing Conditions

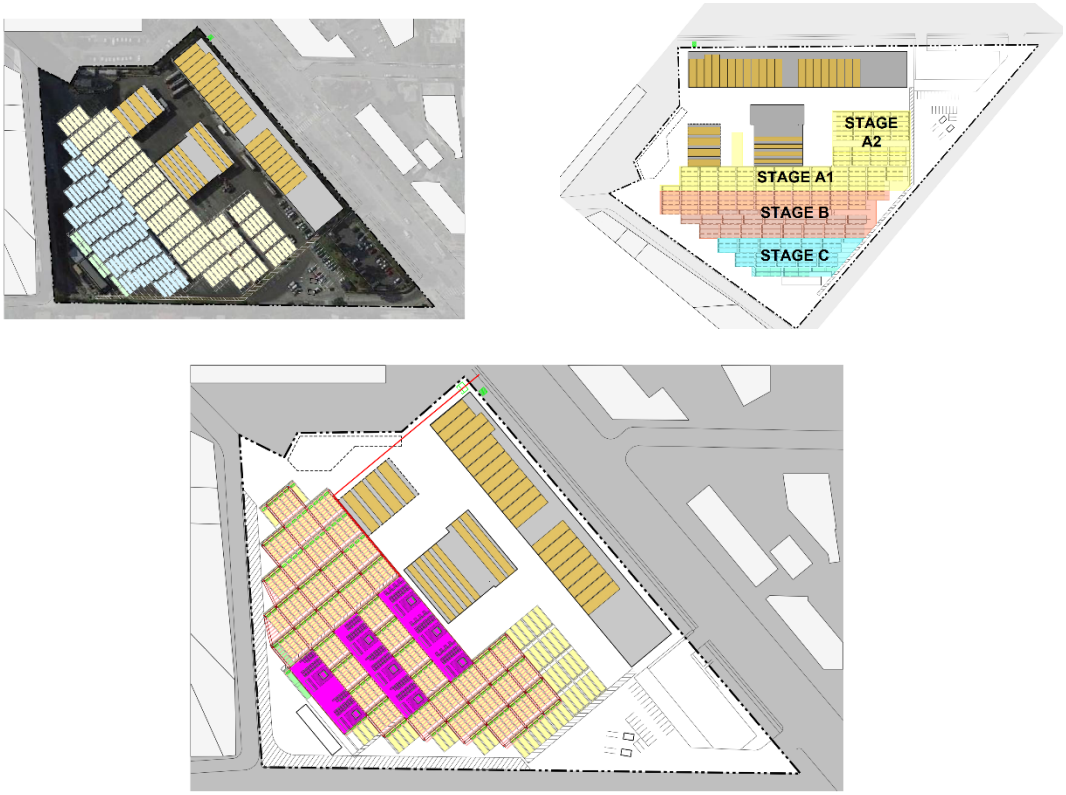
Division 7 is located at 8800 Santa Monica Boulevard in the City of West Hollywood. 233 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 7's fleet consists of 148 40-foot, 80 45-foot, and five 60-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses Division 7. Based on preliminary demand modeling, approximately 14 MW of power will be needed to be provided by Southern California Edison (SCE) to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take three to five years.

Construction for Division 7 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Buses are anticipated to be temporarily stored at Division 10 during these stages. Ultimately, Division 7 is expected to have 117 150-kW and three 450-kW chargers and will be BEB-operational in 2030. Figure 3-15 illustrates the process that Division 7 will undergo towards full electrification.

Figure 3-15. Division 7 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.6 Division 8

Existing Conditions

Division 8 is located at 9201 Canoga Avenue in the City of Los Angeles. 202 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 8's fleet consists of 61 40-foot, 107 45-foot, 33 60-foot, and one 65-foot bus. Bus parking predominates the site and buses are parked in diagonal stacked rows in the south and west portions of the division. As part of a recent reconfiguration of the parking, two diagonal rows have been combined to be nose-to-tail.

10 ABB 150-kW plug-in chargers will be installed on western wall of the Division. However, this work preceded the ZEB Master Plan which is recommending a different charging strategy and layout.

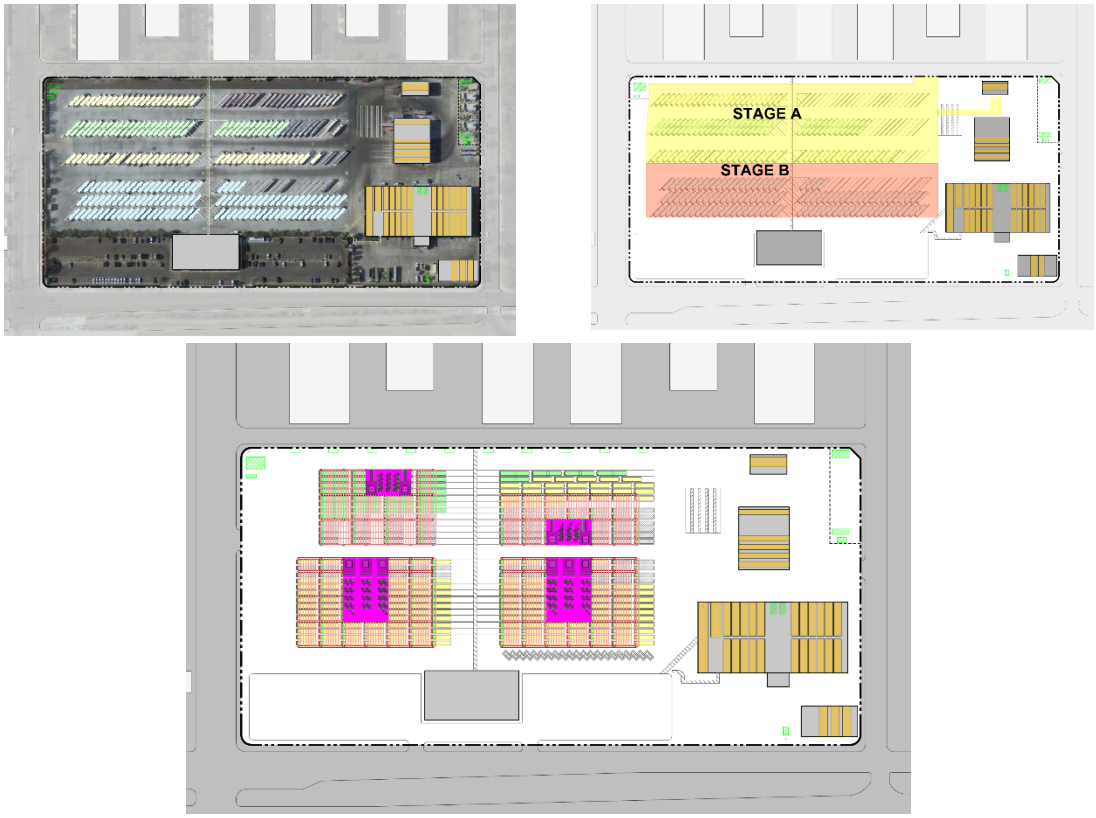
Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses Division 8. Based on preliminary demand modeling, approximately 14 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years. It should be noted that additional capacity was installed at the division to accommodate the 10 plug-in chargers.

To accommodate additional buses and future BEB equipment, the division is being designed for nose-to-tail track parking. Construction for Division 8 and its associated BEB charging equipment and support systems will be completed in two, six-month stages. Due to available storage capacity at Division 8 and the adjacent Marilla Lot (Metro-owned parking lot), buses can be rearranged on site and/or moved temporarily to Marilla Lot during construction.

Ultimately, Division 8 is expected to have 101 150-kW and three 450-kW chargers and will be BEB-operational in 2024. Figure 3-16 illustrates the process that Division 8 will undergo towards full electrification.

Figure 3-16. Division 8 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.7 Division 9

Existing Conditions

Division 9 is located at 3449 Santa Anita Avenue in the City of El Monte. 223 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 9's fleet consists of 161 40-foot and 62 45-foot buses. Division 9 has both nose-to-tail parking and diagonal parking. Buses assigned to the division are parked in one of 11 parallel rows at the western end of the site. Overflow parking is provided for buses in the diagonal-arranged lot to the east.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 9. Based on preliminary demand modeling, approximately 19 MW of power will be needed to be provided by SCE to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take three to five years. Existing diagonal parking will be transitioned to nose-to-tail to accommodate more buses and conform with BEB infrastructure plans.

Construction for Division 9 and its associated BEB charging equipment and support systems will be completed in two, six-month stages. Due to available storage capacity at Division 9, buses can be rearranged on site without temporary displacement. Ultimately, Division 9 is expected to have 112 150-kW and four 450-kW chargers and will be BEB-operational in 2026. Figure 3-17 illustrates the process that Division 9 will undergo towards full electrification.

Figure 3-17. Division 9 – Existing, Construction Staging, and Buildout

Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout
Source: ZEBGO, December 2018

3.5.8 Division 10

Division 10 is located at 742 N. Mission Road in the City of Los Angeles.

As of September 2020, due to future anticipated service needs, Metro has permanently closed Division 10 for revenue service. However, Division 10 is expected to be a key component in Metro's ZEB transition as it will be relied upon for temporary storage and bus relocations as other divisions are being improved.

3.5.9 Division 13

Existing Conditions

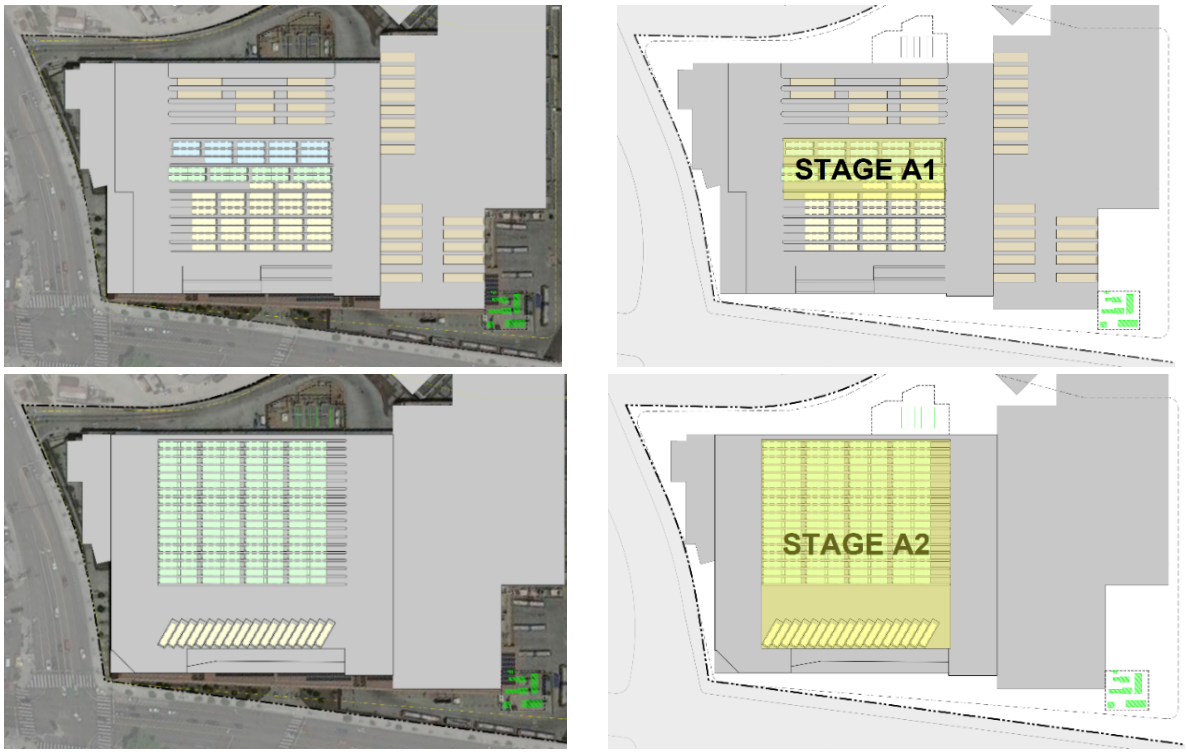
Division 13 is located at 920 N. Vignes Street in the City of Los Angeles. Division 13 is also connected to Metro's Central Maintenance Facility (CMF). 163 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 13's fleet consists of 56 40-foot, 14 45-foot, and 93 60-foot buses. Division 13 is a multi-level structure. The "Lower Level" (subterranean) is for employee parking, "Level 1" (street level) is for 40- and 45-foot bus parking, maintenance, fueling, and wash, and the "Upper Level" is for 60-foot bus parking. Buses are parked in unassigned, numbered tracks (nose-to-tail).

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 13. Based on preliminary demand modeling, approximately 10 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

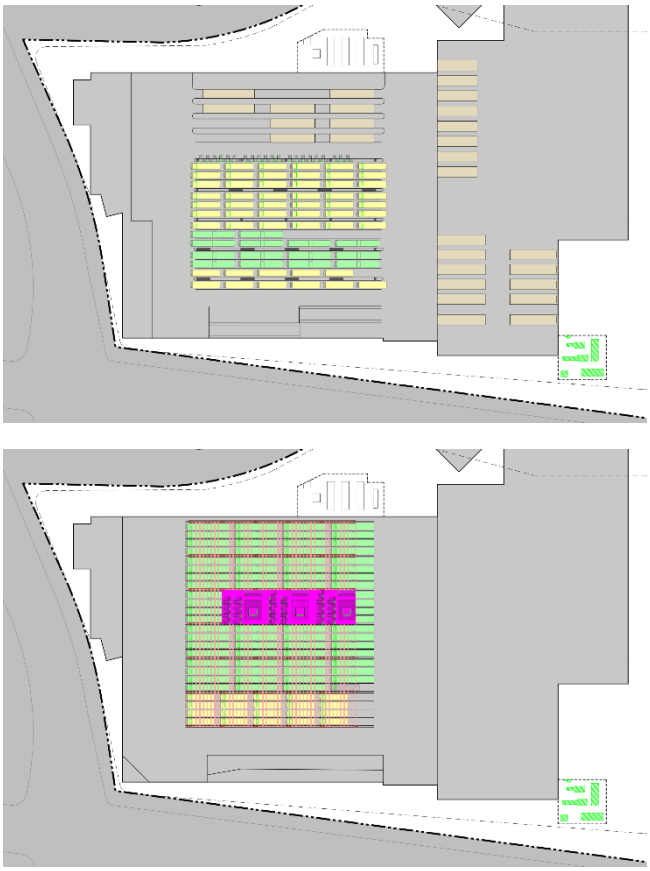
Construction for Division 13 and its associated BEB charging equipment and support systems will be completed in one six-month stage. Buses are anticipated to be temporarily stored at Division 10 and CMF during these stages. Ultimately, Division 13 is expected to have 95 150-kW and three 450-kW chargers and will be BEB-operational in 2026. Figure 3-18 illustrates the existing (December 2018) and construction staging for the 2nd and 3rd levels, and Figure 3-19 illustrates these levels at full buildout.

Figure 3-18. Division 13 – Existing and Construction Staging (2nd and 3rd Levels)



Source: ZEBGO, December 2018

Figure 3-19. Division 13 – Buildout (2nd and 3rd Levels)



Source: ZEBGO, December 2018

3.5.10 Division 15

Existing Conditions

Division 15 is located at 11900 Branford Street in the City of Los Angeles. 241 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 15's fleet consists of 82 40-foot, 109 45-foot, and 50 60-foot buses. Bus parking comprises the majority of the site in the south and west portions of the division. Parking is single row diagonal and has recently been expanded into an underutilized space.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 15. Based on preliminary demand modeling, approximately 17 MW of power will be needed to be provided by LADWP to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take two to three years.

Given the current layout, making room for charging equipment could be challenging but rearranging two or more rows, as was done at Division 8, would provide ample parking space.

Construction for Division 15 and its associated BEB charging equipment and support systems will be completed in two, six-month stages. Due to available storage capacity at Division 15 and the nearby Marilla Lot (Metro-owned parking lot), buses can be rearranged on site and/or moved temporarily to Marilla Lot during construction. Ultimately, Division 15 is expected to have 121 150-kW and three 450-kW chargers and will be BEB-operational in 2025. Figure 3-20 illustrates the process that Division 15 will undergo towards full electrification.

Figure 3-20. Division 15 – Existing, Construction Staging, and Buildout

Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout.
Source: ZEBGO, December 2018

3.5.11 Division 18

Existing Conditions

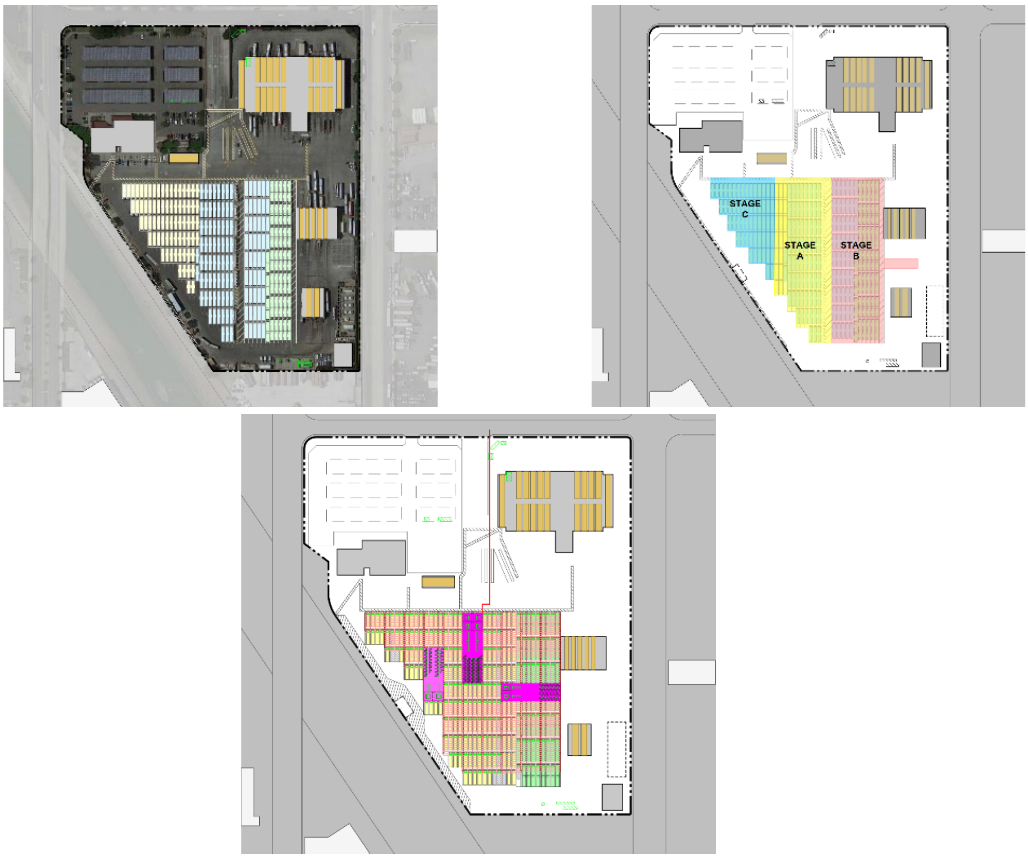
Division 18 is located at 450 W. Griffith Street in the City of Gardena. 252 CNG-powered buses are stored, maintained, fueled, and serviced at the division. Division 18's fleet consists of 74 40-foot, 116 45-foot, and 62 60-foot buses. Buses are parked in unassigned, numbered tracks (nose-to-tail). The division is constrained with no significant space for future ground-level BEB charging equipment.

Planned ZEB Modifications and Timeline

Additional electrical capacity will be required to meet the service needs of buses at Division 18. Based on preliminary demand modeling, approximately 17 MW of power will be needed to be provided by SCE to support the current fleet. Construction and enhancements to bring this additional capacity is anticipated to take three to five years.

Construction for Division 18 and its associated BEB charging equipment and support systems will be completed in three, six-month stages. Due to available storage capacity at Division 18, buses can be rearranged on site without temporary displacement. Ultimately, Division 18 is expected to have 126 150-kW and five 450-kW chargers and will be BEB-operational in 2026. Figure 3-21 illustrates the process that Division 18 will undergo towards full electrification.

Figure 3-21. Division 18 – Existing, Construction Staging, and Buildout



Clockwise (from the upper left), from existing conditions (December 2018), to construction staging, to full buildout.
Source: ZEBGO, December 2018

4 DISADVANTAGED COMMUNITIES

The following section provides an overview of disadvantaged communities (DACs) in Metro's service area and the strategy to prioritize them for ZEB adoption.

4.1 Disadvantaged Communities Served

73 percent of Metro's divisions are located in communities that are classified as "disadvantaged" according to CalEnviroScreen. The conversion of existing CNG operations to BEB operations will directly benefit the communities in the vicinity of these divisions by way of a reduction in noise and local emissions. These divisions also serve multiple routes that traverse multiple DACs across Los Angeles County.

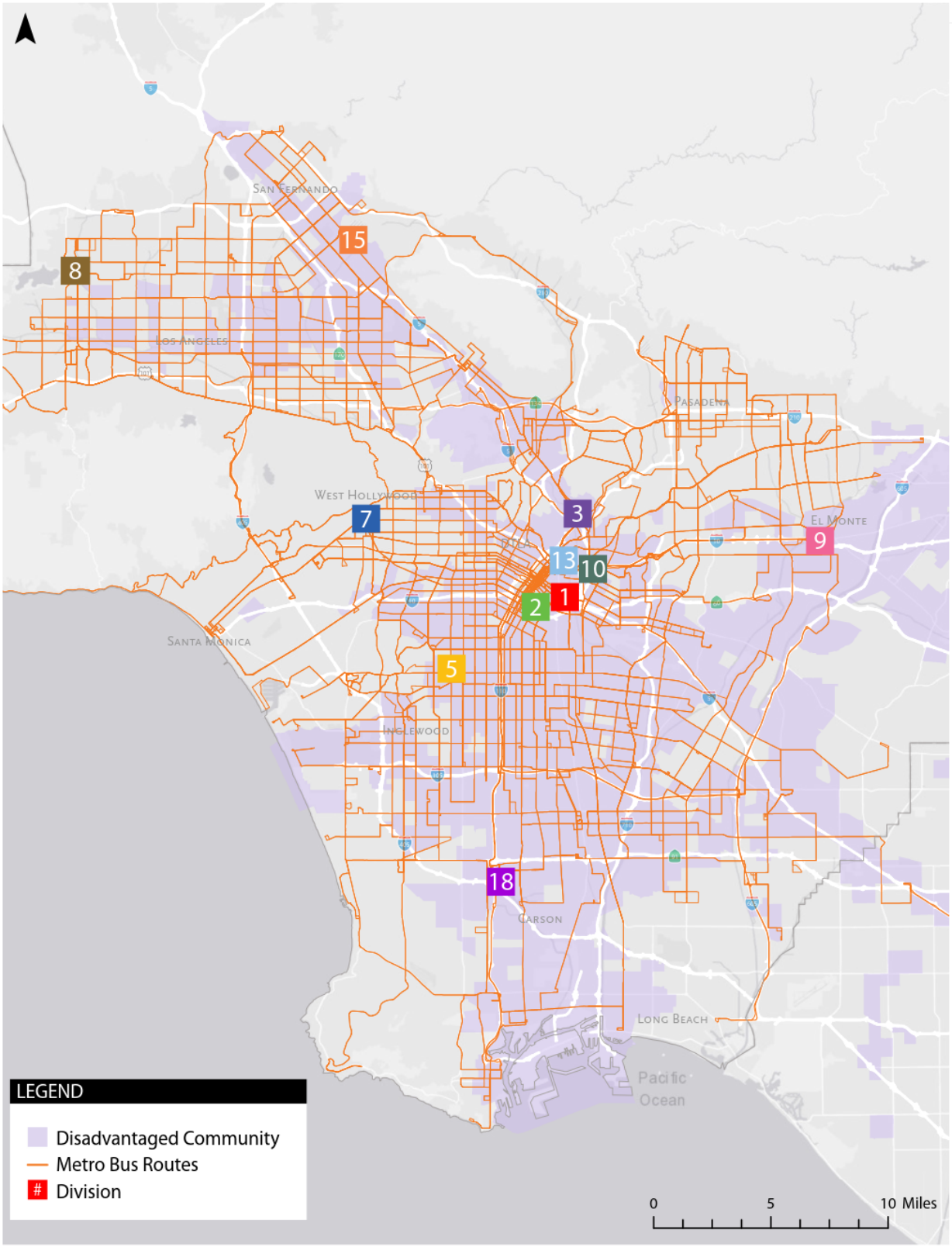
Table 4-1 summarizes whether or not divisions are located in DACs and the number and percentage of DACs that its respective routes serve. Figure 4-1 illustrates Metro divisions and routes in DACs.

Table 4-1. Disadvantaged Communities

Division	In DAC?	NOx Exempt Area?	Communities (Tracts) Served	DACs Served (#)	DACs Served (%)
1	Yes	No	299	206	69%
2	Yes	No	299	234	78%
3	Yes	No	343	213	62%
5	Yes	No	285	211	74%
7	No	No	362	194	54%
8	No	No	283	114	40%
9	Yes	No	343	188	55%
13	No	No	251	148	59%
15	Yes	No	404	181	45%
18	Yes	No	480	339	71%

Source: CalEnviroScreen 3.0, June 2018

Figure 4-1. DACs in Service Area



Source: ZEBGO, CalEnviroScreen 3.0, June 2018

4.2 DAC Prioritization Strategy

As previously mentioned, Phase 1's ZEB transition is focused on the Silver and Orange BRT lines. The second and third phases will focus on Metro's other routes and services.

Since ZEBs cannot operate unless infrastructure is in place to charge buses, Metro's transition (primarily Phases 2 and 3) largely focuses on division electrification and not individual routes. Once divisions are electrified, buses will be strategically deployed to routes and service blocks with a priority of DAC service. It should be noted that in Phase 2, three of the four divisions to be electrified divisions are in DACs, the remaining four DAC divisions will be electrified in Phase 3.

The population that resides in DACs tend to be society's most vulnerable. They typically rely on the public transit system, are more likely to be impoverished, and are more frequently exposed to harmful emissions and pollutants that result in negative health outcomes. Thus, DAC communities will benefit the most once ZEBs are adopted and this is why Metro is making a concerted effort to ensure that divisions and routes within and that service DACs are among the first to be transitioned to ZEBs, as shown in Table 4-1.

5 WORKFORCE TRAINING

The following section provides an overview of Metro's plan and schedule to train personnel on the impending transition.

5.1 Training Requirements

The transition to ZEBs will significantly alter Metro's service and operations. Converting to ZEBs from CNG is an arduous endeavor and will impact all ranks of the organization. This will require extensive change management and training which will be provided by the OEMs and Metro. Training will need to be conducted after buses are procured and in advance of the delivery of said buses. Therefore, it is expected that all personnel will be sufficiently trained before the buses arrive. Training conditions and schedules will be included in procurement documents, as they are with all existing procurements. If other OEM-provided buses are procured in the future and/or if new components, software, or protocols are implemented, it is expected that Metro's staff will be trained well in advance of the commissioning of these additions. Since battery technology is rapidly evolving, it is likely that buses and supporting battery chemistries and software will change between 2020 and 2040, therefore, Metro's future procurements/deliveries will require refresher or updated trainings for relevant staff.

The following provides a list of personnel and positions that will need to be retrained upon adoption of ZEBs (this list is not exhaustive):

- **Bus Operators**
  Bus operators will need to be familiarized with the buses, safety, bus operations, and pantograph operations.
- **Facilities Maintenance Staff and Maintenance**
  Facilities staff will need to be familiarized with scheduled and unscheduled repairs, high-voltage systems, and the specific maintenance and repair of equipment.
- **First Responders**
  Local fire station staff will need to be familiarized with the new buses and supporting facilities.
- **Mechanics**
  Mechanics will need to be familiarized with the safety-related features and other components of ZEBs.
- **Instructors**
  For both Operator Central Instruction and Maintenance, instructors will need to understand all aspects of the transition of ZEBs to train others.
- **Service Attendants**
  Service attendants will become familiarized with proper charging protocol and procedures that are ZEB-specific.
- **Management Staff**
  All management staff (supervisors, directors, etc.) will be familiarized with ZEB operations and safety procedures.

6 COSTS AND FUNDING

The following section identifies potential funding sources that Metro may pursue in its adoption of ZEBs.

6.1 Preliminary Costs

Based on preliminary estimates, Metro's transition is expected to cost between $1.3 billion and $1.6 billion. Infrastructure will cost between $900 million and $1.4 billion. and BEBs are expected to cost $222 million more than the conventional CNG buses. These costs only reflect capital infrastructure. Various operations and maintenance costs, including utility, operating, and maintenance costs are still be analyzed.

6.2 Funding Sources

There are a number of potential federal, state, local, and project-specific funding, and financing sources at Metro's disposal. To date, Metro has applied for and been awarded various Federal, State, and Local funds for ZEB projects, as indicated in Table 6-1.

Table 6-1. Metro's ZEB Funding

Type	Agency	Funding Mechanism	Year	Status	Award
Federal	FTA	Low- or No-Emission Vehicle Grant	2015	Awarded	$4.3M
Federal	FTA	Low- or No-Emission Vehicle Grant	2016	Not Awarded	N/A
State	Caltrans	Transit and Intercity Rail Capital Program	2016	Not Awarded	N/A
Local	SQAMD	AB2766 Discretionary Fund	2017	Awarded	$2M
State	CARB	Carl Moyer Memorial Air Quality Standards Attainment Program	2018	Not Awarded	N/A
State	Caltrans	Transit and Intercity Rail Capital Program	2020	Not Awarded	N/A

Source: Los Angeles Metropolitan Transportation Authority, February 2020

Metro is also leveraging utility-based programs such as LADWP's Commercial EV Charging Station Rebate Program and SCE's Charge Ready Program. For funding, Metro will also continue to use local tax measure(s) and other strategies to meet its 2030 goals, such as public-private partnerships, and other grant opportunities.

7 START-UP AND SCALE-UP CHALLENGES

As mentioned, Metro has a very aggressive ZEB transition schedule – 10 years before the ICT regulation requires. To meet both deadlines, there are several challenges and opportunities that Metro has identified. The following briefly described some of the challenges that Metro faces for its transition:

- **Technological adaptation.** Currently, Metro is modeling and planning for a transition based on December 2018 service levels and existing ZEB technology. With challenging 2030 and 2040 deadlines looming, it is difficult to anticipate future technological enhancements and changes, such as improved batteries and chargers. Slight changes in these technologies could improve bus ranges, in turn, reducing costs. Metro (and the market) must be aware of these changes as it would be counterproductive to invest in technologies that will soon be outdated.
- **Costs.** Adoption of ZEBs has many benefits, including potential lifecycle cost savings. However, the investment required for capital and change management will be very expensive. Metro will have to be creative with funding mechanisms and sources to ensure that the transition to ZEB will not be detrimental to its operations and service.
- **Market Production Factors.** The ICT regulation will put a lot of pressure on OEMs to produce ZEBs at unprecedented rates. However, it is not only California that is interested in converting to ZEBs. These multi-state policy changes will have a great impact on these transitions; however, it will also make it challenging to meet ZEB goals for agencies if supply of buses can meet with demand.
- **Phasing and Transition.** Metro has the second largest transit fleet in the United States. Transitioning to ZEBs without any service interruptions will be very challenging due to the limited space for construction, staging buses, and maintaining service.
- **Utility Upgrades.** Metro's divisions are currently under the jurisdiction of two utilities, whereas potential on-route charging locations are under nine. These utilities have different rate structures and protocols to apply for and receive additional power. How each utility is sanctioned (whether municipal or private) also dictates procedural requirements. These nuances will make it challenging to plan for due to the variances in schedule and process.
- **Managing Power Demand.** The transition to BEBs will require strategies to ensure that Metro can utilize power in the most cost-efficient way. Metro is currently doing this via utility negotiations and demand modeling to determine methods to reduce peak demands. However, shaving demand may also come at a hefty capital cost, something that staff is currently analyzing.
- **Uncertainty of COVID-19.** COVID-19 has impacted all facets of our global economy, transit is not an exclusion. During the pandemic, ridership has plummeted and caused major shortfalls in Metro's budget which has impacted capital programs and operations. At this time, it is unclear what short- and long-term impacts will be for service. There is a possibility that service ridership levels may not return to previous levels resulting in changes to procurement and funding. Metro will continue to analyze trends to determine service changes and plans.

In conclusion, Metro is still determining the path forward towards its transition goals. At this time, Metro is slated to convert its entire fleet to ZEBs by 2030, 10 years in advance of what is required by the ICT. Metro's next steps in this process is to continue refining analysis and Master Planning efforts.

ITEM 41

ZEB Program
Master Plan Update

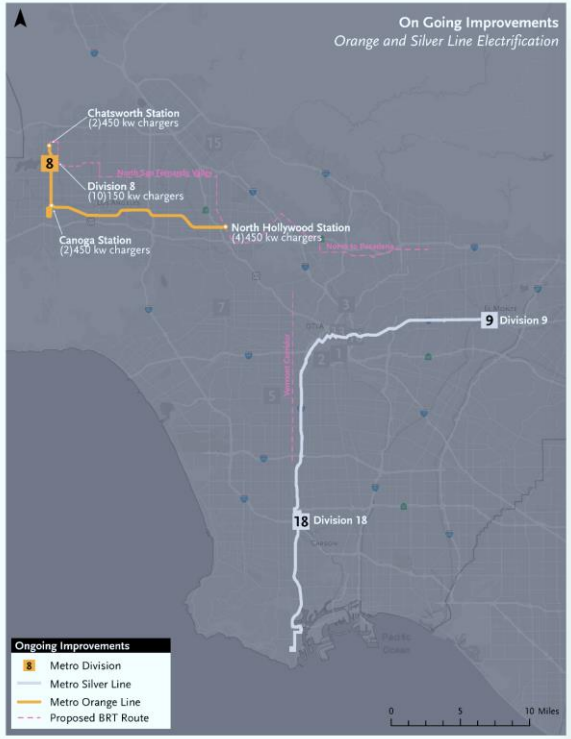
Metro

Executive Management Committee

March 2021

Transition Phasing

Phase 1



Orange & Silver Lines
Divisions: 8,9,18

Phase 2

Independent Divisions
Divisions: 8, 9, 10, 15, 18

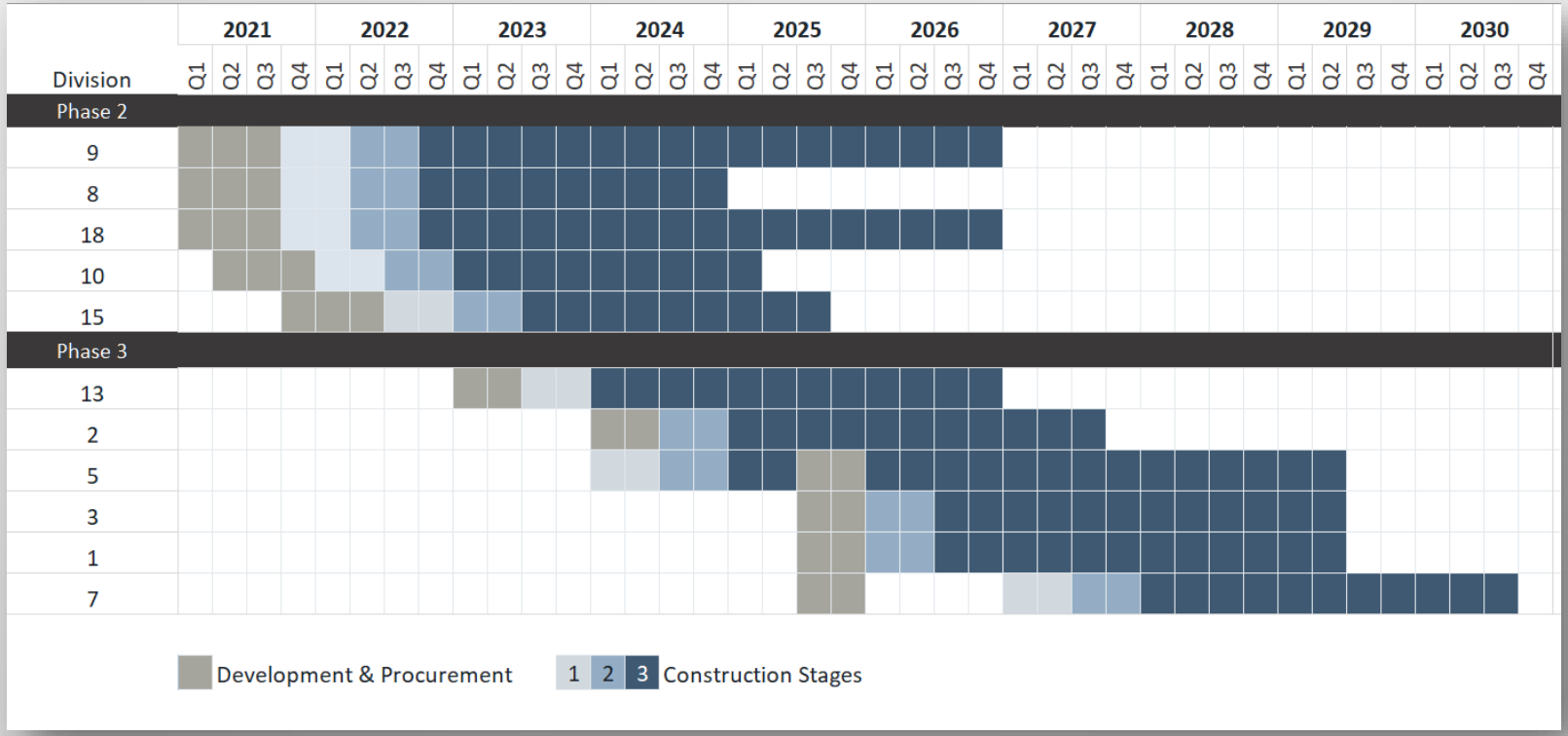
Phase 3

Dependent Divisions
Divisions: 1, 2, 3, 5, 7, 13

Metro

Infrastructure Phasing Schedule 2030

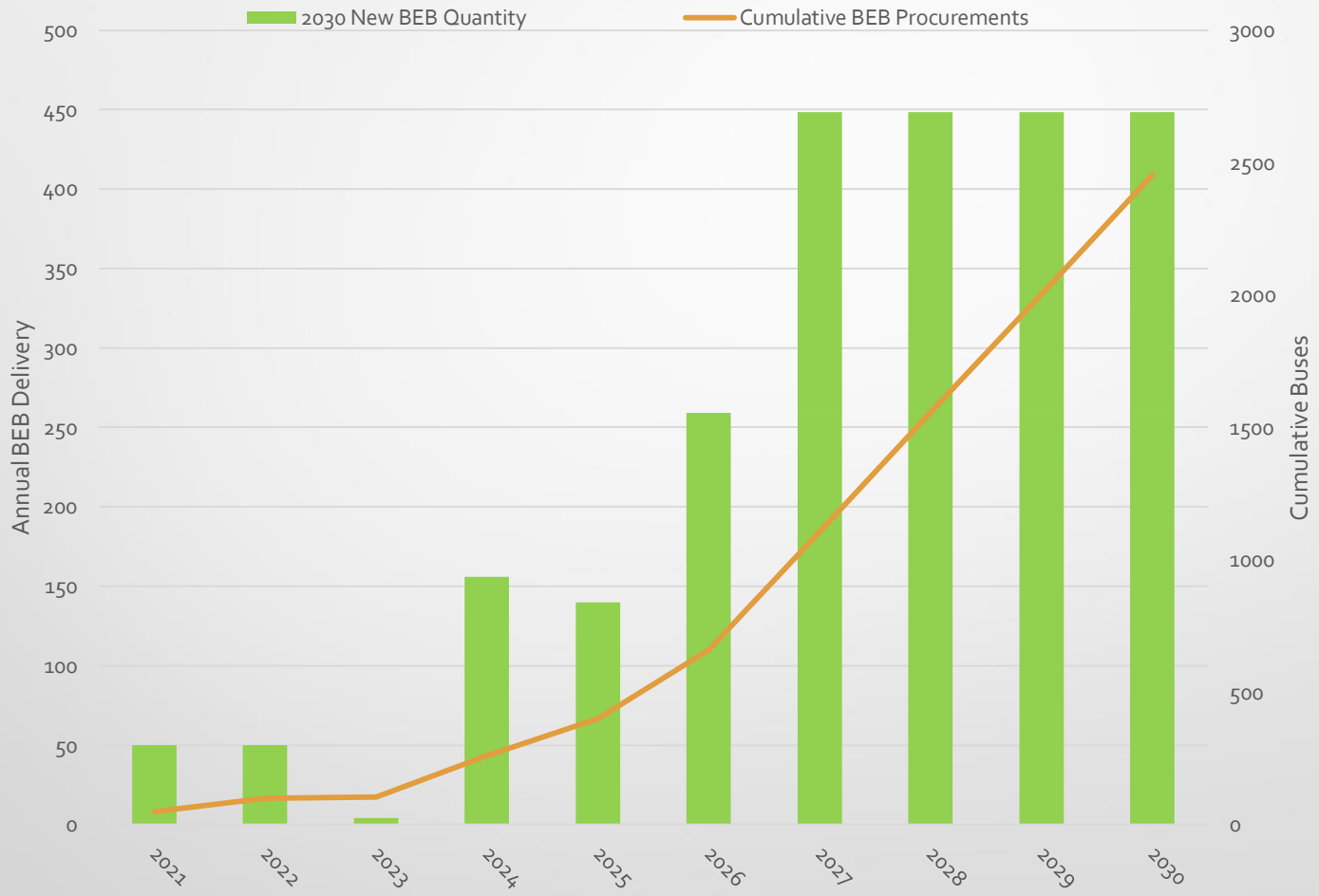
Division Modification and En-route Charger Installation Schedule



Bus deliveries are timed with completion of construction stages and en-route charging installations.

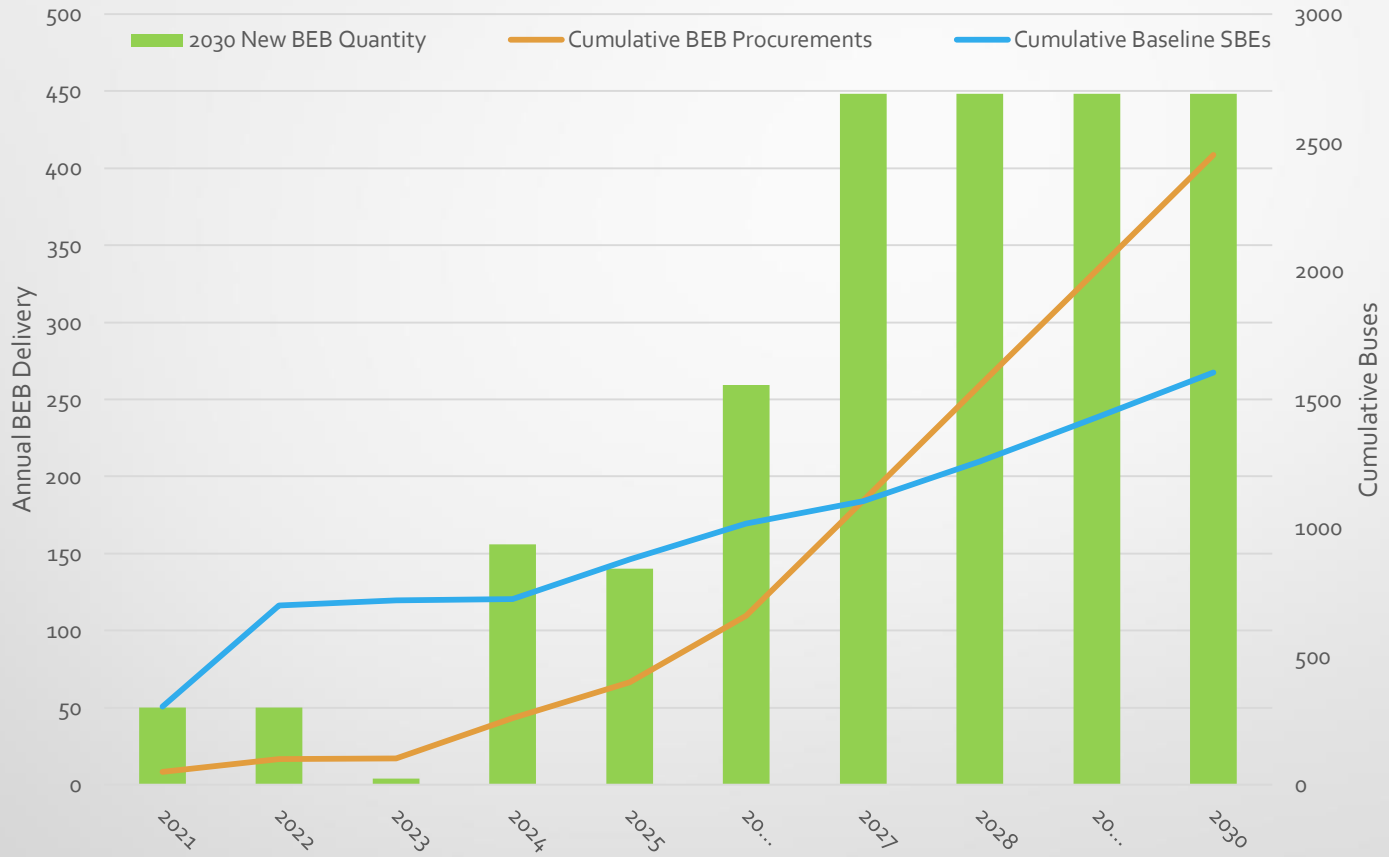
Metro

Bus Delivery Schedule 2030



Metro

Bus Delivery Schedule 2030



Note: Current BEB scheduled procurements exceeds baseline procurements to meet service needs by 848 Standard Bus Equivalent (SBE) 40' Buses.

Metro

Costs by Division

Division	Bus Qty	Infrastructure		En-Route	Buses	Total[2]
		Min[1]	Max[2]			
1	171	$70.9M	$100.1M	$14.2M	$150.8M	$265.1M
2	169	$67.3M	$95.1M	$16.8M	$149.0M	$261.0M
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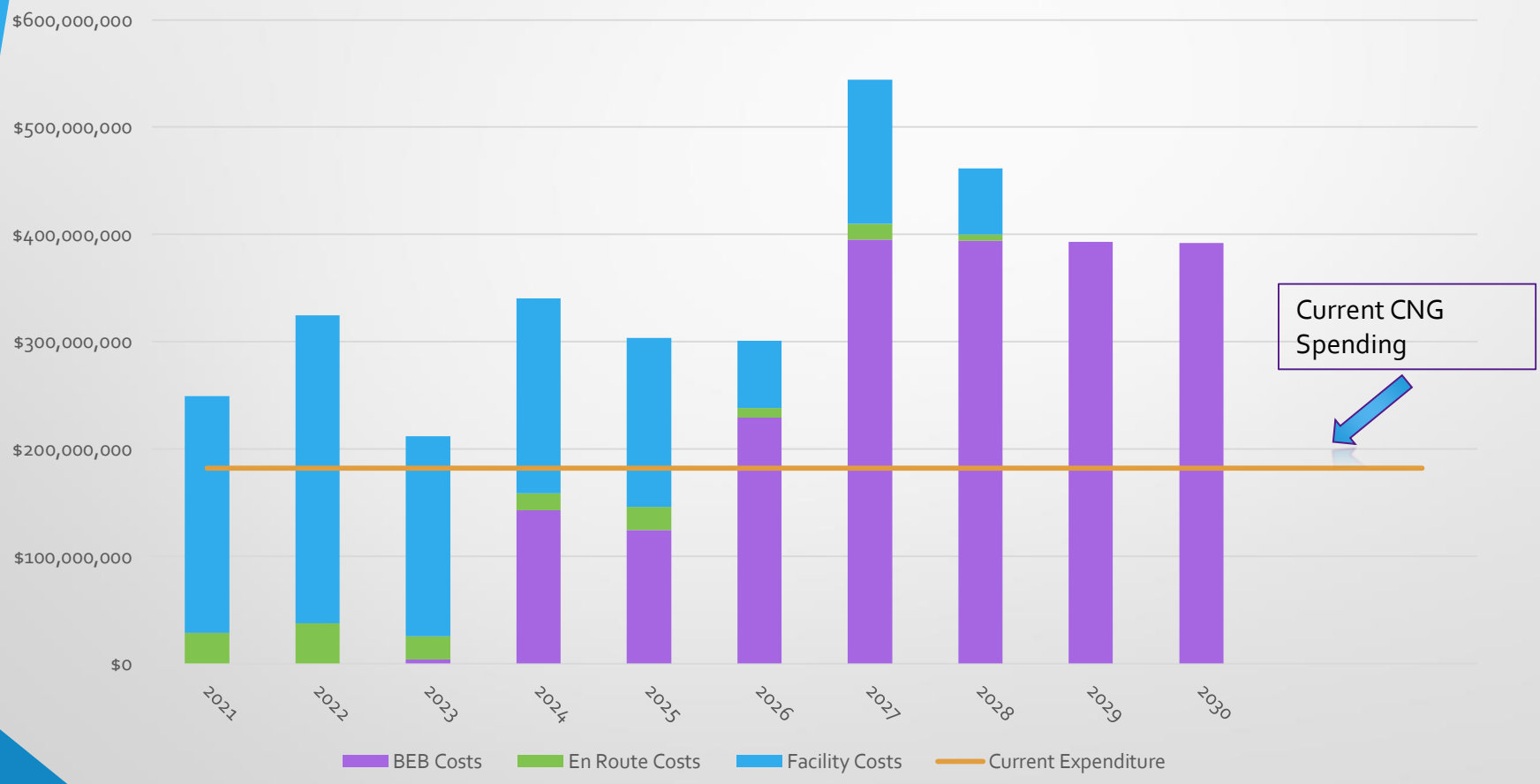
18	185	$70.7M	$99.9M	$27.4M	$163.1M	$290.4M
Totals	**2,353**	**$921.9M**	**$1.30B**	**$154.7M**	**$2.07B**	**$3.53B**

1. Baseline BEB Infrastructure Only
2. Baseline Infrastructure + On-Site Storage + Solar

Metro

Annual Cashflow vs. Current Spending



Metro

ITEM 43 & 44

ZEB Program

Charging Infrastructure & Electric Bus Procurements

Metro

Executive Management Committee
June 17, 2021

Introduction

Mission:
Transition to Zero Emission Bus Operations by 2030 in accordance with July 2017 Metro Board Motion 2017-0524

Background:

Three Phase Approach has been developed

- Phase 1 – Electrify BRT's
- Phase 2 – Electrify Divisions without space impacts
- Phase 3 – Electrify All Remaining Divisions

Considerations:

- Implementation requires approval of multi-year programmatic strategy & funding
- Current LRTP & SRTP include CNG replacement, however Battery Electric Bus procurement Charging infrastructure are excluded

Metro

Recommendations

A. Approve Life of Project (LOP) budget of $50M commencing FY22 for Phase 1 for the Charging Infrastructure Program for the Silver Line

B. Approve FY22 Budget amendment for charging Infrastructure

C. Consider that authorization of the use of alternative delivery methods, pursuant to PUC Code Section 130242, will achieve integration of design, project works, and other components in an efficient manner at Metro bus facilities

Approval of the above recommendations ensures the ZEB Program:

- 2030 Resolution remains a priority
- Focus on completing the Phase 1 Charging Infrastructure
- Allows for the addition of $34M in FY22 funding for this program
- Metro may use this procurement to explore alternative delivery approaches

Metro

Phase 1: BRT Conversion Status

Orange (G) Line:

- Complete

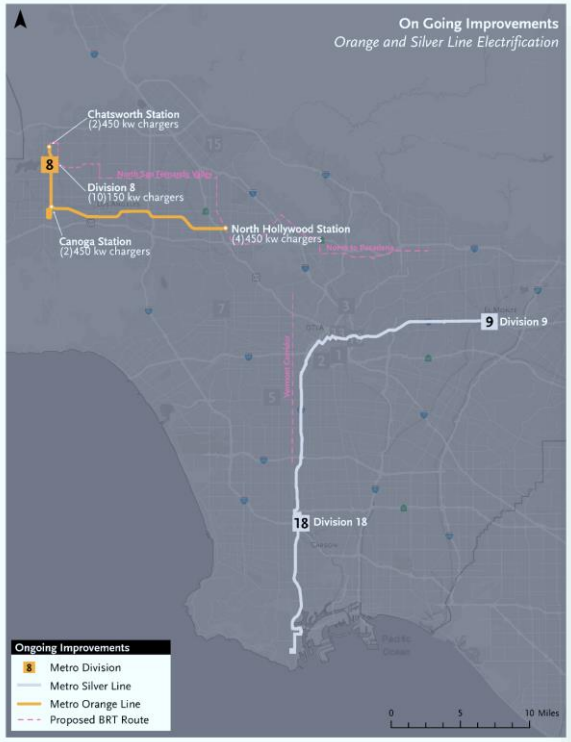
Silver (J) Line:

- Contract executed for sixty (60) battery electric buses
- Board approved change order to BTD for Division 9 depot chargers
- Board approved SCE contract to upgrade utilities
- Still Required:
  - Complete design from 30%
  - Construction contract for Division 9 Depot charger installations
  - Construction contracts for en-route chargers and Installations at El Monte and Harbor Gateway Transit Centers

Metro

Transition Phasing

Phase 1



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Metro

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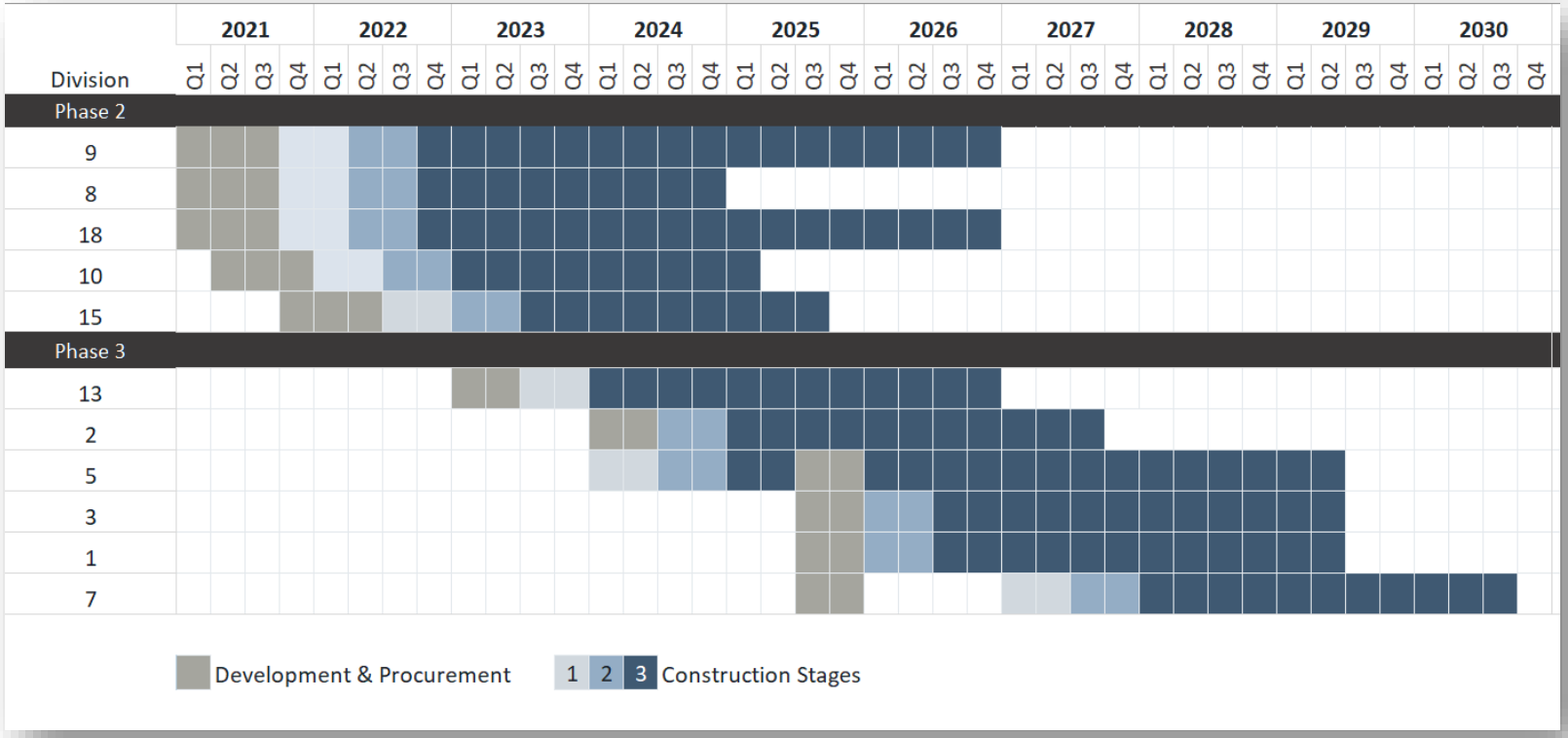
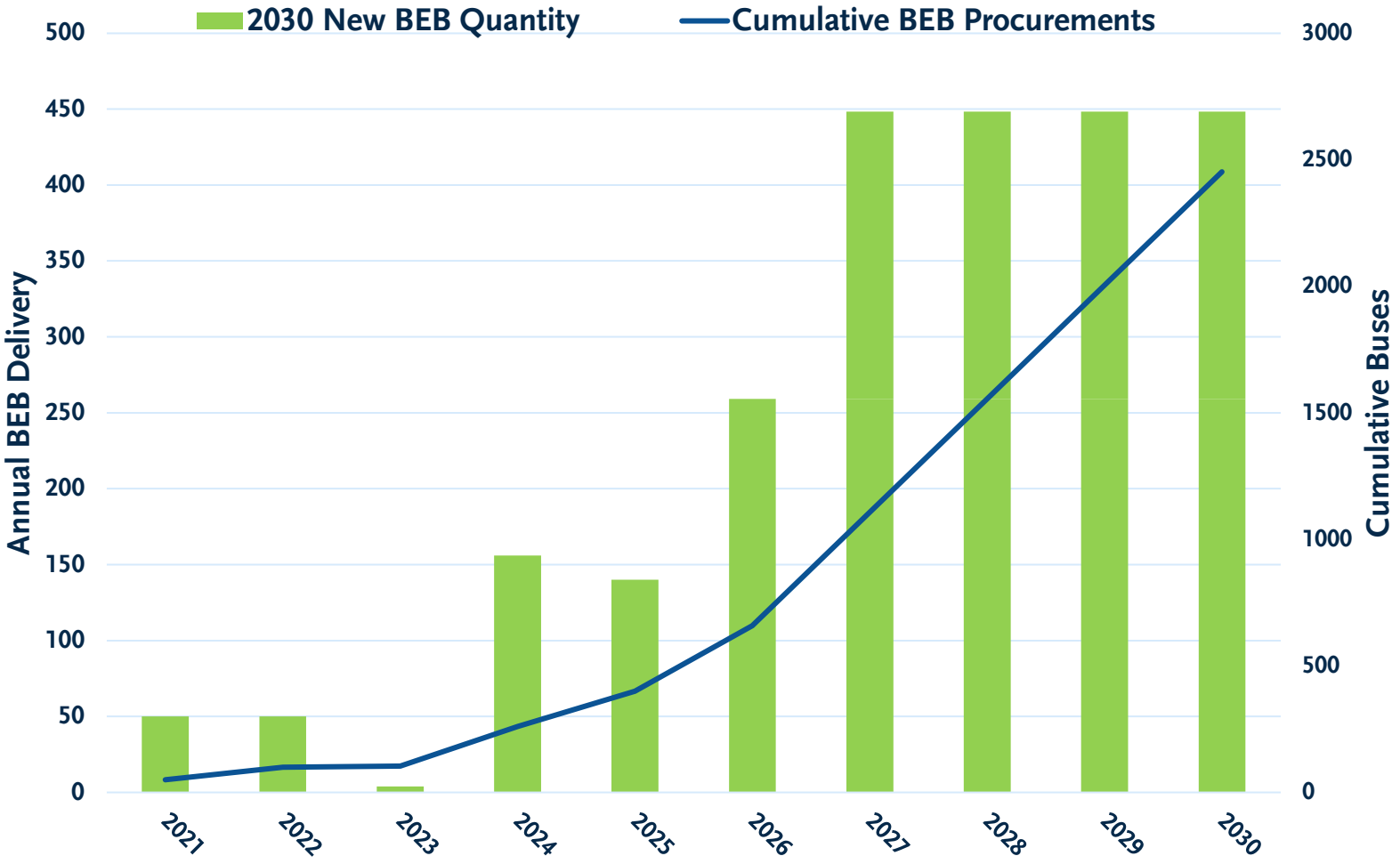


Bus deliveries are timed with completion of construction stages and en-route charging installations.

Metro

Bus Delivery Schedule 2030



Metro

Costs by Division

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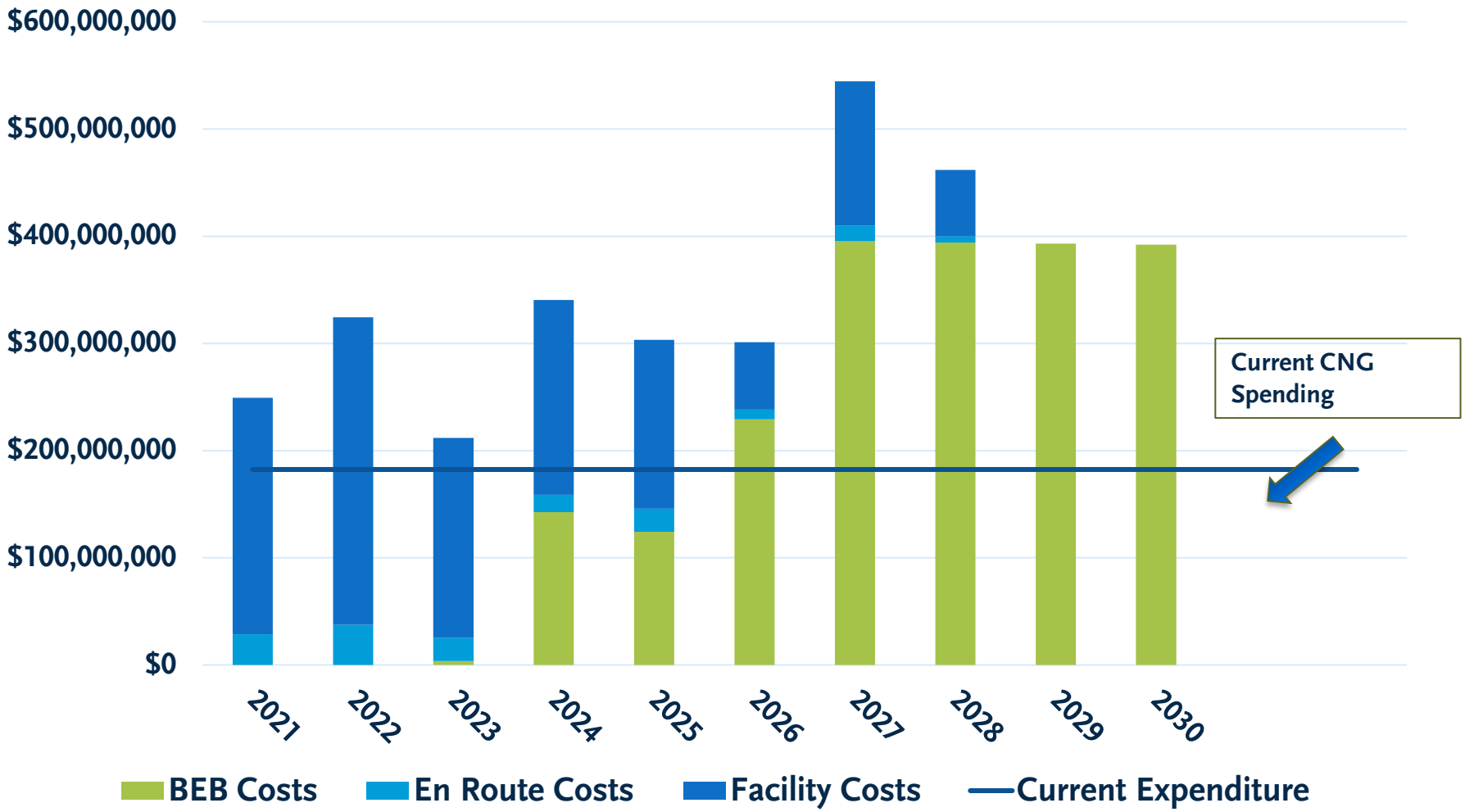
1. Baseline BEB Infrastructure Only
2. Baseline Infrastructure + On-Site Storage + Solar

Metro

Annual Cashflow vs. Current Spending



Metro

Phase 1: Orange Line

OEM	Length	Base Order (Option)	Battery Capacity (kW-hr)	Budget	Charging Strategy	
					Depot	En-Route
New Flyer	60’	40 (65)	320	$80,003,282	J1772 CCS1 (150 kW)	SAE 3105-1 (450 -600 kW)
BYD	60’	5	610	$8,109,500		

Metro

Phase 1: Silver Line

- Staff has identified an optimum charging strategy
- May 2021 Metro Board approved contract with SCE to upgrade service at D9 & El Monte Transit Center
- May 2021 Metro Board approved change order with BYD for depot chargers
- Testing five of sixty (60) base order 40' BYD pilot buses for Silver only; production to start upon proof of design
- June 2021- Request Board approval for $50M LOP to complete electrification of Silver Line:
  - Complete construction design
  - Install depot chargers
  - Procure and install en-route chargers

Metro

Next Steps

- June 2021 - Request for Board approval of LOP for $50M to complete electrification of the Silver Line
  - Commence specification updates and advanced conceptual design efforts to produce solicitation documents for the charging infrastructure program for the Silver Line

- June 2021 - Report outlines the approach to convert Metro's CNG bus operations to zero emission by 2030
  - Continue to pursue competitive grants, identify additional funding sources, and incorporate the 2030 Zero Emissions Bus program in the SRTP and LRTP

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2021-0193, **File Type:** Contract **Agenda Number:** 44.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: CHARGING INFRASTRUCTURE LIFE OF PROJECT BUDGET ADOPTION

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

A. APPROVE Life of Project (LOP) budget of $50.0M commencing FY22 for Phase 1 for the Charging Infrastructure Program alongside the J Line (Silver) supporting the Zero Emission Bus Program;

B. APPROVE amending the FY22 Budget for $34.0M for charging infrastructure; and

C. CONSIDER finding that authorization of the use of alternative delivery methods pursuant to Public Utilities Code Section 130242 will achieve integration of design, project works, and other components in an efficient manner at Metro bus facilities.

(REQUIRES 2/3 VOTE OF THE BOARD)

ISSUE

In April 2016, Metro's Board of Directors passed a motion to convert Metro's bus operations from CNG to Zero Emissions by 2030. Subsequently, in December 2018 the California Air Resources Board (CARB) issued the Innovative Clean Transit (ICT) regulation which requires all California public transit agencies to transition from conventional fueled buses to zero emission buses by 2040. Given the adoption of the Board motion and CARB regulation, it is critical that Metro adopt procurement and installation plans that commit funding and personnel to deliver ZEB services by 2030.

The 2030 ZEB conversion goal is desired to expedite the clean air goals for Los Angeles County. This reduces the carbon impacts along the services routes where Battery Electric Buses (BEB) can be provided. BEBs operate at noticeably lower decibel level than comparable CNG buses which results in reduced noise levels particularly benefitting residential areas. Ultimately the conversion to ZEBs provides reduced noise levels and improves air quality where Metro provides its BEB services.

In March 2021, staff presented the ZEB Rollout Plan (item 2020-0636), which demonstrated a phased implementation plan for the Battery Electric Buses to meet a 2030 ZEB conversion goal.

With this goal, bus deliveries and expenditures are compressed resulting in expenditure demands exceeding available constrained funding sources. Additionally, accelerated bus deliveries may exceed fleet needs starting 2027 and beyond. To mitigate the potential implications of the Rollout plan, early adoption of the recommendations are essential to reduce potential delay risks due to limited budget allocations, constrained funding, limited personnel to manage the work, and long construction lead times.

BACKGROUND

Metro currently operates a fleet of approximately 2,400 CNG buses of various lengths from ten (10) divisions. To transition to 100% Zero Emissions Bus operations Metro will have to address several challenges.

Charging Infrastructure and Utility Upgrades

Overnight charging at Metro Divisions and en-route charging installations are needed to successfully deploy Battery Electric Bus services by 2030. Each of Metro's divisions will need to be upgraded to provide the anticipated power levels. To optimize available power and minimize the scale of the required upgrades, staff and its consultants are modeling numerous charging strategies to reduce peak demand and maintain acceptable service levels. It is anticipated that this approach will result in reduced risk to the construction schedule and savings in Life Cycle Costs.

Also, Metro's bus divisions are currently under the jurisdiction of two utilities; each have their own protocols for rate structures, application for upgrades, and construction activities. These nuances will make syncing activities between divisions under different jurisdictions challenging. During the pandemic, Metro Transit services was qualified as Emergency services for which Metro will continue to pursue preferential rates and top tier support services as part of the system resiliency requirements.

Performance Limitations

Despite all the advances in the last five years since April 2016 when the Board adopted the motion to convert to ZEB operations, the range of BEB's is still not close to that of CNG buses. The performance limitations may be addressed with a range of strategies, including adding en-route chargers at strategic locations, adjusting the time and distance of the operational assignments (service blocks), and increasing fleet size. Each strategy comes with its own set of risks and costs.

Coordination with Construction and NextGen

BEB deliveries must be synchronized with the charging infrastructure construction schedules to ensure that BEBs are delivered as each construction phase is completed. Further, BEB deliveries should be synchronized with service requirements. Failure to properly coordinate may result in a surplus of buses being delivered. This in turn will result in perfectly good buses being parked or underused while the warranty clock expires.

Currently, there are sufficient buses to support anticipated service needs for the coming years. The biggest risk is having a surplus of buses in the later years as the rate of BEB deliveries required to meet the 2030 goal exceeds the rate at which buses are retired. The risk of surpluses may be addressed with a range of strategies, including early retirement, or selling of CNG buses or converting them to BEB's. Each strategy comes with its own set of risks and costs.

Funding

As detailed in Figure-1, below, the Rough Order of Magnitude (ROM) cost to transition to 100% ZEB Operations is approximately $3.5B. Over a 10-year period, this is an average of $350.0M per year. In recent years Metro's bus capital expenditures have averaged approximately $190.0M per year. Therefore, Metro will need to identify funding sources to close the approximately $160.0M annual gap. This is a significant challenge and staff must formally start the funding identification processes. Even as more monies become available, there is growing competition for new and existing funds.

Figure-1

Division	Bus Qty	Infrastructure		En-Route	Buses	Total[2]
		Min[1]	Max[2]			
1	171	$70.9M	$100.1M	$14.2M	$150.8M	$265.1M
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Totals	**2,353**	**$921.9M**	**$1.30B**	**$154.7M**	**$2.07B**	**$3.53B**

1. Baseline BEB Infrastructure Only
2. Baseline Infrastructure + On-Site Storage + Solar

DISCUSSION

Approval of the recommendations ensures that the 2030 resolution for the ZEB Program remains a priority for the agency.

Recommendation A: Approve $50.0M LOP Ph 1 J Line (Silver) Charging Infrastructure

With current BEB deliveries under contract to be completed by 2022, a focus on completing the Phase 1 Charging Infrastructure is the next step to provide more capacity for BEB service. Figure 2 describes the phases of the ZEB Master Plan.

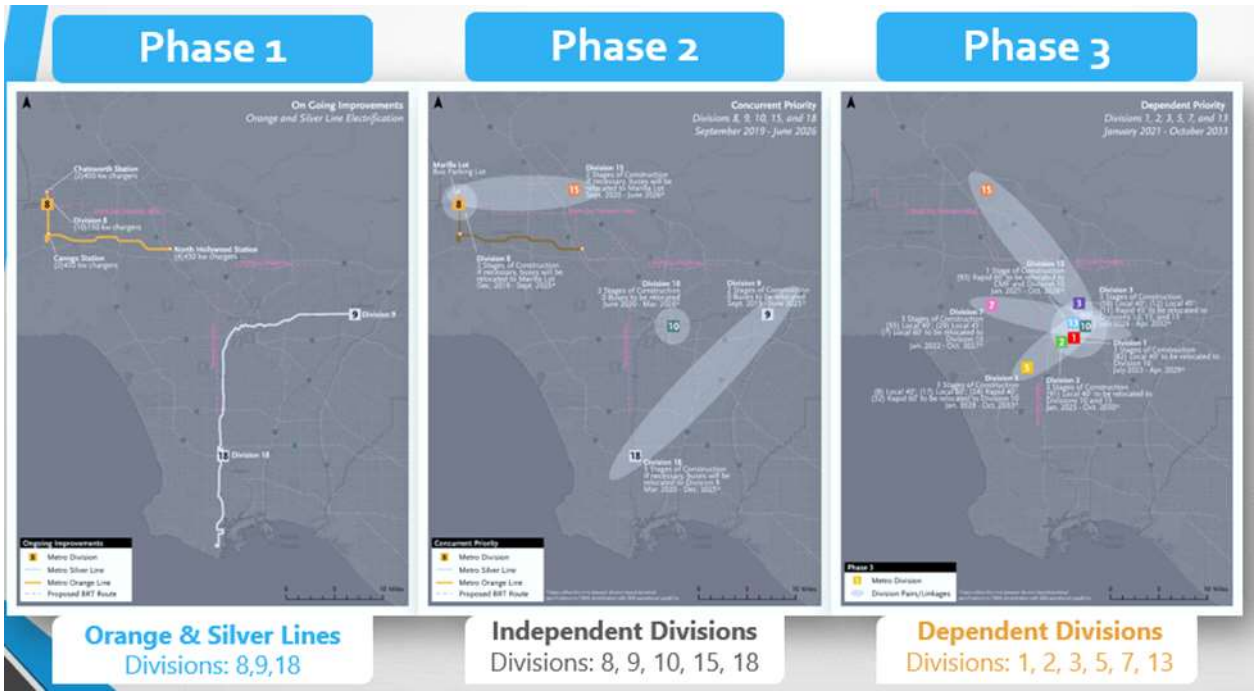
The $50.0M LOP budget recommendation for charging infrastructure will be used to fund the Metro facility conversion plan to install depot chargers, at Division 9 in El Monte and add en-route chargers along the J Line (Silver). Approval to

establish the infrastructure LOP will enable staff to develop funding for the J Line (Silver) ZEBs for FY23.

Recommendation B: Approve Amending FY22 Budget

Approval of Recommendation B allows for the addition of $34.0M in FY22 budget for this program. At this time, the proposed FY22 Budget is constrained which limits the completion of J Line (Silver) Charging infrastructure installations in phase 1 locations. Additional FY22 funds are needed to progress infrastructure efforts and fully equip J Line (Silver) with Zero Emission Bus operations.

Figure 2 - ZEB Master Plan Phases



Phase 1: $444.2M Phase 2: $246.9M (DIV. 10, 15) Phase 3: $765.8M

Preliminary ZEB Program Grand Total: $1,456.9M

Recommendation C: Authorization for Alternative Delivery Methods

Metro may use this procurement authority to explore alternative delivery approaches for the ZEB program. To date, Metro has received two Unsolicited Proposals from private sector companies that are interested in a delivery model that would combine design, construction, vehicle delivery, charger management, energy management, and financing services. Metro staff have determined that such a model would provide value to the broader ZEB program and ensure Metro can provide the best possible transit service. Staff are now thoroughly evaluating all elements of the delivery model and developing a procurement that would guarantee infrastructure performance, minimize future operational needs, be flexible and scalable, provide cost certainty, and deliver other benefits to the ZEB program.

It is in the public's and Metro's best interest to utilize the best value competitive negotiation method rather than a sealed bid process to consider factors other than price in the award of contracts for vehicles as allowed under Public Utilities Code 130242. The best value competitive negotiation process allows consideration of factors other than price that could not be adequately quantified or considered in low bid procurement.

By establishing explicit factors that identify Metro's definition of Best Value, the solicitation can use important evaluation criteria to augment price considerations such as past performance related to schedule adherence, quality, reliability, maintainability and vehicle performance.

Equity Assessment

As presented on March 21, 2021, Executive Management Committee Meeting, the adoption of ZEB program includes a strategy to prioritize Disadvantage Communities (DACs). Specifically, 73 percent of Metro's divisions are located in communities that are classified as "disadvantaged" (CalEnviroScreen). The conversion of existing CNG operations to BEB operations will directly benefit the communities in the vicinity of these divisions by way of reduction in noise and local emissions. These divisions also serve multiple routes that traverse multiple DACs across Los Angeles County. Since ZEB's cannot operate unless infrastructure is in place to charge buses, Metro's transition largely focuses on division electrification and not individual routes. Once divisions are electrified, buses will be strategically deployed to routes and service blocks with a priority of DAC. In addition to prioritizing DACs, Metro staff has completed the Rapid Equity Assessment tool and preliminary information suggests that a significant ratio of the ZEB program will benefit DACs and Equity Focused Communities (EFCs) by a reduction in noise, local emissions and result in a better quality of life.

Failure to implement this action will not only result in a non-compliance with a State requirement but will continue to impact DACs and EFCs, which are most frequently exposed to harmful emissions, and pollutants that result in negative health outcomes. Metro will continue to work with the Office of Equity and Race to mitigate any concerns or negative consequences that are identified with the implementation of this decision. Metro will continue to use the Rapid Equity Assessment tool if a change is required to address equitable outcomes during all program phases.

Conclusion

Ultimately, Metro is leading the nation in the largest and most aggressive BEB fleet conversion. The technology for battery capacity and charging infrastructure are embryonic with anticipated cost volatility as technology evolves. Approval of these recommendations allows Metro to continue with ZEB implementation while maintaining responsible fiscal flexibility when service demands, and financial conditions improve.

DETERMINATION OF SAFETY IMPACT

Board approval of these recommendations will permit the expedient transition to Zero Emission Bus operation. This will directly contribute to improving the air quality in the Los Angeles basin.

FINANCIAL IMPACT

Approval of recommendation A ($50.0M LOP) and B ($34.0 FY22 budget amendment) will identify

available funding to enact Phase 1 activities. The funds associated with the FY22 budget amendment will enable staff to continue procurement activities, design and construction activities. Financial planning for future fund applications will be more clearly defined and adopted as part of the planned 2021 Short-Range Transportation Plan (SRTP). Staff will program future State and Federal funding into the SRTP, and when made available, pursue grant applications like Low Carbon Transit Operations Program (LCTOP) and Transit and Intercity Rail Capital Program (TIRCP) to accumulate funding resources to support the Board's 2030 motion for the ZEB Program.

The Phase I Infrastructure projects will require over $444.0M in the next five (5) years to complete. Additionally, staff has reviewed the 2030 ZEB program goal compared to average annual bus acquisition budgets. Historically bus acquisitions alone average $190.0M per year; however, this program requires a $350M average per year to enact the $3.5B plan commencing from FY20. The ZEB Program carries a premium price tag for BEB's to replace CNG buses. It is an operational necessity that charging infrastructure be installed in advance of bus deliveries to charge BEB's during service. The ZEB Program funding needs are out of balance by $160M per year on average for the next five (5) years.

Multi-Year Impact

Approval of funding for the recommended project LOPs will result in the incorporation of the cost of this program into the SRTP financial forecast. Staff will identify available funding for the cost of the charging infrastructure, en-route charging, and BEBs. As the cost, schedule, and implementation plan are updated, the funding plan will be revised.

Future State or Federal Funding

Metro's Government Relations team is working with members of the House, Senate and the Biden/Harris Administration to ensure that ample funds are provided for these initiatives. Specifically and consistent with our Board-approved 2021 Federal Legislative Program, Metro is actively working to support the American Jobs Plan that was unveiled earlier this year in Pittsburgh, Pennsylvania by President Biden. The American Jobs Plan seeks to provide over $160B for vehicle electrification. The plan, as outlined by the Biden/Harris Administration to congressional stakeholders, would include $15B for vehicle electrification, $100B for consumer rebates for the purchase of electric vehicles, $25B for zero emission transit vehicles and $20B for school bus electrification.

At the same time, Metro is working with the Los Angeles County Congressional Delegation to ensure that the multi-year surface transportation authorization bill that Congress is seeking to adopt this year to replace the FAST Act - includes billions of dollars for charging infrastructure and electric bus procurements. Government Relations staff are encouraged that both the House Committee on Transportation and Infrastructure and the Senate Banking Committee (which has jurisdiction over the transit title) have indicated a strong interest in providing robust funding for zero emission transit vehicles. While the final version of these bills have yet to be unveiled, staff will remain engaged - consistent with Board policy - to ensure that the final surface transportation authorization bill signed into law by President Biden includes funds to back our charging infrastructure and electric bus procurements.

Impact to Budget

Upon approval, the recommendations will be funded with a combination of Federal, State and Local

funds including Green Funds. Staff will continue to pursue additional grants and funding opportunities such as FAST Act, annual federal 5307 discretionary funding. If there is a Federal funding award shortfall after receiving funding sources like American Jobs Plan, alternative grant funding options will be employed to close the gap. Other funding such as utility rebates and the like will be applied as they materialize.
Since this is a multi-year effort, the Cost Center Manager, Project Manager and Chief of Operations will be responsible for future fiscal year budgeting.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

This item supports the following Strategic Goals: 1) Provide high-quality mobility options that enable people to spend less time traveling, 2) Provide responsive, accountable, and trustworthy governance within the Metro organization, 3) Enhance communities and lives through mobility and access to opportunity, and 4) Transform LA County through regional collaboration and national leadership.

ALTERNATIVES CONSIDERED

Staff considered several alternatives, including:

- Request approval to complete the conversion of those divisions supporting the Orange and Silver Lines, Divisions 8, 9, and 18, with an associated preliminary LOP of $994M for the phase 1 infrastructure and 500 battery electric buses. To date, the work at those divisions has been limited to only what is needed to convert those BRT's to zero emission operations. Approval of this recommendation would allow for the conversion that had been started at those divisions to be fully completed. Once the conversion is completed, Operations would gain valuable experience operating zero emission service from three divisions.
- Request approval to complete the conversion of those divisions, including battery electric buses, supporting the J Line (Silver), Divisions 9 and 18, with an associated LOP of approximately $556M.
- Request approval to complete the conversion of Division 9, including battery electric buses, with an associated LOP of approximately $266M.

These alternatives were not considered at this time as funding constraints to the overall agency budget and financial plan makes alternatives unfeasible in the near term. Staff will utilize a small portion of the proposed $50M recommendation to investigate other means to bridge the funding gap to meet the 2030 goal.

NEXT STEPS

Upon approval of the recommendations, staff will commence specification updates and advanced conceptual design efforts to produce solicitation documents. Staff will work within the authorized Life of Project budgets to enact the recommendations. The Board shall be updated with any significant cost or schedule impacts to the projects as they progress. Contract award authorization remains with the Board and it shall be presented for contract award approval(s) as individual contractors / vendors are selected.

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Stephanie N. Wiggins
Chief Executive Officer

ITEM 43 & 44

ZEB Program

Charging Infrastructure & Electric Bus Procurements

Metro

Executive Management Committee
June 17, 2021

Introduction

Mission:
Transition to Zero Emission Bus Operations by 2030 in accordance with July 2017 Metro Board Motion 2017-0524

Background:

Three Phase Approach has been developed

- Phase 1 – Electrify BRT's
- Phase 2 – Electrify Divisions without space impacts
- Phase 3 – Electrify All Remaining Divisions

Considerations:

- Implementation requires approval of multi-year programmatic strategy & funding
- Current LRTP & SRTP include CNG replacement, however Battery Electric Bus procurement Charging infrastructure are excluded

Metro

Recommendations

A. Approve Life of Project (LOP) budget of $50M commencing FY22 for Phase 1 for the Charging Infrastructure Program for the Silver Line

B. Approve FY22 Budget amendment for charging Infrastructure

C. Consider that authorization of the use of alternative delivery methods, pursuant to PUC Code Section 130242, will achieve integration of design, project works, and other components in an efficient manner at Metro bus facilities

Approval of the above recommendations ensures the ZEB Program:

- 2030 Resolution remains a priority
- Focus on completing the Phase 1 Charging Infrastructure
- Allows for the addition of $34M in FY22 funding for this program
- Metro may use this procurement to explore alternative delivery approaches

Metro

Phase 1: BRT Conversion Status

Orange (G) Line:

- Complete

Silver (J) Line:

- Contract executed for sixty (60) battery electric buses
- Board approved change order to BTD for Division 9 depot chargers
- Board approved SCE contract to upgrade utilities
- Still Required:
  - Complete design from 30%
  - Construction contract for Division 9 Depot charger installations
  - Construction contracts for en-route chargers and Installations at El Monte and Harbor Gateway Transit Centers

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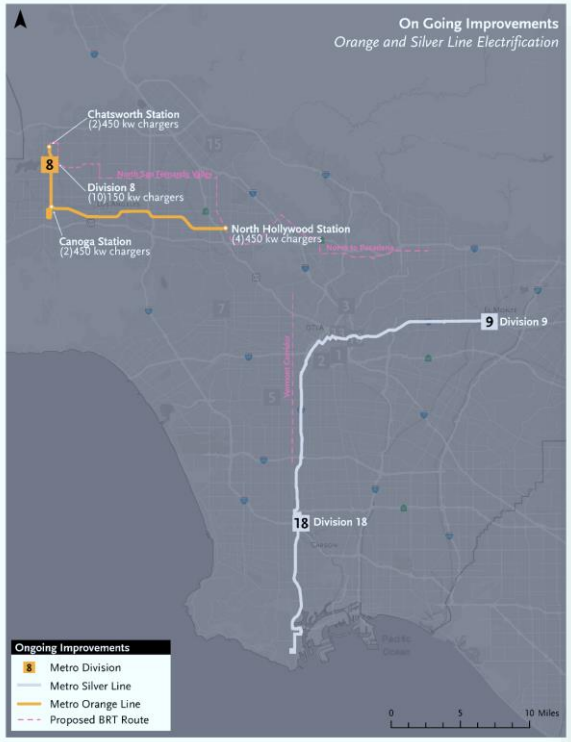
Transition Phasing

Phase 1



Orange & Silver Lines
Divisions: 8,9,18

Phase 2

Independent Divisions
Divisions: 8, 9, 10, 15, 18

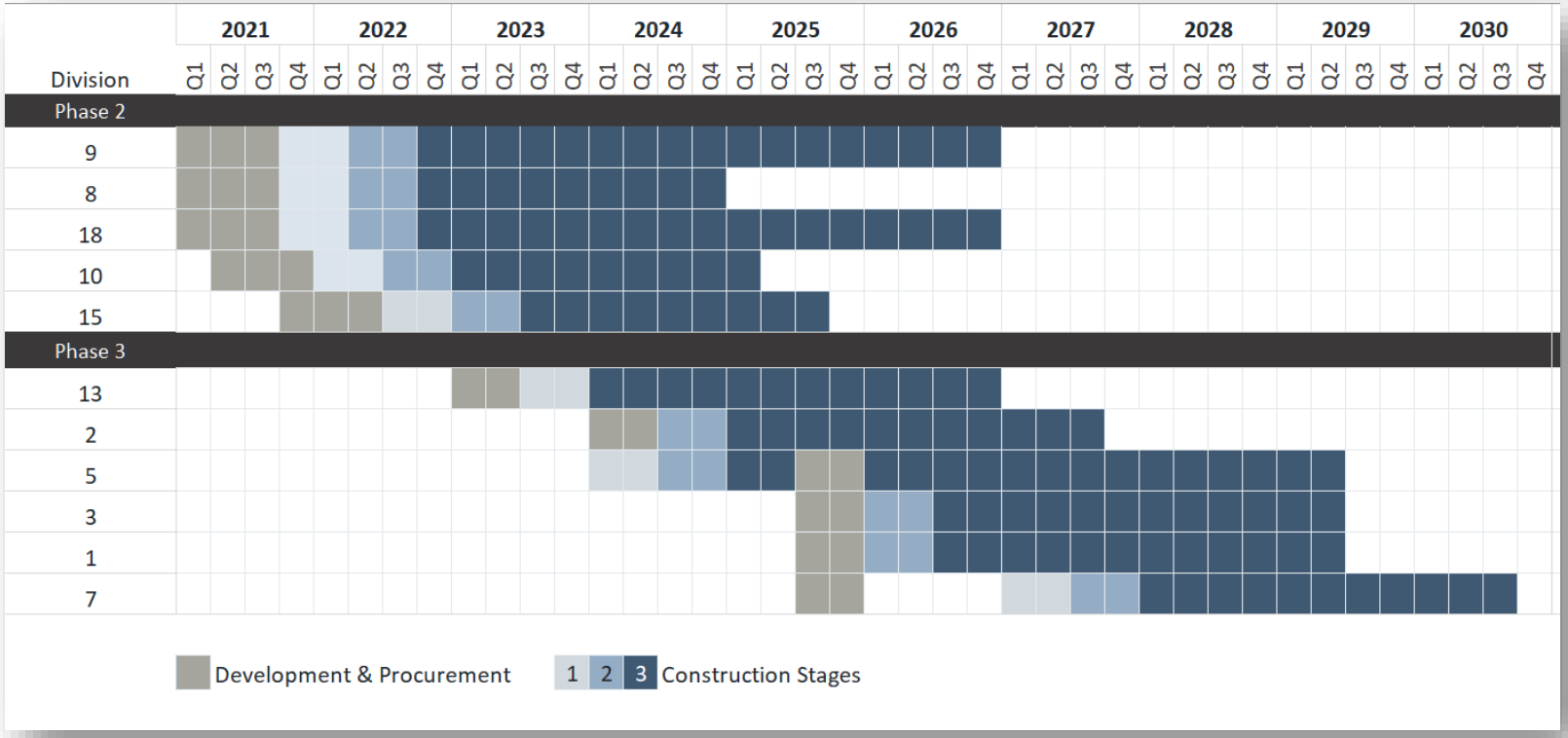
Phase 3

Dependent Divisions
Divisions: 1, 2, 3, 5, 7, 13

Metro

Infrastructure Phasing Schedule 2030

Division Modification and En-route Charger Installation Schedule



Bus deliveries are timed with completion of construction stages and en-route charging installations.

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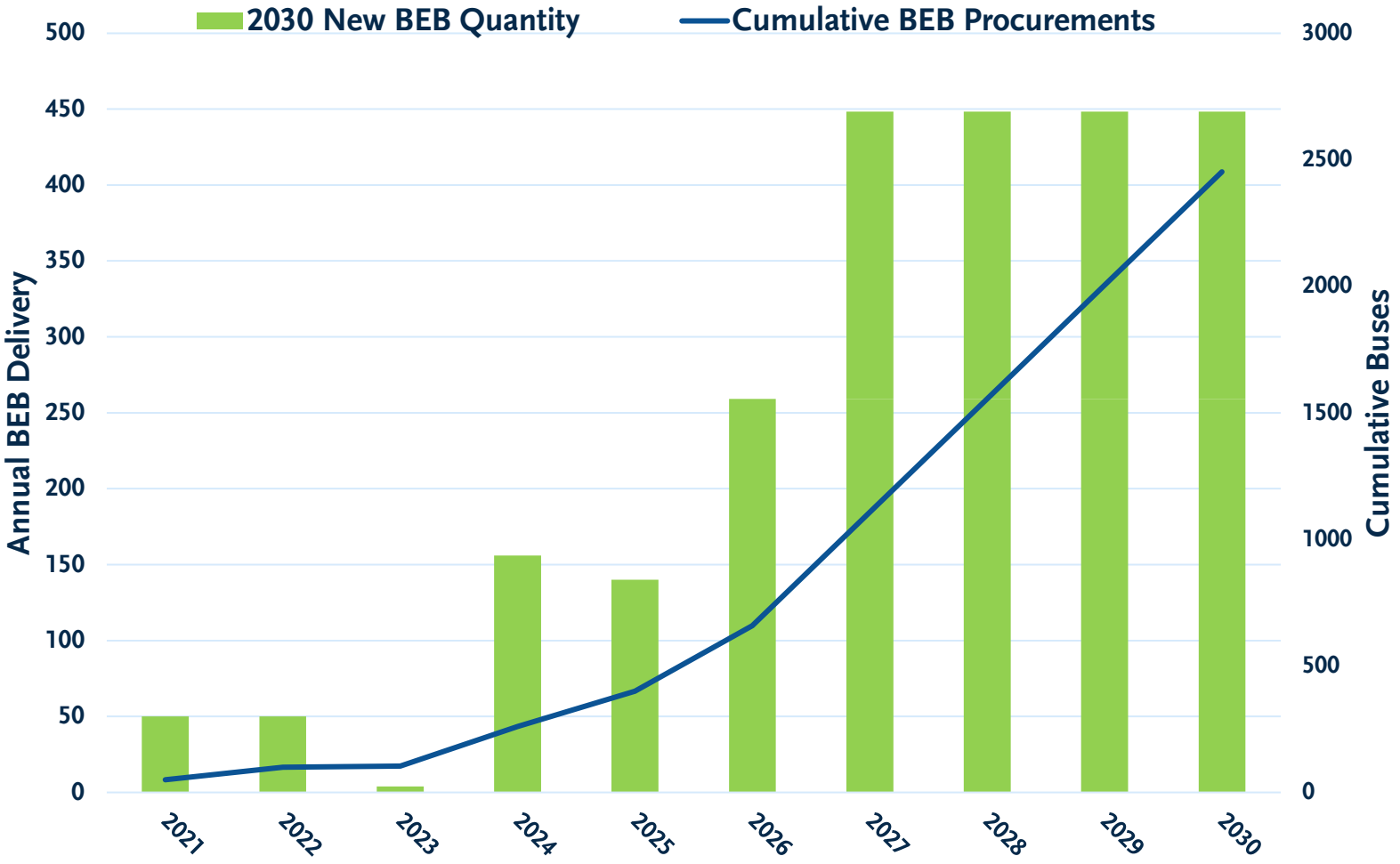
Bus Delivery Schedule 2030



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Costs by Division

Division	Bus Qty	Infrastructure		En-Route	Buses	Total[2]
		Min[1]	Max[2]			
1	171	$70.9M	$100.1M	$14.2M	$150.8M	$265.1M
2	169	$67.3M	$95.1M	$16.8M	$149.0M	$261.0M
3	151	$62.6M	$88.4M	$13.0M	$133.2M	$234.6M
5	167	$66.5M	$94.0M	$8.4M	$147.3M	$249.6M
7	240	$101.4M	$143.3M	$11.1M	$211.6M	$366.1M
8	358	$134.0M	$189.3M	$16.7M	$315.7M	$521.7M
9	176	$65.9M	$93.1M	$17.8M	$155.2M	$266.1M
10	175	$65.5M	$92.5M	$4.5M	$154.3M	$251.4M
13	316	$123.4M	$174.3M	$7.1M	$278.7M	$460.1M
15	245	$93.7M	$132.3M	$17.6M	$216.0M	$366.0M
18	185	$70.7M	$99.9M	$27.4M	$163.1M	$290.4M
Totals	**2,353**	**$921.9M**	**$1.30B**	**$154.7M**	**$2.07B**	**$3.53B**

1. Baseline BEB Infrastructure Only
2. Baseline Infrastructure + On-Site Storage + Solar

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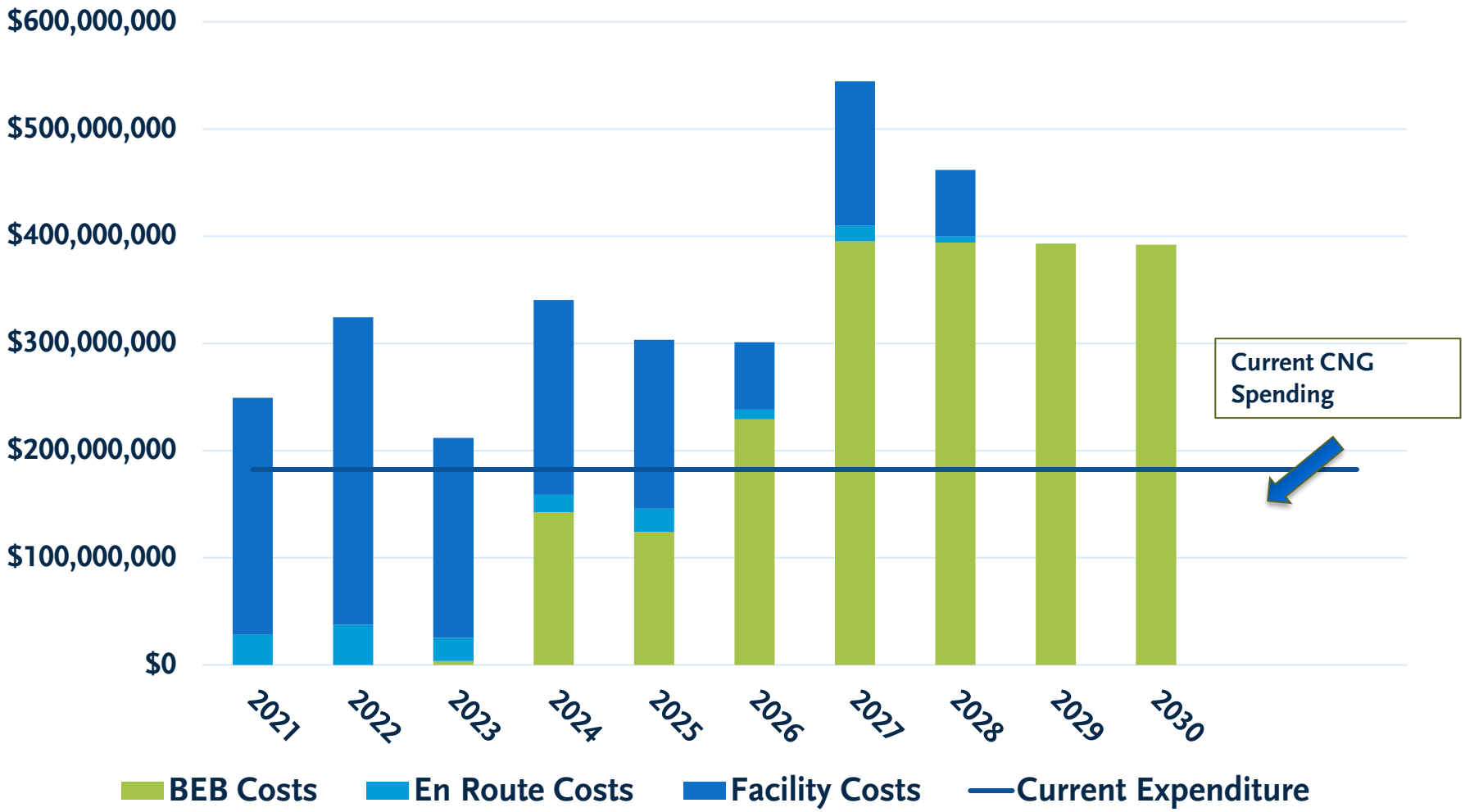
Annual Cashflow vs. Current Spending



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Phase 1: Orange Line

OEM	Length	Base Order (Option)	Battery Capacity (kW-hr)	Budget	Charging Strategy	
					Depot	En-Route
New Flyer	60’	40 (65)	320	$80,003,282	J1772 CCS1 (150 kW)	SAE 3105-1 (450 -600 kW)
BYD	60’	5	610	$8,109,500		

Metro

Phase 1: Silver Line

- Staff has identified an optimum charging strategy
- May 2021 Metro Board approved contract with SCE to upgrade service at D9 & El Monte Transit Center
- May 2021 Metro Board approved change order with BYD for depot chargers
- Testing five of sixty (60) base order 40' BYD pilot buses for Silver only; production to start upon proof of design
- June 2021- Request Board approval for $50M LOP to complete electrification of Silver Line:
  - Complete construction design
  - Install depot chargers
  - Procure and install en-route chargers

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Next Steps

- June 2021 - Request for Board approval of LOP for $50M to complete electrification of the Silver Line
  - Commence specification updates and advanced conceptual design efforts to produce solicitation documents for the charging infrastructure program for the Silver Line

- June 2021 - Report outlines the approach to convert Metro's CNG bus operations to zero emission by 2030
  - Continue to pursue competitive grants, identify additional funding sources, and incorporate the 2030 Zero Emissions Bus program in the SRTP and LRTP

Metro

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

Metro

Board Report

File #: 2021-0334, **File Type:** Oral Report / Presentation **Agenda Number:** 45.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: TRAFFIC REDUCTION STUDY

ACTION: ORAL REPORT

RECOMMENDATION

RECEIVE oral report on Traffic Reduction Study (formerly named the Congestion Pricing Feasibility Study).

ATTACHMENTS

Attachment A - Presentation on the Traffic Reduction Study

Prepared by: Emma Huang, Principal Transportation Planner, Office of Extraordinary Innovation, (213) 660-9115
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Reviewed by: Joshua Schank, Chief Innovation Officer, (213) 418-3345

Stephanie N. Wiggins
Chief Executive Officer

Executive Management Committee
June 17, 2021

We're studying ways to reduce traffic.

TRAFFIC REDUCTION STUDY

Metro

Traffic Reduction Pilot Program Framework

Goals of a pilot program

- Reduce traffic through congestion pricing, and
- Provide more high-quality options for getting around

We're striving for these additional positive outcomes:

Support environmental and economic justice

Improve public health and safety

Improve the economy

Re-invest net revenues in communities served/affected

Metro

Potential Economic Outcomes

What the initial data say about

- **Travel Delay**
- **Jobs Access**

Our Next Steps

Assess:

- Jobs access to key destinations and by mode
- Deliveries and freight
- Net revenue potential

Identify reinvestment opportunities:

- Transportation Improvements

Metro

Potential Environmental & Economic Justice Outcomes

What the initial data say about

- **Air Quality**
- **Transit Ridership**

Our Next Steps

Assess:

- Air quality in EFCs
- Household transportation budget
- Transit performance

Identify reinvestment opportunities:

- Low-income assistance
- Transportation improvements

Metro

Potential Public Health and Safety Outcomes

What the initial data say about

- **VMT**
- **Air Quality**
- **Active Transportation**

Our Next Steps

Assess:

- Air quality in EFCs
- Street safety needs
- Spillover traffic

Identify reinvestment opportunities:

- Street safety improvements
- Mitigate spillover traffic

Next Steps

Share what we've learned from the initial technical analysis

Conduct stakeholder and public engagement to:

- Prioritize metrics, outcomes, tradeoffs
- Identify strategies to address impacts to low-income and vulnerable communities
- Determine re-investments and mobility improvements to address burdens and increase benefits
- Identify feasible concepts to carry to the next stage of study

In Order to Inform

- Equity assessment
- Income analysis
- Financial plan development
- Transportation improvements analysis

Metro

File #: 2021-0216, **File Type:** Plan **Agenda Number:** 46.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: COORDINATED PUBLIC TRANSIT - HUMAN SERVICES TRANSPORTATION PLAN FOR LOS ANGELES COUNTY

ACTION: ADOPT COORDINATED PLAN FOR LOS ANGELES COUNTY

RECOMMENDATION

CONSIDER adopting the locally developed 2021-2024 Coordinated Public Transit - Human Services Plan for Los Angeles County to comply with the requirements of the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) as reauthorized by the Fixing America's Surface Transportation Act (FAST Act) of 2015.

ISSUE

Metro is the Designated Recipient of Federal Transit Administration (FTA) Section 5310 funds in urbanized areas of Los Angeles County (about $9 million per year) and is responsible for the planning, programming, distribution, and management of these funds. To fulfill the Designated Recipient obligations required by the FTA, including awarding Section 5310 funds to eligible projects, the locally developed 2021-2024 Coordinated Public Transit-Human Services Transportation Plan for Los Angeles County ("Coordinated Plan") must be adopted. It will update and replace the 2016-2019 Coordinated Plan that was approved by the Board in 2015.

DISCUSSION

The Coordinated Plan addresses the specific mobility needs of seniors and persons with disabilities in Los Angeles County. These individuals represent an increasing share of the County population, and for many the traditional fixed-route public transit service is not effective or appropriate. Human services transportation providers throughout the County fill this gap by operating paratransit vehicles and delivering other transportation services. The Coordinated Plan evaluates the existing transportation services provided by human service agencies and includes projects and programs for future implementation that would improve mobility for the target population in the County.

Significant funding for human services transportation in the County comes from the FTA Section 5310 Program. Metro is the Designated Recipient of Section 5310 funds for the three urbanized areas of Los Angeles County and receives about $9 million per year. The goal of the Section 5310 Program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation

services and expanding transportation mobility options. This program requires that projects receiving Section 5310 funding derive from a Coordinated Plan which must be developed with the involvement of seniors and persons with disabilities.

The locally developed 2021-2024 Coordinated Plan will update and replace the 2016-2019 Coordinated Plan that was approved by the Board in 2015. The Coordinated Plan does the following:

- Assesses transportation services provided for target population groups.
- Considers and evaluates current and future target population transportation needs.
- Develops goals and strategies to address gaps in existing transportation services.
- Prioritizes projects and programs that will improve mobility for target population groups.
- Allows Metro to fulfill its responsibilities as the Designated Recipient for Section 5310 funds.

Outreach

To engage stakeholders and assess mobility needs and service gaps in the County, an outreach process was developed to target participation geographically and by population group. As part of this process, multiple outreach efforts to interact with stakeholders and gather information on transportation needs and preferences were conducted, including:

- Three virtual focus group meetings.
- Distribution of 7,000 surveys and project concept forms to individuals associated with human service agencies.
- Updates to Metro's stakeholder database.
- Dedicated helpline and Metro email address.
- Updates to the Metro Coordinated Plan website.
- Bilingual eblast notifications of the focus group meetings.
- Follow-up phone calls and email reminders of the focus group meetings and surveys.
- Presentation to target population advocacy groups and human service agencies.

For the release of the draft Coordinated Plan which was available for public review and comment from March 19, 2021 through April 19, 2021, additional outreach efforts were performed. These included eblasts, distribution of printed copies, digital and social media, mailings, toolkits to over 150 organizations, 5,000+ bilingual announcements on Metro buses, and a virtual community meeting to present an overview of the Coordinated Plan and receive comments from the public. In addition to the community meeting, two stakeholder briefings were held to provide an opportunity for interested organizations to engage with Metro in a more focused setting. Metro also made additional presentations, provided materials, and attended meetings with advisory committees.

Goals and Strategies

Building on the 2016-2019 Coordinated Plan, regional and local plans, and input received throughout the outreach effort, the following goals and strategies have been identified to address the mobility needs and service gaps of Los Angeles County's target populations:

- Goal 1: Fund Mobility Options - Sustain, fund, and continue to expand public, private and other transportation services in LA County.
- Goal 2: Address Mobility Gaps - Improve coordination between public transportation and human services transportation to address mobility gaps.
- Goal 3: Provide Support Services - Provide support services to enable access for target populations.
- Goal 4: Promote and Improve Information Portals - Promote, improve and expand multi-cultural information portals on mobility options.
- Goal 5: Enhance Accountable Performance Monitoring Systems - Enhance customer feedback and accountable performance monitoring systems to ensure that high quality service is maintained.
- Goal 6: Provide COVID Support Services - Support transportation providers in serving target populations during the COVID-19 pandemic.

Given trends identified in the assessment of transportation services, input received during the public participation process, and these goals and strategies, the highest priority projects and programs have been established. These projects and programs serve to guide private and public transportation operators in planning their own investment approaches and establishes the list of eligible activities under the Section 5310 program. Over the life of the Coordinated Plan and consistent with past practice, Metro anticipates allocating a portion of Section 5310 funds to a competitive solicitation process to fund projects that further the goals of the Section 5310 program. Metro will use the Coordinated Plan as a key resource for evaluating project applications and considering future funding awards.

Equity Platform

Adoption of the Coordinated Plan supports Equity Platforms two (Listen and Learn) and three (Focus and Deliver). The Coordinated Plan was developed through a comprehensive process that included participation by seniors, individuals with disabilities, low-income individuals, veterans, representatives of public private and non-profit transportation and human service providers, and other members of the public. Further, the Coordinated Plan identifies the highest priority projects and programs that will serve to guide private and public transportation operators in planning their own investment approaches and establishes the list of eligible activities under the Section 5310 program.

DETERMINATION OF SAFETY IMPACT

Adoption of the Coordinated Plan will have no impact on safety.

FINANCIAL IMPACT

Adoption of the Coordinated Plan will have no financial impact.

Impact to Budget

Preparation of the Coordinated Plan is an administrative activity funded by federal program administration funds that are only eligible for this purpose. No other Metro funds will be required.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Adoption of the Coordinated Plan supports the following goals of the Metro's Vision 2028 Strategic Plan:

Goal 1: Provide high-quality mobility options that enable people to spend less time travelling by developing goals and strategies to address gaps in existing transportation services.

Goal 3: Enhance communities and lives through mobility and access to opportunity by prioritizing projects and programs that will improve mobility for target population groups.

ALTERNATIVES CONSIDERED

The Board may choose not to adopt the Coordinated Public Transit-Human Services Transportation Plan for Los Angeles County. Staff does not recommend this alternative because Metro will fail to comply with the requirements of MAP-21 and the FAST Act and become ineligible to receive future FTA Section 5310 Grant Program funds.

NEXT STEPS

Upon Board adoption, we will submit the Coordinated Plan to the FTA as required.

ATTACHMENTS

Attachment A - Coordinated Public Transit - Human Services Transportation Plan 2021-2024

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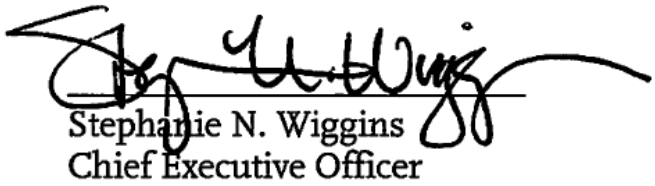


Stephanie N. Wiggins
Chief Executive Officer

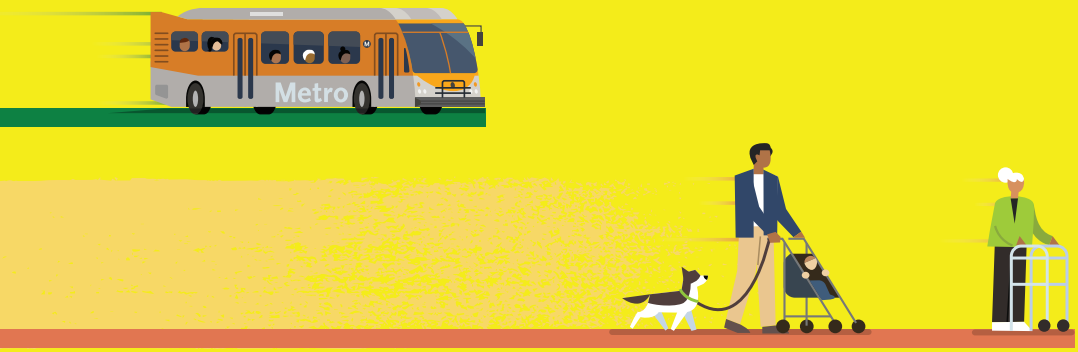
Attachment A

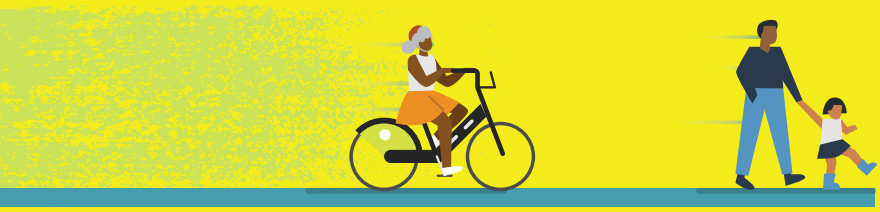
metro.net/cp

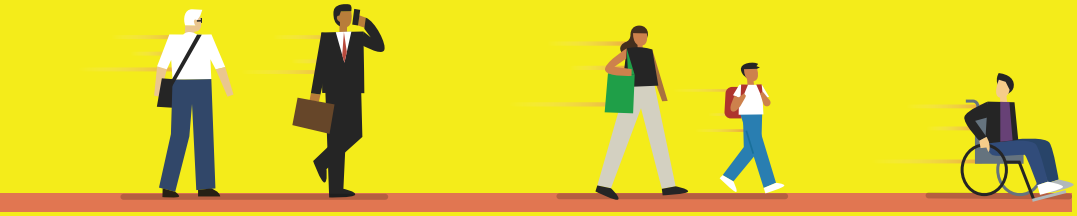
We're ensuring better transit for all.

COORDINATED PUBLIC TRANSIT – HUMAN SERVICES TRANSPORTATION PLAN

2021–2024







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Edna Jimenez
Julie Diaz

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Dennis Brooks

Table of Contents

Tables and Charts

Maps

Executive Summary

Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro) 2021-2024 Coordinated Public Transit-Human Services Transportation Plan (herein referred to as the "Coordinated Plan" or the "Plan") addresses the mobility needs and service gaps in Los Angeles County (LA County) for seniors (over the age of 65), persons with disabilities, low-income individuals, and veterans (herein referred to as "target populations") by providing a framework of strategies and projects to improve service levels through an open stakeholder engagement process.

Significant funding for human services transportation – approximately $9 million per year in LA County – comes from the Federal Transit Administration (FTA) Section 5310 Program. Per the FTA, human services transportation refers to transportation services provided by or on behalf of a human service agency. Human service agencies (herein referred to as "service agency") provide access to services and/or meet the basic, day-to-day mobility needs of transportation-disadvantaged populations, especially individuals with disabilities, seniors, and people with low incomes. This funding is combined with State, Local and private investment funding to deliver transportation services to individuals for whom public transit is insufficient or unavailable. The goal of the Section 5310 program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding transportation mobility options. This program also requires that projects receiving Section 5310 funding derive from a Coordinated Plan, which must be developed with the involvement of seniors and persons with disabilities.

The Plan does the following:

- Assesses transportation services provided for target population groups.
- Considers and evaluates current and future target population transportation needs.
- Develops goals and strategies to address gaps in existing transportation services.
- Prioritizes projects and programs that will improve mobility for target population groups.
- Allows Metro to fulfill its responsibilities as the Designated Recipient for Section 5310 funds in LA County.

Existing Conditions

The LA County Planning Region includes three large Urbanized Areas (UZAs) as defined by the U.S. Census as populations of at least 200,000 persons: the Los Angeles/Long Beach/

Anaheim UZA, Lancaster/Palmdale UZA, and Santa Clarita UZA, as well as Rural and Non-Urbanized Areas defined as populations of less than 50,000 persons. Overall, the LA County Planning Region is around 4,058 square miles and home to about 10.2 million persons, the most populous county in the U.S. Within LA County's three UZAs, there is a significant percentage of seniors and persons with disabilities (23.1 percent) as well as low-income individuals (14.2 percent) and veterans (2.6 percent). Not only does the Los Angeles/Long Beach/Anaheim UZA have the largest senior population in the state of California, it also has the second highest number of seniors nationwide, second only to the New York-Newark, NY-NJ-CT UZA. As such, it is important that LA County's unique mobility needs are addressed.

Within LA County, Metro and other transit providers operate over 7,000 buses and 300 miles of rail. Combined, Metro's local services, 16 municipal bus operators and 42 local operators serve around 1.6 million daily bus passengers while Metro rail and Metrolink trains carry over 340,000 daily passengers.

Mobility Needs and Service Gaps

To engage stakeholders and assess mobility needs and service gaps for all of LA County, a comprehensive outreach process targeted participation geographically and by specific populations. The outreach process included interacting with stakeholders and gathering data and information on transportation needs and preferences from service agencies. Outreach efforts included three virtual focus group meetings, distribution of 7,000 surveys and project concept forms to individuals associated with service agencies, outreach to Metro's stakeholder database, presentations to target population stakeholders, a virtual community meeting, and a 30-day public review and comment period of the Plan.

For the release of the Plan, outreach efforts included a variety of traditional and digital notification methods to research target populations throughout LA County. Notification materials were prepared in both English and Spanish and included eblasts, printed copies at 18 public libraries throughout LA County and Metro Headquarters, digital and social media campaigns, postcard mailings, toolkits sent to over 170 stakeholders, 5,000+ bilingual announcements on Metro buses and an open-forum community meeting. Stakeholders submitted comments via a website comment form, email, helpline and mail-in comment cards.

Focus Groups

Three virtual focus group meetings were conducted in November 2020 to collect input and identify mobility needs and service gaps from target population groups and service agencies. More than 400 LA County targeted stakeholders were invited to participate in these focus group meetings. A total of 62 participants attended via an online platform and phones, representing 36 service agencies and other non-profit, and for-profit organizations across LA County. These included advocacy groups, municipalities, county departments, institutions of higher learning, social services providers, non-profits, private firms, health services providers, residential program providers, and target population riders.

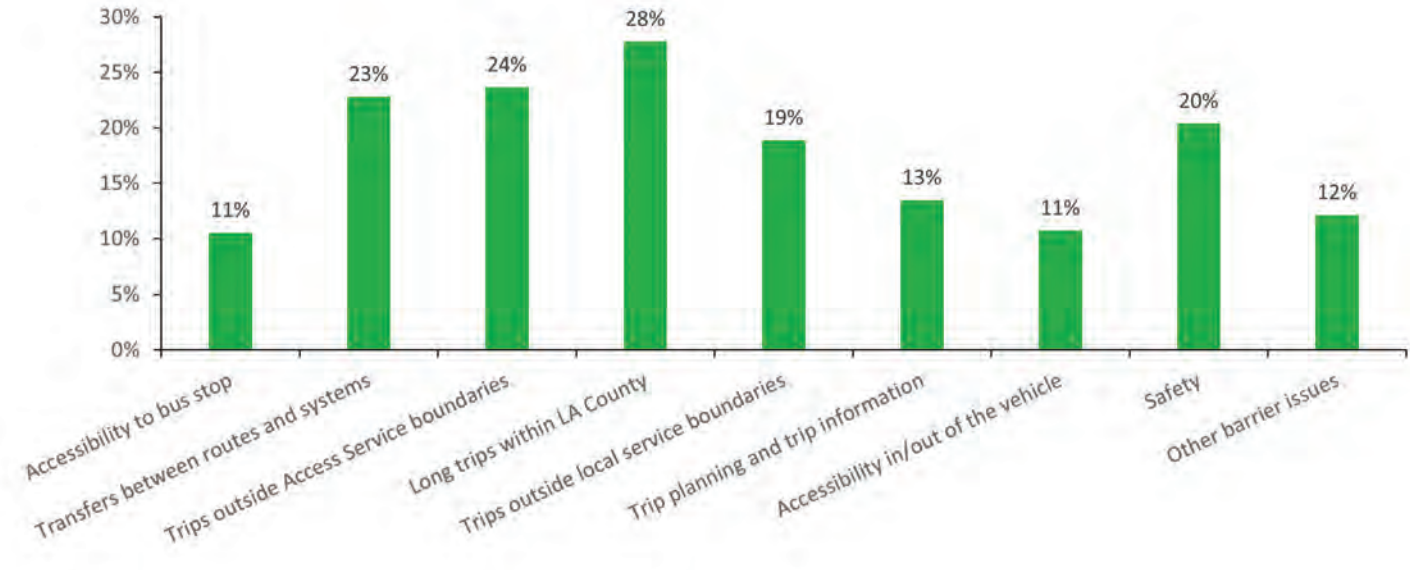
The major mobility needs and themes discussed included: need for expanded services, need for safety measures, access to on-demand transportation services, need for funding after COVID-19, targeted communication, connectivity and reliability, regional mobility management, and information gaps.

Human Service Agency Surveys

Approximately 7,000 surveys were distributed to individuals associated with service agencies throughout LA County. The agency survey identified the anticipated transportation service gaps over the next four years for service agencies region-wide. Agency respondents identified the following key mobility issues:

- **Difficult trip types** – The most difficult trips were medical trips, local doctor or health clinic visits, and essential shopping. Other difficult trips were non-peak hour trips, as well as same-day/immediate (on-demand) trips.
- **Barriers for access/mobility** – The most common response was long trips within LA County, trips outside Access Service boundaries, transfers, and safety areas (see Figure 1).
- **Barriers for agencies** – Common themes agencies described included the need for regional inter-agency cooperation, funding, understaffing, last minute service requests, safety and security, as well as the need for more rolling stock and equipment.
- **COVID-19** – The majority of agencies (around 80 percent) stated that COVID-19 restrictions and protocols had significantly affected delivery of their services. Revising communications and interactions, reduced hours of operation, applying social distancing guidelines, and limiting services to those deemed essential were some of the changes in service described by agencies. Operational and safety barriers were identified as the top two challenges agencies were facing during the COVID-19 restrictions.
- **Barriers using technology** – Issues with technology were discussed to understand challenges in communicating with seniors, persons with disabilities and others. Attaining information and having reliable Wi-Fi connections were the top challenges cited to using technology today.

Figure 1: Access and Mobility Barriers in Transportation Services



Source: 2021-2024 Agency Survey, Question #16, January 2021.

Community Meeting

A virtual community meeting was held in early April 2021 to present an overview of the draft Plan and provide an additional opportunity to receive comments from the public. The draft Plan was available for public review and comment from March 19 to April 19, 2021. With simultaneous Spanish and American Sign Language (ASL) interpretation, along with live closed captioning, the virtual meeting fostered a well-attended and participatory environment with 44 attendees providing comments on the draft Plan. The presentation was recorded and posted on the Metro Coordinated Plan website, and a thank you eblast with a link to the recording, and information on how to submit comments on the draft Plan was also provided to encourage additional participation. An Americans with Disabilities Act (ADA) accessible version of the draft Plan was made available on the website.

The most common topics discussed by attendees at the community meeting were opportunities for communication and outreach to target population groups, and access to on-demand travel services (e.g., Access Services, dial-a-ride, and microtransit). Other comments were related to funding and the availability for accessible transportation options in more suburban communities.

In addition to the community meeting, two stakeholder briefings were held on March 23 and 25, 2021 to provide opportunities for interested organizations to engage with Metro in a more focused setting. Participants included MoveLA, Access Services, PIH Health, Help Me Help You, SCRS-ILC, L.A. Care, Antelope Valley Senior Center, Griffith Park Adult Community Center, Epilepsy Foundation of Los Angeles, and Cal State LA. Metro also delivered additional presentations, attended meetings, and/or provided materials to Metro's advisory committees, including the Local Transit Systems Subcommittee (LTSS), the Aging and Disability Transportation Network (ADTN), and the Accessibility Advisory Committee (AAC).

Goals

Building on the 2016-2019 Coordinated Plan, regional and local plans, and input received throughout the outreach effort, the following goals and strategies have been identified to address the mobility needs and service gaps of LA County's target populations:

> **Goal 1: Fund Mobility Options** – Sustain, fund, and continue to expand public, private and other transportation services in LA County.

> **Goal 2: Address Mobility Gaps** – Improve coordination between public transportation and human services transportation to address mobility gaps.

> **Goal 3: Provide Support Services** – Provide support services to enable access for target populations.

> **Goal 4: Promote and Improve Information Portals** – Promote, improve and expand multi-cultural information portals on mobility options.

> **Goal 5: Enhance Accountable Performance Monitoring Systems** – Enhance customer feedback and accountable performance monitoring systems to ensure that high quality service is maintained.

> **Goal 6: Provide COVID Support Services** – Support transportation providers in serving target populations during and following the COVID-19 pandemic.

Projects and Programs

Project concept forms, previous Section 5310 awards, and projects and programs in earlier Coordinated Plans were identified as potential strategies and projects to address the gaps between current service and needs and opportunities to achieve efficient in-service delivery. These strategies and projects were compared to the goals to determine the overall project and program needs for the Plan. Based on this information 29 project and program types were identified.

Priorities for Implementation

One of the key outcomes of the Plan is a prioritized list of projects and programs to address the mobility needs and service gaps identified for target populations. The Plan's prioritization process, results and recommendations were based on a comparative evaluation of the projects and program types identified under each goal.

The outreach and public input obtained through focus groups, surveys, and project concept forms created the foundation of understanding the critical needs of target populations over the next four years. Coupled with implementation considerations such as availability of resources, feasibility and timeline, evaluation criteria were developed to identify priorities among the 29 projects and program types. The purpose of providing a comparison priority ranking is to identify Metro's priorities for investment towards human services transportation and to guide LA County private and public transportation operators in planning their own investment approaches. Figure 2 on the following page presents the overall prioritization ranking of the project and program types.

Figure 2: Overall Prioritization Ranking

PRIORITY RANKING	PROJECT AND PROGRAM TYPES
Priority 1	Safety protocols and standards
	Safety equipment, supplies and services
	Vehicle and fleet expansion and replacement
	Programs to serve same-day transportation for critical need trips
	Vehicle modifications and upgrades
	Programs to serve inter-county and multi-city trips
	Capacity and service level improvements
	Dial-a-ride services for First/Last Mile access to stations
	New door-through-door transportation
	Pool multi-city agency resources
	Promote senior-friendly vehicle operator training
Priority 2	Expand door-to-door and door-through-door services
	Information, outreach and communication
	Travel training programs
	Mileage reimbursement programs for difficult-to-serve trips
	Real-time transit information
	Integration of mobility management for target groups into transit centers
	Fund local trip coordinators
	Subsidized vanpool/carshare programs
	Programs to serve same-day transportation for non-critical need trips
	First/Last Mile plans and improvements
	Street improvement projects for access to stops and stations
	Subsidies and voucher-based programs
	Multi-language format guides
Priority 3	Find-a-ride trip planner
	Fare integration among operators
	Social media to promote mobility options
	Performance measurement monitoring and reporting program
	Expand satisfaction surveys

Source: Metro 2021

Note: Projects and programs are listed by total scoring value.

Conclusions

Addressing mobility needs and service gaps of target populations requires sustained public participation opportunities to help identify and develop the projects and programs that require investments. This includes supporting existing transportation services, investing in new or expanded transportation services, adapting to changing demographics, responding to unforeseen circumstances related to the COVID-19 pandemic, and continuing our commitment to bridge connections with communities and individuals who have deep relationships and insights into community-specific needs and opportunities.

As identified through a comprehensive public participation process, the highest priorities for service agencies and target population groups are: safety protocols and standards; safety equipment, supplies and services; followed by programs to serve same-day transportation and serving critical need trips. In addition, more traditional capital investment in vehicle and fleet expansion/replacement; upgrading and modifying vehicles; and better mobility management/pooling multi-agency resources are also high on the priority list.

As the Designated Recipient of Section 5310 funds in urbanized areas within LA County, Metro will allocate Section 5310 funds for projects and programs included in this Plan. Given trends identified in the assessment of transportation services, input received during the public participation process, and the goals and strategies developed for the next four years, the highest priority projects and programs have been established. These prioritized projects and programs will guide private and public transportation operators in planning their own investment approaches, and establishes the list of eligible activities under the Section 5310 program. Overall, the Plan is a roadmap to address the mobility needs and service gaps for seniors, persons with disabilities, as well as low-income individuals and veterans in LA County.

Introduction

The 2021-2024 Coordinated Public Transit-Human Services Transportation Plan was developed by Metro to identify the transportation needs of seniors, individuals with disabilities, as well as low-income individuals and veterans. The Plan provides strategies for meeting those needs, and prioritizes transportation services for funding and implementation. The chapters and key sections of the Plan are as follows:

1 – Introduction

What is a Coordinated Plan?

Description of FTA's Section 5310 program

2 – Existing Conditions

Discussing demographic trends

Assessment of transportation services

3 – Mobility Needs and Service Gaps

Key findings from outreach, focus groups and agency surveys

COVID-19 implications

4 – Goals and Strategies

Developing goals of the plan

Description of goals and strategies

5 – Projects and Programs

Identifying Section 5310 eligible project and programs

6 – Prioritization and Implementation

Methodology for prioritization

Evaluation of project and programs

7 – Conclusions

Addressing mobility needs and service gaps

Serving as a guide for LA County priorities

What is a Coordinated Plan?

The Los Angeles County Metropolitan Transportation Authority (Metro) 2021-2024 Coordinated Public Transit-Human Services Transportation Plan (herein referred to as the "Coordinated Plan" or the "Plan") addresses the mobility needs and service gaps in Los Angeles County (LA County) for seniors (over the age of 65), persons with disabilities, low-income individuals, and veterans (herein referred to as "target populations") providing a framework of strategies and projects to improve service levels through an open stakeholder engagement process.

Significant funding for human services transportation – approximately $9 million per year in LA County – comes from the Federal Transit Administration (FTA) Section 5310 Program. Per the FTA, human service transportation refers to transportation services provided by or on behalf of a human service agency. Human service agencies (herein referred to as "service agency") provide access to services and/or meet the basic, day-to-day mobility needs of transportation-disadvantaged populations, especially individuals with disabilities, seniors, and people with low incomes. This funding is combined with State, Local, and private investment funding to deliver transportation services to individuals for whom public transit is insufficient or unavailable. The goal of the Section 5310 program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding transportation mobility options. This program also requires that projects receiving Section 5310 funding derive from a Coordinated Plan, which must be developed with the involvement of seniors and persons with disabilities.

The Plan does the following:

- Assesses transportation services provided for target population groups.
- Considers and evaluates current and future target population transportation needs.
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- Allows Metro to fulfill its responsibilities as the Designated Recipient for Section 5310 funds in LA County.

Federal Transit Administration Section 5310 Program

In June 2014 the FTA published Circular 9070.1G, which guides the administration of the transit assistance program for seniors and individuals with disabilities under 49 U.S.C. 5310. The goal of the Section 5310 Program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding the transportation mobility options available when public transit is insufficient, inappropriate, or unavailable by a) exceeding the requirements of the Americans with Disabilities Act (ADA) of 1990; b) improving access to fixed route service and decreasing reliance on complementary paratransit; and c) providing alternatives to public transportation.

The Section 5310 Program provides operating and capital assistance for public transportation projects. The program requires that these transportation projects derive from a Coordinated Plan, which must be developed with the involvement of seniors and persons with disabilities.

The Section 5310 Program addresses human services transportation needs in LA County by funding eligible capital expenditures that qualify as "Traditional" Section 5310 projects, as well as "Other" projects that are other capital and operating projects. Traditional projects are described as capital projects that are planned, designed, and carried out to meet the specific needs of seniors and persons with disabilities when public transportation is insufficient, unavailable, or inappropriate. A minimum of 55 percent of all Section 5310 funds for a given apportionment area must be obligated to Traditional projects before any Other projects can be funded. This requirement reinforces the importance of strategies that can be supported by funding Traditional Section 5310 projects.

Traditional projects deemed as eligible under the Section 5310 program include the following:

> Acquisition of replacement and expansion rolling stock, including vehicle rehabilitation, preventative maintenance, extended warranties, radios, communication equipment and wheelchair lifts, and ramps and securement devices.

> Purchase and installation of passenger facilities and equipment related to Section 5310-funded vehicles, including benches, shelters, and other passenger amenities.

> Vehicle related equipment to support the delivery of transportation, including computer hardware and software, intelligent transportation systems, and dispatch systems or fare collection systems.

> Lease of equipment when leasing is more cost effective than purchasing equipment.

> Mobility management and coordination programs, including the operation of transportation brokerages and one-stop transportation information centers by telephone or internet, or coordinating individualized travel training and trip planning activities for customers.

> Acquisition of new transportation services under a contract, lease, or other arrangement. Capital and operating costs associated with new contracted services are eligible Traditional capital expenses.

Other projects are described as other capital and operating projects that are i) planned, designed, and carried out to meet the specific needs of seniors and persons with disabilities when public transportation is insufficient, unavailable or inappropriate; ii) exceed the requirements of the Americans with Disability Act (ADA) of 1990; iii) improve access to fixed-route service and decrease reliance on complementary paratransit service; and/or iv) provide alternatives to public transportation to meet the specific needs of seniors and persons with disabilities. Up to 45 percent of all Section 5310 funds for a given apportionment area can be obligated to other projects.

Other projects deemed as eligible under the Section 5310 program include the following:

> Expanding the ¾ mile ADA complementary paratransit service area requirement, expansion of current hours and days of operation, implementing same-day service and assistance beyond the curb, including door-to-door, and door-through-door service.

> Providing "feeder" services for access to bus, rail and transit centers beyond ADA requirements.

> Public transportation alternatives for seniors and persons with disabilities, including mileage reimbursement programs, service provided through accessible taxis and ridesharing companies, vanpool programs supported with accessible vehicles, and vouchers for transportation not provided through public fixed-route or complementary ADA service.

> Accessibility improvements to the fixed-route system, including building an accessible path to a bus or rail stop that is currently inaccessible, curb cuts, sidewalks, accessible pedestrian signals, improved signage or other features.

In compliance with FTA guidance to "establish performance goals to define the level of performance" and to also "establish performance indicators to be used in measuring relevant outputs, service levels, and outcomes," the Plan sets forth goals and strategies to define and establish performance indicators based on:

> An analysis of target populations' socio-economic and demographic data.

> Comprehensive outreach to over 7,000 individuals, including over 3,500 agencies, community groups, service agencies and stakeholders. The service agencies identified currently fund and/or provide human services to target populations in LA County.

> An agency survey to gather information about their operations, estimated number of rides for seniors and individuals with disabilities, and how COVID-19 protocols have changed their services.

> A list of potential Section 5310 eligible concept projects and programs received from service agencies between November 2020 and January 2021.

> Mobility needs and service gaps identified and discussed during three virtual focus groups conducted in November 2020.

> A review of relevant documents, plans, programs, policies, regulations and data sources that address target populations within LA County.

The performance indicators are used in order to fulfill obligations to the FTA and ensure that the implementation of strategies result in outcomes associated with the program.

Metro is the Designated Recipient of Section 5310 funds apportioned for the areas in LA County that are within the urbanized areas of Los Angeles-Long Beach-Anaheim, Lancaster-Palmdale, and Santa Clarita. As the Designated Recipient, Metro allocates the funds for project and programs included in this Plan. Metro will conduct competitive solicitations for proposals to select projects for funding. Metro will also prepare and submit grant applications to the FTA on behalf of all subrecipients approved by the Metro Board of Directors to receive a Section 5310 funding award, and as applicable, on behalf of agencies selected to receive a funding award from other federal subrecipient programs.

Approximately $9 million of Section 5310 funds are available per year for LA County, and every few years Metro allocates these funds utilizing a formula and competitive solicitation process. This Plan sets forth the goals, strategies, eligible activities, and project priorities to provide a baseline for Metro's allocation of these Section 5310 funds in LA County.

Other Metro Funding Opportunities

As described in Metro's 2020 Long Range Transportation Plan (LRTP), Metro administers revenues received from the sales tax measures to local jurisdictions and is the recipient for state and federal funding programs that pass through to local jurisdictions. Per the 2020 LRTP, Metro will allocate an anticipated $38 billion over the next 30 years to the Local Return program with the largest percentage going to support local public transit and dial-a-ride services.

Metro's Section 5310 Program Management Plan describes its policies and procedures for administering and programming transportation funds in LA County. This role includes monitoring and participating in state and federal funding distribution, allocation, and management. State and federal transportation funding is integral to implementing regional, and local transportation programs and projects. Metro's transportation funding webpage provides information and resources on funding management, programming, and opportunities. One resource includes the Metro Funding Sources Guide (Guide) that provides an overview of the funding sources available for transportation in LA County. The Guide is intended to assist the reader in understanding the various funding sources and their eligible uses. This Guide separately presents the three distinct governmental sources of revenue (Local, State, and Federal) by program source, and where appropriate, estimates of the funding available in LA County.

Existing Conditions

This chapter provides an overview of the existing demographic trends and an assessment of transportation services for seniors, persons with disabilities, low-income individuals and veterans.

Building from current U.S. Census information, this chapter describes key characteristics from LA County's large urbanized areas, plus growth trends compared to the previous 2016-2019 Coordinated Plan. The comprehensive transportation services offered to target populations in LA County include fixed-route, paratransit, commuter rail, human services transportation, rideshare/vanpool and private transportation options. An assessment of human services transportation was based on results of an agency survey. By researching LA County's existing services, we can better understand current conditions and how services compare to target populations and their projected growth.

In five years, LA County's senior population increased by **22 percent** and persons with disabilities grew by **94 percent**.

Demographics

Per Metro's 2019 Aging and Disability Transportation Report, one out of eight Angelenos are over 65 years old, and by 2030, this ratio may reach one out of every five. Coupled with the number of persons with disabilities that have almost doubled in the past five years, the percentage of LA County's target population in need of mobility services will outpace the growth in work age adults (age 25-64) by 2040. By 2050, the ratio of seniors to working age adults will reach one senior for every two working adults in LA County. As such, it is important to understand the population growth trends of target populations.

The demographic characteristics of the large Urbanized Areas (UZAs) that comprise the LA County Planning Region includes the Los Angeles/Long Beach/ Anaheim UZA, Lancaster/Palmdale UZA, Santa Clarita UZA, and Rural and Non-Urbanized Areas (see Figure 3). As defined by the U.S. 2010 Census, a large UZA is comprised of at least 200,000 persons; small UZAs have populations between 199,999 and 50,000, and non-urbanized areas have less than 50,000 persons. Information discussed in this section is based on the 2018 American Community Survey (ACS) from the U.S. Census and mobility, equity information provided by Metro in November 2020. The information was analyzed and illustrated at the Census Tract level.

The LA County Region comprises of a land area of about 4,058 square miles and is home to over 10.2 million persons living in 88 incorporated cities as well as the unincorporated areas. As the most populous county in the U.S., the three large UZAs comprised within LA County, is distributed as follows:

> Approximately 9.58 million persons live within the Los Angeles/Long Beach/Anaheim UZA.

> Approximately 389,600 persons live within the Lancaster/ Palmdale UZA.

> Approximately 272,100 persons live within the Santa Clarita UZA.

Not only does the Los Angeles/Long Beach/Anaheim UZA have the largest senior population in the state of California, it also has the second highest number of seniors nationwide, second only to the New York-Newark, NY-NJ-CT UZA.

The rest of the population of LA County lives in non-urbanized, rural areas, primarily located in the North LA County Region surrounding the Lancaster/Palmdale and Santa Clarita UZAs.

Figure 3: Urbanized Areas of the LA County Planning Region

Source: Metro 2020 Decennial Census 2010-2019, Urbanized Areas

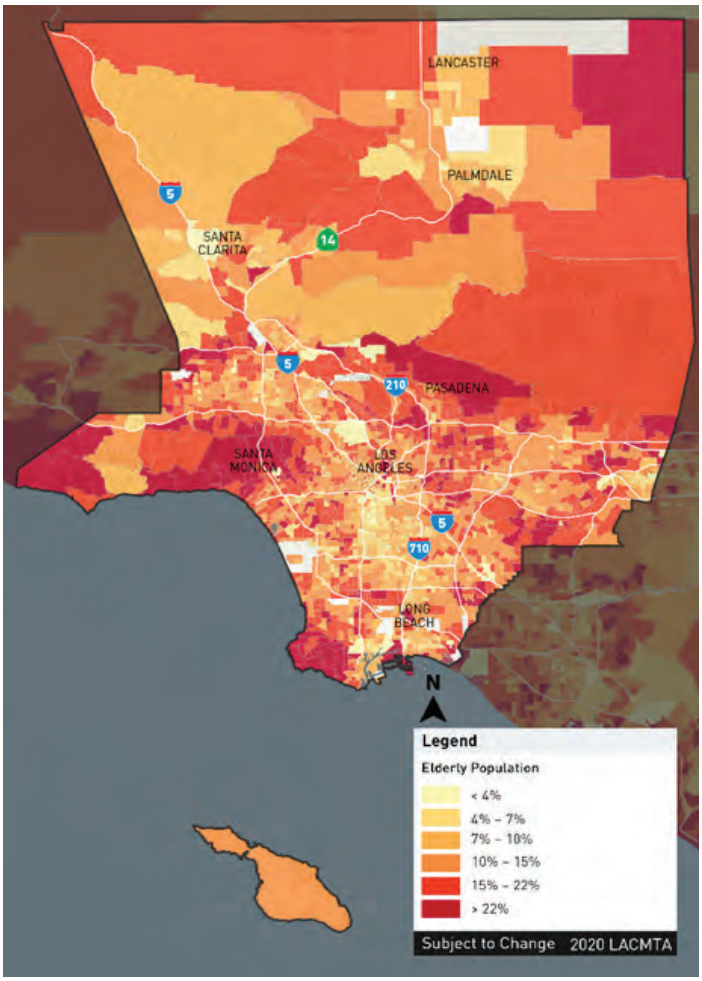
The following summarizes the major findings for the UZAs and Rural and Non-Urbanized Areas of LA County:

> The largest and most populated UZA (9.58 million persons), the Los Angeles/Long Beach/Anaheim UZA includes a significant number of seniors and persons with disabilities (9.8 and 2.5 percent, respectively).

> Although the UZAs of Santa Clarita and Lancaster/ Palmdale have lower overall populations (272,100 and 389,600 persons, respectively), they have higher concentrations of persons with disabilities representing 10.4 percent of the population in the Lancaster/Palmdale UZA and 9.3 percent in the Santa Clarita UZA.

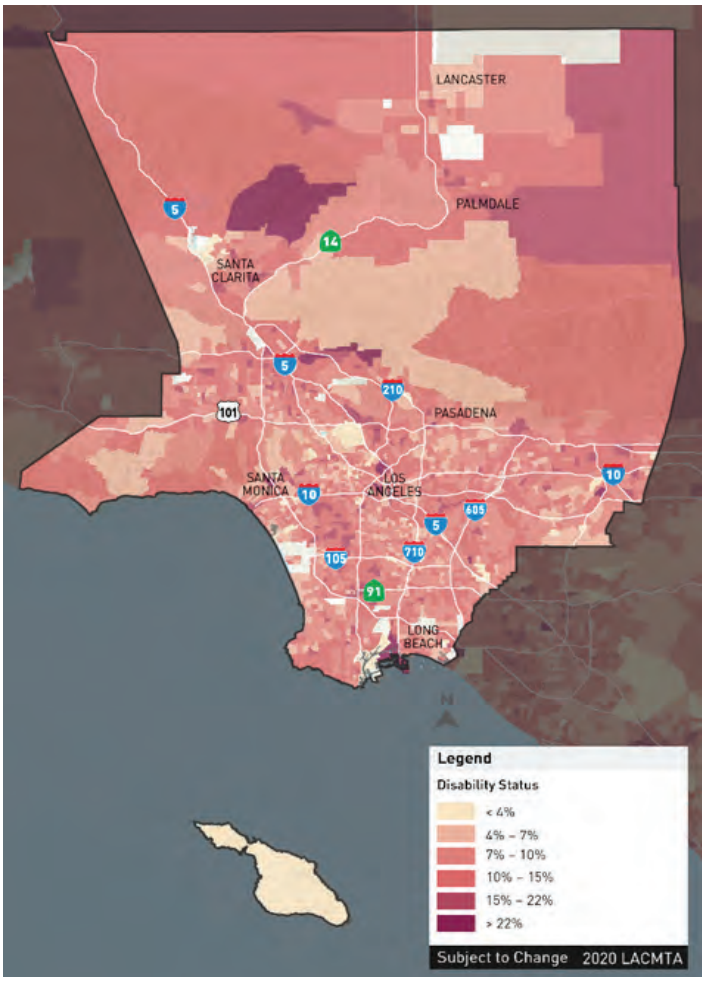
> The Rural and Non-Urbanized Areas within LA County have around 60,000 residents (around 0.6 percent of LA County's total population). Of this population, around 16.1 percent are seniors and 10.7 percent are persons with disabilities.

Figure 4: LA County Senior Population



Source: Metro 2020, ACS 2018 Estimates

Figure 5: LA County Persons with Disabilities Population



Source: Metro 2020, ACS 2018 Estimates

Compared to population characteristics from five years ago, the overall population of LA County has grown, particularly for target populations. According to the California Department of Aging, the percent of seniors in LA County is projected to increase by over 150 percent over a 50 year period (from 2010-2060). The following information is provided to help understand changes in target populations since the 2016-2019 Coordinated Plan:

> The total population of LA County **increased by approximately 3.5 percent** (an increase of around 350,000).

> Of LA County's 10.2 million population, **over 23 percent** are seniors and persons with disabilities (see Figure 4 and Figure 5).

> The percentage of the population classified as seniors significantly grew from 11.2 percent to 13.3 percent, an (increase of about **248,000**).

> The percentage of the population identified as persons with disabilities increased from 5.2 percent to 9.8 percent of LA County's population (increase of about **488,300**).

> Approximately **14.2 percent** of LA County's population are considered **low-income individuals** with reporting incomes at or below the federal poverty level (about 1.43 million individuals).

> Approximately **2.6 percent** of LA County's total population are **veterans** (about 331,640 veterans).

Based on the large share of these target population groups, services for seniors and persons with disabilities are a significant need in LA County. This need is particularly acute in the rural areas of LA County.

Transportation services that serve target populations are important with the number of seniors and persons with disabilities growing at a higher percentage (22.3 and 94.1 percent, respectively) compared to LA County's population as a whole (3.5 percent) (see Figure 6). The next section describes the existing transportation services in LA County that serve these growing target population groups.

Figure 6: 2013-2018 Population Trends in LA County

	TOTAL LA COUNTY	SENIORS	PERSONS WITH DISABILITIES
2013 Population	9.89 million	1.11 million	518,800
2018 Population	10.24 million	1.35 million	1.01 million
Total Growth (2013 to 2018)	350,000	248,000	488,300
Rate of Growth	3.5%	22.3%	94.1%

Source: U.S. Census ACS 2013 and 2018 Estimates

Assessment of Transportation Services

Serving LA County's 10.2 million population, Metro and other LA County transit providers operate over 7,000 buses and 300 miles of rail. In combination with Metro's local services, LA County's 16 municipal bus operators (e.g., city operated buses) and 42 local operators (e.g., neighborhood shuttles) collectively serve around 1.6 million daily bus passengers. Metro and Metrolink trains also carry over 340,000 daily passengers.

Transportation service information from the National Transit Database (NTD) includes an asset inventory and condition assessment used by the FTA in their apportionment formulas including that for the Section 5310 program. Figure 7 on the following page presents information from the NTD for Metro in 2019, the most recent data available. As the NTD only requires mandatory reporting from direct recipients or beneficiaries of Section 5307 and Section 5311 funds, additional information was obtained through the agency survey to document trips provided by service agencies.

LA County's public transit network includes regional and subregional rail, fixed-route bus and demand response paratransit providers. These public systems are augmented by the services provided by agency services that help to fill gaps and hard-to-serve needs in the public network.

Figure 7: Overview of LA County Public Transportation Trips and Vehicle Fleets by Mode

LOS ANGELES COUNTY PUBLIC AND SPECIALIZED TRANSPORTATION						
National Transit Database Reporting, Fiscal Year (FY) 2019						
*2021-2024 Coordinated Plan Agency Survey						
MODES	**Operator Totals**		**Mode Level Totals**			
	Passenger Trips	Vehicles in Max. Service	Passenger Trips	% of Total	Vehicles in Max. Service	% of Total
RAIL	**115,553,701**	**excluded**	**115,553,701**	23.4%	excluded	n/a
Metrolink (Heavy Rail)	12,824,059					
Metro Rail (Heavy Rail - D and B Lines)	43,074,277					
Metro Rail (Light Rail - A,C,L and E Lines)	59,655,365					
BUS - Core Regional Network	**87,364,179**	**2,418**	**371,963,707**	**75.2%**	**3,401**	**37%**
Metro (Bus)	266,887,614	1,918				
Metro (Bus Rapid Transit)	6,860,145	41				
Commuter Bus	1,563,113	112				
Foothill Transit	12,053,307	347				
BUS - Inter-Community and Community Service	**84,599,528**	**983**				
Municipal/City (Bus) 30 cities	84,599,528	983				
Small operators (Bus) - 32 of 48 city programs	n/a	n/a				
PARATRANSIT - Regional Demand Response Services	**4,458,330**	**1,485**	**5,740,137**	**1.2%**	**1,836**	**20%**
Access Services	4,458,330	1,485				
PARATRANSIT - Municipal Demand Response Service	1,281,807	351				
Demand Response	1,281,807	351				
Small Operators DR (Dial-A-Ride)	n/a	n/a				
TOTAL ALL NTD REPORTED PUBLIC TRANSIT			**493,257,545**	**99.7%**	**5,237**	**57%**
Coordinated Plan Agency Survey - Human Services	**1,279,153**	3,880	**1,279,153**	**0.3%**	**3,880**	**43%**
Estimated Contracted Services	1,111,153					
Estimated Directly Operated	156,000					
Estimated # of Volunteered Drivers	12,000					
TOTAL ALL Los Angeles County Transportation Documented			**494,536,698**	**100%**	**9,117**	**100%**

Source: National Transit Database, 2019 Annual Agency Profile.

Notes: N/A (2019 data not available for small operators). Human Services totals exclude survey reported trips and vehicles from city operated services and school districts to avoid double counting.

Fixed-Route Transit

Metro Bus serves as the primary regional fixed-route bus system for LA County. Metro's 119 current bus routes, consisting of Local lines that stop every few blocks, Express lines that travel on freeways, and Metro Rapid lines with fewer stops only at major intersections, connect residents of LA County to travel destinations throughout the region and facilitates transfers with other available transit services. More than 273 million one-way trips were provided on Metro Buses in FY 2019.

Subregional fixed-route transit is provided by Foothill Transit in the San Gabriel and Pomona Valleys, Santa Clarita Transit in the Santa Clarita Valley and Antelope Valley Transit Authority (AVTA) in the Antelope Valley. The Downtown Area Shuttle (DASH) circulates through many communities in the City of Los Angeles, providing frequent and affordable transit to the city's residents. Some local fixed-route bus routes operated by individual cities provide interjurisdictional transit between cities and communities, while others serve as intracity circulators for city residents. In addition to the regional ADA service provided by Access Services, many of LA County's municipal and local operators provide demand response service to seniors and persons with disabilities within their service areas or within city limits. Local paratransit programs generally require lower passenger fares and eligibility criteria that is easier to meet than ADA paratransit.

Regional ADA Paratransit

Metro provides funding for countywide paratransit service for the elderly and people with disabilities via LA County's Access Services. A flexible service, paratransit is a federally mandated right through ADA for persons with disabilities who have difficulty using fixed-route buses and other forms of public transit to meet some or all of their trip needs. Paratransit, typically provided via vans or mini-buses, is on-demand and does not follow fixed routes or schedules. Access Services enables persons with verifiable disabilities to travel within ¾ miles of the nearest fixed-route bus within the greater Los Angeles basin. Access Services annually provides 4.5 million trips to 150,000 eligible riders using a fleet of more than 1,700 vehicles.

Commuter Rail Services

Commuter rail services for the greater Los Angeles regions are provided by Metrolink, a heavy rail system that shares existing train tracks with freight trains and intercity rail lines. Metrolink provides intercity travel across seven rail lines between Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. Metrolink provided almost 12 million passenger trips in FY 2019.

The Metro Rail and Busway system, operated by Metro, is a fixed guideway network of above ground light rail, subway trains, and buses that connect the communities of LA County. These eight lines stretch from the City of Long Beach to Chatsworth in the San Fernando Valley at its furthest points and delivered almost 103 million trips in FY 2019.

Amtrak is a national rail provider that connects America's cities via 21,000 route miles across 46 states, Washington, D.C. and three Canadian provinces. Amtrak operates more than 300 trains each day that travel at speeds up to 150 mph, covering more than 500 destinations. In FY 2019, Amtrak customers took 32.5 million trips, which is an average of almost 90,000 trips per day.

Human Services Transportation

Human services transportation programs provide essential mobility options for the target populations of the Plan, meeting specialized transportation needs and filling gaps in the public transportation network. These specialized programs are often flexible and vary in service design, including door-through-door transportation, subsidization of vouchers and bus passes, mileage reimbursement and volunteer driver programs, public transit travel training, and transit information and mobility management brokerages. Based on the agency survey respondents (which is a sample of all service agency providers), 1.28 million annual passenger trips and 3,880 vehicles were reported.

Transportation for non-emergency trips to medical appointments, pharmacies and dialysis treatment are also provided by L.A. Care and Health Net, the two Medi-Cal funded transportation providers for LA County. These services are available to approximately 30 percent of the county's population and were providing more than 100,000 trips per month before the COVID-19 pandemic.

Rideshare and Vanpool

Metro Micro is Metro's new on-demand rideshare service, offering trips within several zones in LA County. The new service is for short trips and uses small vehicles (seating up to 10 customers). Micro is part of Metro's family of services and has been designed hand-in-hand with Metro's NextGen Bus Plan. The service is meant to be a fast, safe and convenient option for quick trips around town without having to transfer. The service is currently available in portions of Watts, Willowbrook, Long Beach, Carson, South Gate, Lynwood, Downey, Inglewood, El Segundo, Westchester, Playa Del Rey, North Hollywood, Burbank, Compton, Baldwin Park, Rosemead, El Monte and South El Monte, with an average wait time of 10 minutes and a promotional $1.00 fare.

The Metro Vanpool program provides a monthly subsidy of $500 to eligible vanpools traveling at least 30 miles round-trip each day. Vanpool members can create their own vanpools with coworkers or other persons with common commute patterns. Metro's Vanpool program provided 3.2 million trips on almost 1,300 vanpools in FY 2019.

Private Transportation

Private providers of intercity bus are part of a larger bus infrastructure that transports people across the country. Amtrak extends its rail service to communities not served directly by Amtrak trains by running approximately 150 Thruway bus routes providing guaranteed connections to trains. Some Thruway buses are dedicated as train feeder service and only carry Amtrak train passengers, while other Thruway buses are coordinated with other carriers to provide access to Amtrak. Annually there are approximately 1.5 million Thruway trips. Greyhound intercity bus service supports travel to more than 2,700 destinations on 123 routes across the country, operating more than 1,700 buses. Greyhound operates Express service for regularly scheduled trips between cities and the Connect service that links rural communities with the larger Greyhound network. The MegaBus specializes in low-cost intercity bus service throughout North America. MegaBus coach style vehicles are wheelchair accessible and offer free Wi-Fi and AC power outlets at every seat. Fares can be as low as $1.00 depending on service demand for a particular trip.

Transportation Network Companies (TNCs) such as Uber and Lyft provide app-based rideshare trip booking for on-demand transportation as a modern alternative to taxis. These demand response ride-hailing models give passengers an innovative way to reserve and pay for trips through a smartphone that estimates the cost of the desired trip and provides real-time vehicle mapping and arrival time estimates. Both companies have worked on efforts in recent years to be more accommodating to customers with disabilities and riders using mobility devices.

Mobility Management and Information Resources

211 LA provides 24/7 multi-lingual access to a centralized information and referral database that is accessible by telephone (dial 2-1-1), internet, e-mail or two-way texting. 211 LA is also a member of the 211RIDE collaborative that offers a multimodal trip planning tool, designed to help clients find transportation options that best meet their needs. Accessible at www.211ride.org, 211RIDE advances and enhances commuting in five Southern California counties.

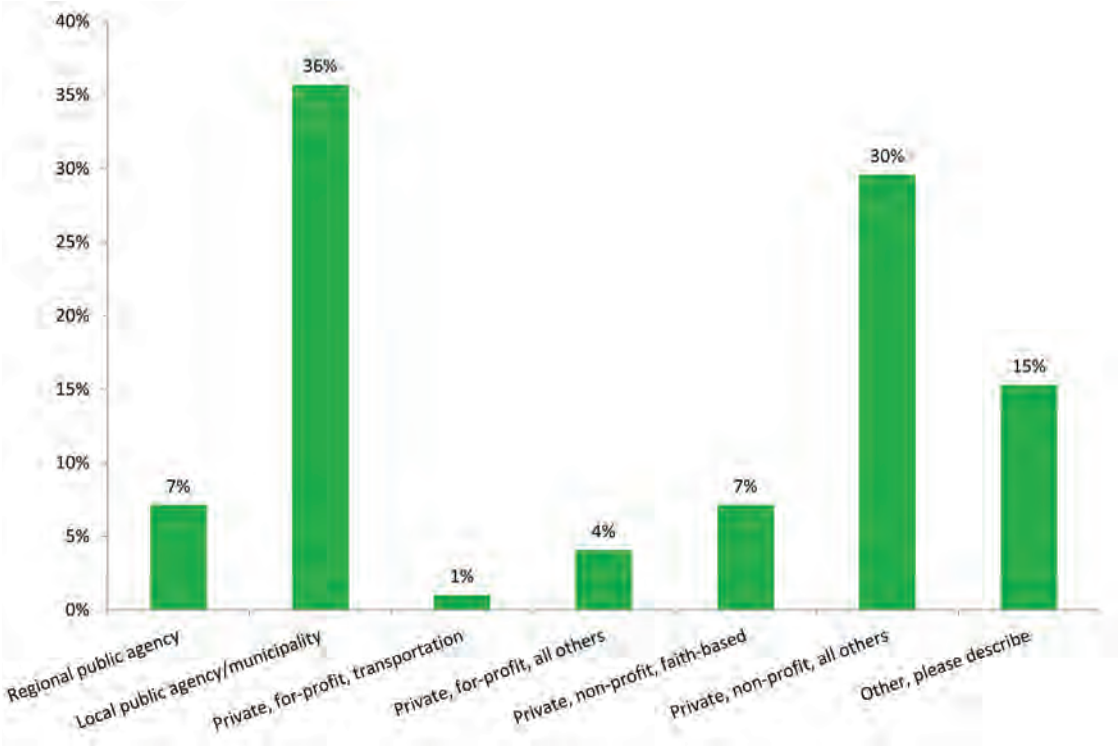
The online one-click solution simplifies trip planning by providing the best transportation options based on a user's demographic characteristics or specified needs. It enables a user to choose the most appropriate mode of transit by presenting fixed-route transit, demand-response transit, TNCs, and volunteer transportation services that best match their mobility needs.

Assessment of Human Service Agencies

A service agency survey was conducted in November 2020 to understand their operational and service needs over the next four years. The 97 survey responses provided detailed information about service agency operations, clients and how COVID-19 protocols have changed their services. The respondents were a cross section of local and regional agencies, private and for-profit organizations, as well as representatives from the health and education industries. Figure 8 shows the percentage of participation by the various groups.

Approximately 18 percent of respondents reported they were a direct operator, while 30 percent reported they contract out their services to outside entities. A smaller portion indicated they only provide transportation information assistance (about 11 percent) and arrange transportation through volunteer drivers (about 5 percent). The remaining agencies (about 22 percent) responded they do not operate transportation services. Around 14 percent stated that they provide "other" services such as transportation subsidies, transportation job training or use their personal vehicles to transport clients.

Figure 8: Percentage of Service Agencies Represented in Surveys



Source: 2021-2024 Agency/Service Provider Survey, Question #2, January 2021.

Figure 9: Regional, Local, and Private Ridership Range of Demand

DEMAND TYPE	REGIONAL PUBLIC AGENCIES	LOCAL PUBLIC AGENCIES	PRIVATE OPERATORS/ NON-PROFIT ORGANIZATIONS
Annual Passenger Trips	17,000 to 3.54 million	2,600 to 178,800	1,000 to 240,000*

*Source: 2021-2024 Agency Survey, Question #7, January 2021. *Note: excludes outliers.*

Passenger Trips

Demand for one-way passenger trips varied by the different types of survey respondents. These include regional agencies such as Access Services, LA County Department of Workforce Development, Aging and Community Services, and Pomona Valley Transportation Authority; local agencies including City of Santa Monica, City of Carson and Los Angeles Department of Transportation; and private operators/non-profit organizations such as Presbyterian Intercommunity Hospital Health, AIDS Project Los Angeles Health, and AltaMed Health Services. Figure 9 above shows the range of annual one-way passenger trips. Respondents also provided information on the range of population groups that utilize their services. Most commonly were persons with disabilities, followed by seniors over the age of 65 and low-income individuals. Persons with limited English proficiency and veterans were also common population groups noted. Some respondents also provided services to the general public and students/youth.

Existing Operations and Budgets

Responding service agencies provided an inventory of 2019 operational and budget information. In total, 58 agencies reported 3,880 fleet vehicles in service. Of those fleet vehicles, nearly 96 percent of these were owned by the agencies themselves, while only four percent were leased or rented. Respondents reported that standard buses were the most common type of vehicles used, followed by van/cutaways and SUVs/minivans. Sedans/cars and shuttle buses had lower percentages reported by respondents, and no large articulated buses were reported. Around 51 percent of vehicles were ramp or lift equipped. Figure 10 below show the percentage of vehicle inventories by vehicle type.

In total, 178 vehicles were reported as needing to be replaced within the next four years. Of these vehicles, the age of the vehicles was generally evenly distributed with a third at around 100,000 miles, a third at around 150,000 miles, and a third at around 200,000 miles.

Agency survey respondents reported that they acquired their assets through a variety of methods, such as direct purchases, contracts and leases, Metro grants (e.g., 5310 grant), and donations. The reported annual operating budget for regional agencies ranged from $220,900 to $187 million, with capital budgets in FY 2019 ranging from $190,000 to $10 million to purchase new vehicles, equipment, assets, and facilities. Local agencies had annual operating budgets ranging from $60,000 to $4 million, with capital budgets in FY 2019 of $16,000 to $400,000 allocated to purchase new vehicles, equipment, assets, and facilities.

Figure 10: Vehicle Inventories

DEMAND TYPE	% OF REPORTED VEHICLES
Large Articulated Bus (>80 passengers)	0%
Standard Bus (40-60 passengers)	43%
Shuttle Bus (25 passengers)	3%
Van/Cutaway (up to 15 passengers)	24%
SUV or Mini-Van (up to seven passengers)	21%
Sedan or Car (up to four passengers)	8%
Other	1%
Lift or ramp-equipped vehicles in your fleet	51%

Source: 2021-2024 Agency Survey, Question #21, January 2021.

Private/non-profit organizations had variable operating budgets depending on the size of the organization, with the highest reported at $10.8 million and the lowest reported at $6,500 annually. Two private/non-profit organizations reported their capital budgets range from $300,000 to $450,000. Most respondents reported that a significant portion of their budgets were directly funded and/operated by a public agency in 2019.

Most agencies (approximately 62 percent) reported their expenses increased from FY 2018 to FY 2019; 36 percent reported no change and only two percent reported a decrease in expenses. In addition, around a third of respondents reported they were likely to expand their programs, 40 percent planned to maintain their current services and around a fourth of respondents were unsure if they were going to expand services once COVID-19 restrictions were lifted.

Most respondents (around 42 percent) said their agencies would participate in the Regional Mobility Management Program for LA County, whereas only four percent said they would not participate. When asked about applying for future Section 5310 grant funding, most of the respondents (45 percent) were unsure, while 42 percent planned to apply and only four percent did not plan to apply.

Based on the assessment of existing transportation services, there is a variety of transportation options for seniors and persons with disabilities in LA County. However, with the anticipated growth patterns of target populations, particularly in the Santa Clarita and Lancaster/Palmdale UZAs, additional services are likely needed to serve these communities. The next chapter further explores the mobility needs and service gaps within LA County.

Mobility Needs and Service Gaps

Assessing mobility needs and service gaps are a key component of the Plan as it highlights the issues and challenges that constrain service agencies from providing the needed service levels to target populations. These needs and service gaps were identified through virtual focus group meetings and agency surveys. In addition, this chapter discusses COVID-19 implications and the resulting barriers transportation services are facing. These areas of need feed into the goals and strategies as well as the prioritization of projects and programs.

"We are still moving people...but we have [mostly] switched where we are now **delivering essential goods** to **vulnerable populations** such as meals and fans during the summer."

The Plan included a comprehensive and inclusive process with participation from targeted populations including seniors, persons with disabilities, low-income individuals, veterans, other members of the public, and representatives of public, private, non-profit transportation agencies and service agencies.

With LA County's large geographic area, in order to promote coordination of transportation services and address the mobility needs of target populations, outreach was conducted through a series of activities to ensure representative participation from the large UZAs that comprise the LA County Planning Region.

Outreach

To engage stakeholders and assess mobility needs and service gaps for LA County, an outreach process was developed to target participation geographically and by target population group. As part of this process, multiple outreach efforts to interact with stakeholders and gather information on transportation needs and preferences were conducted, including:

> Three virtual focus group meetings (see Figure 11).

> Distribution of 7,000 surveys and project concept forms to individuals associated with human service agencies.

> Updates to Metro's stakeholder database.

> Dedicated helpline and Metro email address.

> Updates to the Metro website of the Coordinated Plan.

> Bilingual eblast notifications of the focus group meetings.

> Follow-up phone calls and email reminders of the focus group meetings and surveys.

> Presentations to target population advocacy groups and human service agencies.

> For the release of the Plan, efforts include eblasts, printed copies, digital and social media, mailings, toolkits sent to over 170 organizations, 5,000+ bilingual announcements on Metro buses, and an open-forum community meeting.

> Solicitation of public comments via a website comment form, email, helpline and mail-in comment cards.

Figure 11: Virtual Focus Group Meeting

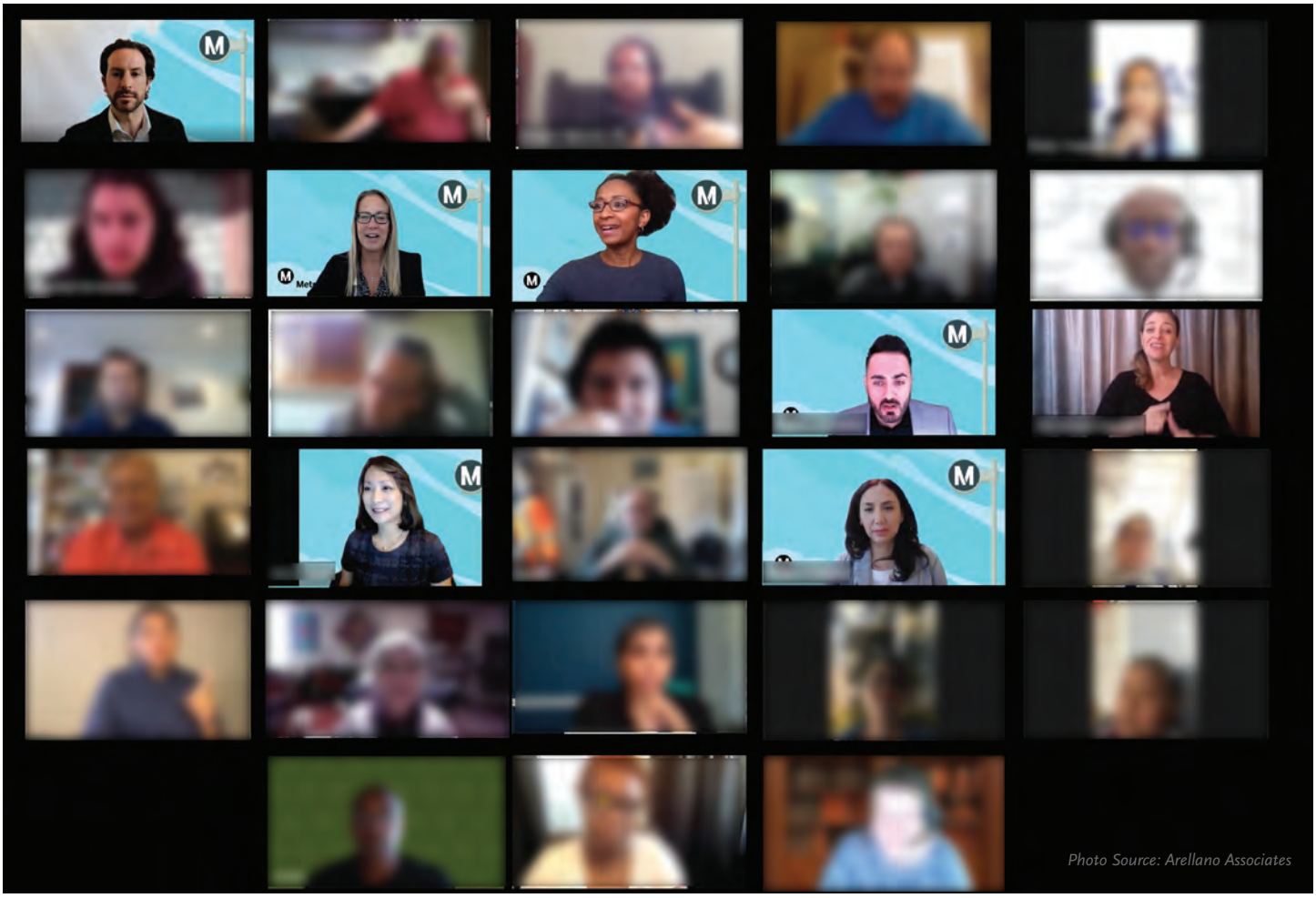


Photo Source: Arellano Associates

Focus Groups

Three virtual focus group meetings collected input and identified mobility needs and service gaps. More than 400 LA County human service agencies, riders, and other members of the public were invited to participate in these focus group meetings. Hosted in November 2020 a total of 62 participants attended via an online platform and phone.

In total, 36 service agencies and other non-profit and for-profit organizations across LA County were represented including advocacy groups, municipalities, county departments, institutions of higher learning, social services providers, non-profits, private firms, health services providers residential program providers, as well as target population riders. The meetings were open to the general public, although Metro identified a specific target audience for two of the three meetings (older adults for the November 17, 2020 session, and persons with disabilities for the November 18, 2020 session).

"It is really hard regionally, working with all the transit agencies to consolidate fares."

Attendees participated in virtual breakout sessions and were guided by a facilitator in their discussions. These breakout sessions provided valuable information and input regarding the transportation challenges faced by service providers and their clients/riders. Most importantly, the issues of target populations before and during COVID-19 restrictions were discussed, including gaps in access and mobility, their ability to travel to their destinations safely and the availability and use of transportation services. Major mobility needs themes included:

> **Need for Expanded Services** – Target populations are now at even greater risk due to COVID-19, services for seniors and persons with disabilities need to be expanded and coordinated among providers. A comprehensive network of services is needed to safely serve these vulnerable populations. This includes support in transporting essential goods such as food delivery services, pharmacy and household items which are all crucial for these target populations.

> **Safety Measures** – Additional and robust protocols and communication of safety measures for all customers (English as a Second Language, disabled, equitable communities) is now needed more than ever. Target populations need to be assured vehicles are utilizing safety precautions and encouraged to follow safety rules on vehicles.

"Making sure that we make things much simpler for the passengers..."

> **Access to On-demand Transportation Services** – There is a greater need for on-demand and Dial-A-Ride services. There are opportunities for agencies and accessibility-based private companies to partner and comprehensively provide better access to services. If services like smaller "hopper" vans can connect and provide access or private companies like RideCo, Lyft and Uber partnered with local agencies and non-profits, on-demand and First/Last Mile trips can serve critical medical and same-day trips.

"Dial-A-Ride and on-demand ride services are needed for essential goods like medical, groceries, household items, pharmacy, emergency food box deliveries, etc."

> **Funding after COVID-19** – Will reliable funding for transportation be available? Concerns were raised about service coverage, ridership decline, and availability of voucher programs. Servicing these target populations will require continuous capital investment in vehicles (low-floor/zero-emission) and services.

> **Communication** – Personalized interaction among seniors and persons with disabilities is needed. While online and digital communication is valuable, in-person interaction is most effective with a large majority of this target population. Targeted outreach is required for equitable user groups. This includes access to Wi-Fi, communicating safety precautions via new technologies, and explanation of costs, services and schedules.

> **Connectivity and Reliability** – Gaps and issues include travel time of current services due to transfers and schedule limitations. Trips during COVID-19 are taking longer than normal. Connections and mobility continue to be difficult outside of service areas. There is a need to promote a variety of services with education on how to access transit. There is also a need to provide better options for essential trips.

"Riders want to see the ETA of their ride, if they know their ride is going to be late, they can see it and feel reassured."

> **Regional Mobility Management** – There is a need for better networking between transit providers in order to tackle issues of countywide coordination, fragmented service, and connections between cities. Jurisdictional limits and service parameters continue to create barriers and confusion for customers.

> **Information Gaps** – Agencies/organizations that offer transportation services and accessibility services need to communicate their services to better guide those using the application. The target population users need to clearly understand the full extent of services offered before they attempt to use them. This includes providing step-by-step travel training for transfers, changes in modes, scheduling, payments and fare collections, travel options at destinations and end-to-end travel times.

"Transfer trips are difficult to plan, for example getting to Ventura County, Santa Clarita and the Antelope Valley."

Human Service Agency Surveys

The agency surveys also included a section on transportation needs, mobility, and technology barriers. The key mobility issues expressed by the respondents included:

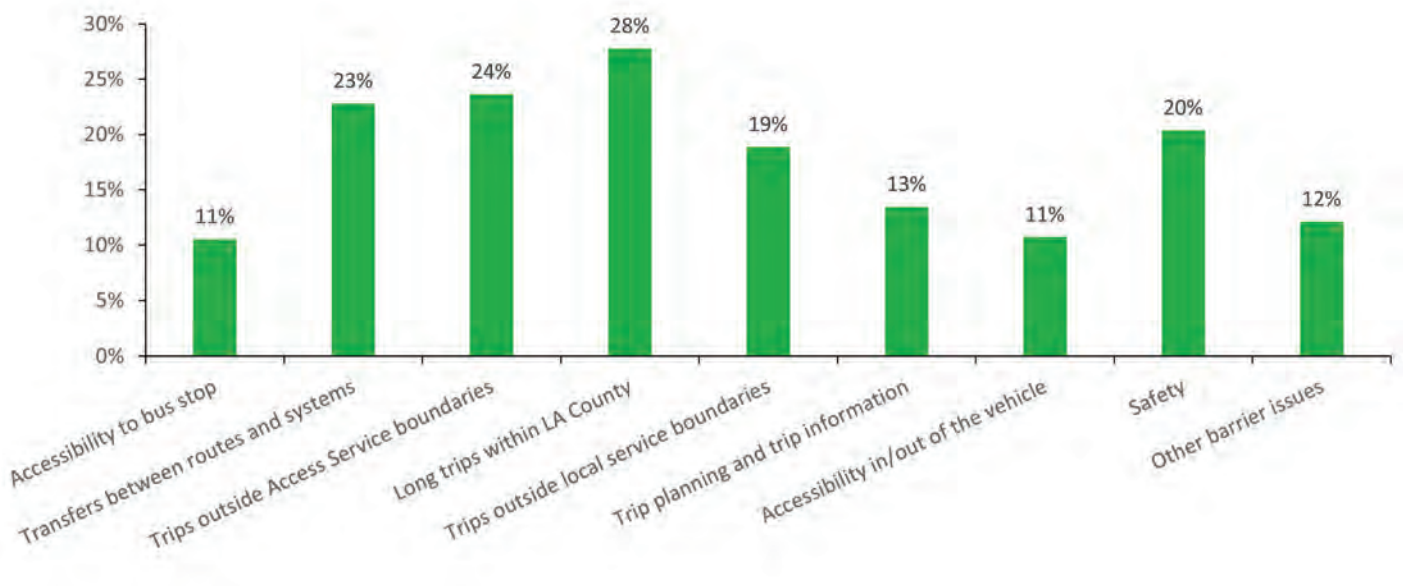
> **Difficult trip types** – The most difficult trip types respondents cited were medical trips, local doctor or health clinic visits, and essential shopping (pharmacy, groceries, etc.). Other difficult trip types were non-peak hour trips (e.g., midday, evening, late evening, and weekend), as well as same-day/immediate (on-demand) trips.

> **Barriers for access/mobility** – When asked about barriers, the most common response was long trips within LA County. Other major access and mobility issues included trips outside Access Service boundaries, and transfers between routes and systems, safety and trips outside local service areas (see Figure 12).

> **Barriers using technology** – Issues with technology were posed to gain a better understanding of challenges in communicating with seniors, persons with disabilities and others. Attaining information and having reliable Wi-Fi connections were the top challenges cited to using technology today.

> **Barriers for agencies** – An open-ended question was posed asking about barriers in providing services to target populations. Common themes included: connecting to other social services; financial, health risk challenges, mobility-aids/equipment on vehicles; aging fleet; need for additional rolling stock and operational costs; regional inter-agency cooperation; safety and security; funding; understaffing; long wait times for round-trip service; last-minute service requests; service boundaries; increasing demand on paratransit and rising cost for providing service; and expanding service area and hours.

Figure 12: Access and Mobility Barriers in Transportation Services



Source: 2021-2024 Agency Survey, Question #16, January 2021.

Community Meeting

The draft Plan was available for public review and comment from March 19 to April 19, 2021 and a comprehensive notification effort utilized a variety of traditional and digital methods to reach target populations throughout LA County. To further garner interest and encourage public comment, a virtual community meeting was held on April 7, 2021. Notifications were prepared in both English and Spanish and included:

- Print Notifications: Full-colored postcards printed and mailed to over 700 stakeholders; bus car cards installed on Metro buses; hard copy distribution available at 18 libraries and Metro Headquarters; and a version adapted to be more accommodating for persons with vision impairment.
- Electronic Notifications: Eblasts notifications sent announcing the draft Plan and the community meeting; website updates with important dates, comment form, and link to the community meeting; social media and blogs (via The Source and El Pasajero); and project helpline with recorded announcements and ability to leave verbal comments.

The community meeting presented the purpose of the Plan, overview of what the Plan included, and solicited public input through written or verbal comments. With simultaneous Spanish and ASL interpretation along with live closed captioning, the meeting fostered a participatory environment with 44 attendees providing comments on the draft Plan. The presentation was recorded and posted on the Metro Coordinated Plan website.

During the community meeting, comments were accepted verbally and through the chat feature. The major comment categories were opportunities for communication and outreach to target population groups and access to on-demand travel services (e.g., Access Services, dial-a-ride services, and microtransit). Other comments were related to funding and availability for accessible transportation options in more suburban communities. Requests for supplemental outreach such as more flyers, access/copies of the Plan, and additional stakeholder briefings were made particularly for those who were not be able to be reached by digital means of communication.

In addition to the community meeting, two stakeholder briefings were held on March 23 and 25, 2021 to provide opportunities for interested organizations to engage with Metro in a more focused setting. Participants included MoveLA, Access Services, PIH Health, Help Me Help You, SCRS-ILC, L.A. Care, Antelope Valley Senior Center, Griffith Park Adult Community Center, Epilepsy Foundation of Los Angeles, and Cal State LA. Metro also delivered additional presentations, attended meetings, and/or provided materials to Metro's advisory committees, including the Local Transit Systems Subcommittee (LTSS), the Aging and Disability Transportation Network (ADTN), and the Accessibility Advisory Committee (AAC).

Comments made during the community meeting, stakeholder briefings, and other outreach activities were combined with all comments received during the public comment period (March 19 to April 19, 2021). In total, 90 comments were received through written comments, emails, voicemails, stakeholder briefings, and during the community meeting. Figure 13 below provides a summary of all the comments received presented by category, number of comments received, and major themes. General public comments unrelated to the Plan were recorded and forwarded to the appropriate Metro departments. It should be noted that some public comments addressed multiple categories.

Figure 13: Summary of Comments on the Plan

COMMENT CATEGORY	COMMENTS RECEIVED	MAJOR THEMES	DISCUSSED IN PLAN
Access to On-demand Transportation Services	18	> Funding for on-demand travel programs should be increased so they can be more reliable. > Important to have service that allows people to make non-critical trips and have choices. > Transportation needs of people with disabilities and seniors who are low-income for work and school need to be met. > Need more TNC programs with wheelchair accessible vehicles. > Upgrading technology of on-demand service with apps can increase convenience. > Add information about Medi-Cal transportation provided by L.A. Care and Health Net.	On-demand services have the potential to address many unmet transportation needs in areas where existing transportation may be insufficient. The Plan's Goal 2, Strategy 2.4 supports on-demand transportation services for essential and non-critical trips including partnerships with TNCs. In addition, Goal 4, Strategy 4.1 addresses the need for technology improvements that facilitate on-demand transportation. Medi-Cal has an important role supporting transportation for its members; the program has been added to the types of providers documented in the Plan.
Communication	32	> Discuss the outreach actives that were done for the Plan. Were there efforts to reach those without digital access? > In-person communication is important. > Social media is a good venue for announcements and participation.	The Plan describes the comprehensive outreach efforts in Chapter 3 Mobility Needs and Service Gaps. This includes providing information digitally using social media and other platforms, and through traditional printed announcements. In addition, the Plan and outreach materials were adapted to accommodate persons with vision impairments and those without digital access. Due to the COVID-19 restrictions, in-person communication needs were addressed through phone calls and virtual meetings with stakeholders and community-based organizations (CBOs).
Connectivity and Reliability	5	> Need for continued service in areas that are at the periphery of LA County (e.g., Antelope Valley, Pomona Valley, etc.). > Reliability needs to be improved. > Paratransit is needed for those who cannot access fixed route services.	Improving and providing connections throughout all of LA County is critical to address gaps in services for target populations. Goal 2, Strategy 2.2 supports expansion of programs to encourage regional coordination and specialized services. Strategy 2.3 further supports services in areas within and between all UZAs, as well as Rural and Non-Urbanized Areas. Strategy 2.5 addresses connectivity issues to improve customer experience and reliability with multi-operators. Paratransit should be inclusive for different riders including those who have difficulty using fixed-route buses and other forms of public transit (see Chapter 2, Regional ADA Paratransit).

COMMENT CATEGORY	COMMENTS RECEIVED	MAJOR THEMES	DISCUSSED IN PLAN
Expand Services	13	> Paratransit has access limitations, extension of services would address gaps. > Special subscription bus/shuttle service would be beneficial. > Extend services to the northern portions of LA County. > Travel training is important to consider.	Paratransit services are generally provided to complement existing fixed-route services. However, specialized transportation projects that fill service gaps in the network are supported by this Plan (see Goal 2, Strategy 2.2), including special subscription programs and extension of services to northern portions of LA County. Goal 3, Strategy 3.1 also supports increasing resources for travel training and other rider campaigns.
Funding	6	> Consider funding programs that offer low-cost options that emphasize safety and assisting with unexpected trips. > Does the Plan support funding COVID-19 related projects? > As the pandemic ends, will upgrades and expansion of services still be prioritized? > Will funding support electric vehicles?	Lower-cost options are important to provide, particularly for target groups. This is addressed through Goal 1, Strategy 1.4, which describes broadening cost-effective mobility choices. The Plan supports regional COVID-19 protocols and standards to ensure public safety and encourage future ridership. In particular, Goal 6, Strategies 6.4 and 6.5 support upgrades and modifications to vehicles to increase social distancing and other future operational requirements. The Plan also supports projects and programs concepts that are consistent with FTA Section 5310 funding including upgrades to services and expansion of services (see Goal 1 strategies) that are not necessarily COVID-19 related. This includes acquisition of accessible rolling stock (including electric and other clean fuel vehicles).
Regional Mobility Management	4	> Programs such as microtransit and On the Move Riders are beneficial for regional access and should be expanded. > Not all taxi companies serve all areas of LA County. Other travel options should be considered.	The Plan encourages innovation in delivering support services to target populations. In particular, Goal 1, Strategy 1.4 looks to broaden cost-effective mobility choices and Goal 3, Strategy 3.7 supports innovative transportation options. These include microtransit, vanpool, partnerships with TNC's and more traditional services like taxis and volunteer driver reimbursement programs. Metro's On the Move Riders Program is a travel training and trip planning service that promotes transit for target populations. Programs such as this are encouraged under Goal 3, Strategy 3.1.

COMMENT CATEGORY	COMMENTS RECEIVED	MAJOR THEMES	DISCUSSED IN PLAN
Safety Measures	12	> Pedestrian crossings for older adults and individuals with disabilities are important. > Safety of passengers is a priority, including cleanliness of buses and provision of protective bus shelters. > Improvements to address safety/ security challenges are needed (emergency button, cameras, security services).	First/Last Mile access is important to connect target populations to public transportation. Under Goal 2, Strategy 2.6, improvements to sidewalks, crossings, bikeways, and other roadway features will enhance safety and reduce the barriers that target populations currently experience. Addressing cleanliness and promoting healthy and safe travel are described in Goal 5, Strategy 5.5 and Goal 6, Strategy 6.2, particularly during the COVID-19 pandemic. Safety and security for target populations on public transportation is also an important issue. Goal 6, Strategy 6.3 highlights the need for safe travel conditions through information, outreach and communication. In addition, funding for safety equipment, supplies and services was identified as one of the highest priorities to help address LA County's safety/ security challenges.

Source: Public comments received on the Plan (March 19 to April 19, 2021).

COVID-19 Pandemic Implications

This section describes how the COVID-19 pandemic has impacted human service agencies' operations. Overall, the majority of agency respondents (around 80 percent) stated that COVID-19 restrictions and protocols have significantly affected delivery of their services. These include the following:

> Communications and interactions are now completely online or telephone in lieu of in-person visits and meetings.

> Some services are limited to those that are deemed essential.

> Indefinitely suspending or eliminating passenger shared rides.

> Social distancing guidelines are being applied in all vehicles (e.g., reduced capacity, safety barriers, face coverings, etc.).

> Reduced hours of operation.

> Transportation resources being used to deliver essentials to users (e.g., meals and groceries).

Figure 14 presents the barriers in transportation services during COVID-19 identified by the service agencies.

Respondents indicated they could better serve their clients during COVID-19 restrictions by providing the following:

> Continuous education of riders on updated restrictions.

> More options for delivery of goods.

> Reducing costs and making services more accessible.

> Increased safety protocols such as face coverings, stricter social distancing guidelines, and increased barriers.

> More vehicles and staff to provide reduced capacity on vehicles.

> Assisting users with more resources to various transportation information.

> Improving communication with users on operational and scheduling updates.

> Increasing accessibility to technology to bridge digital divide with older populations.

> Increasing transportation services to essential locations (medical, food, etc.).

Figure 14: Barriers in Transportation Services During COVID-19

OPERATIONAL BARRIERS	SAFETY BARRIERS
• Limited budget or lack of funding for providing services • Personnel funding/limited staff • Cost to provide a responsive service during a significant decline in ridership • Limited amount of taxis readily available • Lack of dedicated bus or train routes • Difficulty hiring and maintaining drivers as service hours decreased • Suspension of collection fares • Lack of funding to purchase new vehicles • No funding for public services	• Target populations with heightened risks to COVID-19 exposure • Efficiently disinfecting vehicle after every passenger trip • Perceived lack of safety when using public transportation. • Limited amount of taxis readily available • Fear of patients and their families/caregivers to have seniors travel for care • Volume of travelers on public transit • Vehicles are not equipped with COVID-19 plexiglass shields
ADA ACCESSIBILITY BARRIERS	**COMMUNICATION BARRIERS**
• Insufficient number of vehicles equipped to assist clients with disabilities	• Difficulty communicating with seniors as many are not technology-savvy

Source: 2021-2024 Human Service Agency Survey, Question #43, January 2021.

Goals and Strategies

The goals and strategies for the Plan address the mobility needs and service gaps identified in Chapter 3. Goals from the previous 2016-2019 Coordinated Plan provided a framework for the Section 5310 funding decisions in LA County. These goals were then updated to account for new input gathered during the outreach process, and further expanded to address COVID-19 related transportation needs. Overall, this chapter describes the development and description of the goals and strategies for the Plan.

Developing Goals for the Plan

Goals from previous LA County Coordinated Plans provided the framework for discussion during the outreach process. The following sections describe how and why these earlier goals continue to address the mobility needs and service gaps within LA County.

Goal 1: Fund Mobility Options

Sustain, fund, and continue to expand public, private, and other transportation services in LA County.

LA County has over 2,300 peak hour buses and nearly 98 miles of rail service within Metro's service area of about 1,433 square miles. Most communities are served by a combination of transit and paratransit provided by LA County's regional providers such as Metro and Access Services, as well as local transportation services provided by cities and other service agencies. Local transit services vary widely and range from local and sub-regional fixed route networks to local Dial-A-Rides and subsidized taxi programs.

Service agencies shared the following challenges they face in meeting the needs of their communities:

> There is increasing demand on paratransit and rising cost for providing service. Additional funding is needed to meet this increasing demand of customers. In addition, agencies report aging fleet issues, the need for additional rolling stock, the need for additional staff and operational costs as challenges.

> Wheelchair capacity of vehicles has not kept up with the increasing number of persons traveling with mobility devices.

> Safety/security, reduced frequency of public transit, long wait times for round-trip service and last-minute service requests were also reported as challenges.

Metro has in place several short-range and long-range plans that will address many of the issues faced by the target populations. Fully funding these plans is critically important to the future mobility needs of the target populations. Below is a list of some of the LA County plans that support target populations:

> Metro 2020 Long Range Transportation Plan

> Metro 2014 Short Range Transportation Plan

> Metro 2014 First/Last Mile Strategic Plan

> Metro Vision 2028 Strategic Plan

> Metro Customer Experience Plan 2020

> Metro NextGen Bus Plan 2020-2021

> Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategies (SCS) (Connect SoCal)

Goal 2: Address Mobility Service Gaps

Improve coordination between public transportation and human service transportation to address mobility and service gaps.

LA County has a significant and complex layering of mobility options at the local, subregional, and regional levels. As human service transportation is typically provided based on jurisdictional boundaries, services for target population can have gaps in access and mobility. Trips within and between regional and local destinations can be difficult for many members of the target populations. Mobility concerns identified through the outreach process included:

> Higher demand for same-day response services, particularly to address medical needs. This was reported as a difficult trip by almost 70 percent of agency survey respondents.

> Demand does not adhere to city boundaries, with travelers often wishing to cross jurisdictional lines, which creates challenges particularly for demand response services. Trips outside service area boundaries were reported as a barrier (often or sometimes) by approximately 64 percent of all respondents. Trips outside Access Service boundaries were reported as a barrier (often or sometimes) by more than 50 percent of agency survey respondents.

> First-mile and last-mile access to transit is a challenge for seniors and persons with disabilities.

> Local medical trips and essential shopping (groceries, pharmacy, etc.) were reported as a difficult trip (often or sometimes) to make by about 67 percent of agency survey respondents. Medical trips were also increasingly regional, requiring long-distance travel, often outside of local jurisdictions, such as from the South Bay to the University of California, Los Angeles (UCLA).

> There was a desire for early morning, midday, late night, and weekend service as the 24/7 economy drives the demand for longer service hours, particularly for entry level workers to reach service and shift jobs.

> Long trips within LA County were reported as a barrier (often or sometimes) by approximately 59 percent of all agency survey respondents.

> Transfers were reported as a barrier (often or sometimes) by 58 percent of respondents, as they were considered difficult to plan. For example, there were challenges getting from Central LA County to Ventura County, Santa Clarita, and the Antelope Valley area. Connections between the San Gabriel Valley and downtown LA were considered difficult, especially in areas without a rail connection.

In an effort to address the transfer barrier, Access Services expanded its transfer trip service in July 2020. The expansion is aimed at improving travel between Antelope Valley, Santa Clarita, and the rest of LA County. Transfer opportunities were expanded from three to eight times a day, added on weekdays, weekend, holidays, services and fares were permanently reduced.

Goal 3: Provide Support Services

Provide support services to enable access for target populations.

The stakeholder outreach and review of relevant documents revealed the need to provide additional support services to target populations:

> Human service agencies that offer transportation services and accessibility services need to clearly outline and define their services to better meet the needs of those using the service. Not all services provide the same level of transportation amenities or access. The target population users need to understand the full extent of services before they attempt to use them.

> There is a unique opportunity for human service agencies and accessibility-based companies to partner and comprehensively provide better transportation. If large scale transportation network companies (TNCs) partnered with local agencies, they can better understand the needs of those trying to utilize these types of services.

> Services for seniors and persons with disabilities need to be expanded outside of transportation. Purchasing household items, laundry services, and food delivery services are all crucial for these target populations, many of which are now at even greater risk due to COVID-19.

> Face-to-face interaction among seniors and persons with disabilities is best. While online and digital communication is valuable, continuous in-person interaction is most effective. Seniors benefit the most from continuous in-person interaction. The in-person relationship helps reinforce information and ensures it is clearly understood.

> Agencies reported challenges connecting their customers to other social services and expressed a need for regional inter-agency cooperation.

Goal 4: Promote and Improve Information Portals

Promote, improve and expand multi-cultural information portals on mobility options.

Closely related to the issue of mobility is the ability of seniors, persons with disabilities and other target populations to understand and navigate new transportation options. Questions such as: what types of travel options are available; do I need to transfer; how long will the trip take; how much will it cost; and is it safe are frequently asked.

Based on the agency surveys, the following were highlighted as informational barriers:

> The need to promote a variety of services, and education on accessing transit to address information gaps. Some seniors do not have access to cellular phones or help, making it difficult and stressful to obtain this information. There is a request for services that result in less stress, time and offer better options.

> Keep websites up to date so customers can rapidly obtain accurate and current information as services change.

> Customers desire real-time arrival information and ease of transit fare transactions for regional travel.

> There is a desire for regional mobility management and networking between transit providers. The belief is that issues of coordination and fragmented service lead to customer confusion.

> Agencies reported challenges connecting their customers to other social services and expressed a need for regional inter-agency cooperation.

Goal 5: Enhance Accountable Performance Monitoring Systems

Enhance customer feedback and accountable performance monitoring systems to ensure that high quality service is maintained.

Metro has taken important steps on customer feedback and accountable performance monitoring systems for bus and rail systems. Programs such as Metro customer satisfaction surveys and the Mystery Rider Program which reports on wheelchair accessibility issues have provided feedback and, in the case of wheelchair accessibility, accountable performance monitoring systems. More specifically, the following programs are currently in place:

> Metro's Customer Satisfaction Surveys provide yearly input from bus and rail passengers.

> The Metro Wheelchair Accessibility Quarterly Reports use "Mystery Riders" to report on specific items related to Metro policies regarding the transportation of persons in wheelchairs.

> Metro's Customer Experience Plan includes a list of areas for improvement for security, cleanliness and at bus stops. Pilot programs include having elevator attendants to deter crime, urination, defecation, and drug use, and make elevators safe and pleasant for seniors, people with disabilities, travelers with luggage and others.

> Metro's NextGen Plan has extensive and continuous public engagement and outreach to ensure the Metro bus system is addressing the needs of current and future target population riders.

It will be important to build on these accountability efforts in order to enhance user satisfaction. For example, Access Services is conducting a series of comprehensive operational reviews (COR) of its Operations, Customer Service and Eligibility Determination programs with the goal to improve customer experience. Although the majority of the recommendations were implemented, such as extending hours of service and expanding or modifying oversight staff, continual monitoring of the programs will ensure services are responsive, maintained and adjusted to meet the needs of riders.

Goal 6: Provide COVID-19 Support Services

Support transportation providers in serving target populations during and following the COVID-19 pandemic.

Due to the COVID-19 pandemic, agency providers have adjusted their service offerings and requirements to meet ridership levels and customer needs. For example, providers have increased Same Day Service, required face coverings and implemented Meal Delivery Programs. In addition, service agencies highlighted the following needs regarding COVID-19:

> Personal Protective Equipment (PPE) and safety measures are needed to assure customers of safe travel conditions. Safety protocols such as cleanings of vehicles, social distancing, passenger limits, air circulation, larger vehicles, and mask requirements need to be implemented and clearly communicated.

> Due to the COVID-19 pandemic and the resulting Safer-at-Home and Stay-at-Home orders, there has been a reduction in the number of riders and a demand for other essential services. Per a focus group respondent, "We are still moving people, but we have [mostly] switched to where we are now delivering essential goods to vulnerable populations such as meals and fans during the summer. The greatest concern is still serving the vulnerable populations even if they are not traveling." Funding options are needed to maintain and expand service offerings.

> If service demands remain the same with COVID-19, there will be a need for more vehicles to allow for social distancing.

> Access Services started providing same day service due to less demand for riders overall during COVID-19.

> Funding is needed to provide PPE to drivers and customers and for additional staff support based on new COVID-19 requirements.

Goals and Strategies for the Plan

Building from earlier Coordinated Plans, consistency with regional and local plans, and input received throughout the outreach effort, the following goals and strategies have been identified to address the mobility needs and service gaps of LA County's target populations. The following are the Plan's goals and brief descriptions of the regional and local strategies. See Figure 15 for the detailed strategies related to each goal.

> **Goal 1: Fund Mobility Options** – Sustain, fund, and continue to expand public, private and other transportation services in LA County.

- **Regional Strategies:** Consistencies with regional and municipal plans and funding projects, programs and activities that have cost-sharing opportunities and broaden traditional mobility choices.
- **Local Strategies:** First/Last Mile policies and standards, capacity and service level improvements, as well as upgrading, replacing and expanding vehicle fleets.

> **Goal 2 : Address Mobility Gaps** – Improve coordination between public transportation and human service transportation to address mobility and service gaps.

- **Regional Strategies:** Improvements in regional coordination, inter-agency agreements and holistic transit connections throughout LA County.
- **Local Strategies:** Address the travel needs of target populations including: expansion of on-demand services, coordination of multi-operator and cross jurisdictional trips, increasing the span of services, and First/Last Mile improvements to enhance safety and reduce barriers.

> **Goal 3: Provide Support Services** – Provide additional support services to enable access for target populations.

- **Regional Strategies:** Increasing resources and providing guidance to increase mobility through travel training, rider campaigns and equity base fares.
- **Local Strategies:** Developing and broadening assistance to target populations. This includes addressing interactive, immediate and short-term transportation needs.

> **Goal 4: Promote and Improve Information Portals** – Promote, improve and expand multi-cultural information portals on mobility options.

- **Regional Strategies:** Encourage collaborative information sharing and increasing the effectiveness and use of social media to promote mobility options for target populations.
- **Local Strategies:** Providing current, clear, and comprehensive travel information to target populations, acknowledging the diversity and equity needs within LA County. This includes collaboratively promoting mobility management functions at the local and regional levels.

> **Goal 5: Enhance Accountable Performance Monitoring Systems** – Enhance customer feedback and accountable performance monitoring systems to ensure that high quality service is maintained.

- **Regional Strategies:** Set the framework for the provision of high-quality services through the use of surveys, monitoring and quarterly reporting.
- **Local Strategies:** Encourage the implementation of performance standards, goals, and policies as a means to establish service levels, plus processes to obtain and act upon feedback from riders.

> **Goal 6: Provide COVID-19 Support Services** – Support transportation providers in serving target populations during and following the COVID-19 pandemic.

- **Regional Strategies:** Ensuring safety standards and protocols for vehicles and personnel that serve target populations.
- **Local Strategies:** Address the need to provide a safe environment for the target populations while traveling using equipment, supplies and protocols. In addition, communication of these standards and approaches is needed.

Figure 15: Goals and Strategies

Goal 1: Fund Mobility Options

Sustain, fund and continue to expand public, private, and other transportation services in LA County.

REGIONAL STRATEGIES	LOCAL STRATEGIES
1.1 Strategy: Fund regional and municipal operators to address recommendations included in SCAG's 2020-2045 RTP/SCS (Connect SoCal) and Metro's 2014 SRTP and 2020 LRTP.	**1.5 Strategy**: Develop First/Last Mile access improvements in support of Metro's 2018 Transit Oriented Communities (TOC) Policies and 2014 First/Last Mile Strategic Plan & Planning Guidelines.
1.2 Strategy: Fund projects and activities that address high-priority strategies identified in the 2021-2024 Coordinated Plan to enhance mobility of seniors, persons with disabilities, veterans, low-income and other target populations.	**1.6 Strategy**: Fund local municipality-based service improvements to address capacity and service level issues for target populations.
1.3 Strategy: Fund projects, programs and activities that are eligible for cost-sharing arrangements among transportation resources such as Coordinating Council on Access and Mobility (CCAM) and other federal funding sources.	**1.7 Strategy**: Upgrade human service agency fleets to become more accessible by persons with disabilities and encourage private sector taxi and Transportation Network Companies (TNCs) to operate more accessible vehicles.
1.4 Strategy: Broaden cost-effective mobility choices such as Access Services, micro transit/vanpool, Dial-A-Ride, Medi-Cal transportation, County New Freedom Transportation Program and other travel assistance services that support goals included in SCAG's and Metro's regional plans.	**1.8 Strategy**: Institute vehicle replacement and expansion for public transportation and human service agencies to serve the target populations.

Goal 2: Address Mobility Gaps

Improve coordination between public transportation and human service transportation to address mobility gaps.

REGIONAL STRATEGIES	LOCAL STRATEGIES
2.1 Strategy: Improve county-to-county senior and paratransit trips through best practice solutions and formalized inter-agency agreements.	**2.4 Strategy**: Provide on-demand transportation services for critical and non-critical target population travel needs such as medical, essential shopping and off-peak hour trips.
2.2 Strategy: Expand and support programs to encourage regional coordination of specialized transportation services such as a Regional Mobility Management program with strategies to connect seniors and paratransit riders with local and regional transportation options.	**2.5 Strategy**: Address connectivity issues to improve the customer experience with trips involving multi-operators.
2.3 Strategy: Improve transit connections throughout all of LA County including areas within and between the Los Angeles/ Long Beach/Anaheim UZA, Lancaster/Palmdale UZA, Santa Clarita UZA, and Rural and Non-Urbanized Areas.	**2.6 Strategy**: Improve First/Last Mile access within local communities, including improvements to sidewalks, crossings, bikeways, and other roadway features to enhance safety and reduce barriers for target populations.
	2.7 Strategy: Provide incentives for collaborative partnerships to better address immediate, cross jurisdictional and other hard-to-meet travel needs.
	2.8 Strategy: Increase the span of service on weekdays and weekends, recognizing off-peak service needs such as early morning, midday, late night and weekend.
	2.9 Strategy: Improve transfers from one mode or type of service to another service including connections to other counties and the Rural/Non-Urbanized areas within LA County.

Goal 3: Provide Support Services

Provide support services to enable access for target populations.

REGIONAL STRATEGIES	LOCAL STRATEGIES
3.1 Strategy: Increase resources for travel training and related rider campaigns to promote transit and human service transportation for target populations.	**3.4 Strategy**: Develop and support volunteer driver and mileage reimbursement programs for difficult-to-serve trips for seniors and persons with disabilities.
3.2 Strategy: Address the need to connect target populations to other social support services through interagency communication, cooperation, and agreements.	**3.5 Strategy**: Broaden assistance programs to encourage face-to-face interaction for additional assistance needs including door-to-door and door-through-door transportation.
3.3 Strategy: Support and broaden means-based fare discounts to low-income populations to enable their accessibility and use of public transportation access.	**3.6 Strategy**: Develop transit stops/station improvements, path-of-access, and other local pedestrian and bicycle improvements for target populations.
	3.7 Strategy: Support innovative transportation options (e.g., microtransit/vanpool, TNCs, taxis, volunteer driver and mileage reimbursement programs) that could be more cost-efficient/cost-effective for target populations.
	3.8 Strategy: Expand support services to meet the immediate transportation needs of target populations including transporting critical items such as medical supplies, household items, laundry services and food delivery services.
	3.9 Strategy: Ensure communication with target populations embraces a broad array of methods including in-person opportunities, when possible.

Goal 4: Promote and Improve Information Portals

Promote, improve and expand multi-cultural information portals on mobility options.

REGIONAL STRATEGIES	LOCAL STRATEGIES
4.1 Strategy: Support for technology improvements and enhancements to trip planning to incorporate all types of transportation options including public, human service agencies, and private sources and provide current and clear travel directions for target populations and other users. This includes easily accessible multimodal "find-a-ride" functions and maintaining it with up-to-date information.	**4.4 Strategy**: Support local and coordinated regional transportation services by providing real-time information.
4.2 Strategy: Increase the effectiveness and use of social media to promote mobility options to the target populations.	**4.5 Strategy**: Provide clear and comprehensive information at bus stops and rail stations including route/schedule information and stop/station identification, particularly for low-frequency routes.
4.3 Strategy: Provide comprehensive travel information for target populations from a single resource to lessen customer confusion.	**4.6 Strategy**: Ensure that information is available in multiple languages and formats acknowledging the diversity and equity needs of LA County.
	4.7 Strategy: Promote mobility management functions to assist and enable target populations to connect to transit and other transportation options. Collaboratively promote mobility management functions at the local and regional level.

Goal 5: Enhance Accountable Performance Monitoring Systems

Enhance customer feedback and accountable performance monitoring systems to ensure that high quality service is maintained.

REGIONAL STRATEGIES	LOCAL STRATEGIES
5.1 Strategy: Expand Metro Customer Satisfaction Surveys to include questions on other transit and paratransit support services.	**5.4 Strategy**: Adopt standard compliant policies that can be applicable to municipal and other human service providers.
5.2 Strategy: Ensure continued attention to the quality of the ride for target population users through quarterly reporting and ongoing plans such as Metro's Customer Experience Plan and NextGen Bus Plan.	**5.5 Strategy**: Develop performance standards that can be consistent among various service modes. Develop target performance goals for on-time performance, transfers, safety, and cleanliness.
5.3 Strategy: Establish performance monitoring and reporting for transportation pilots and projects that address the needs of the target populations.	

Goal 6: Provide COVID-19 Support Services

Support transportation providers in serving target populations during and following the COVID-19 pandemic.

REGIONAL STRATEGIES	LOCAL STRATEGIES
6.1 Strategy: Adopt regional COVID-19 safety protocols and standards for personnel and vehicles serving target populations that can be applicable to municipal and other human service providers.	**6.2 Strategy**: Provide funding for personal protection equipment (PPE), cleaning and disinfecting supplies, additional staff and other services, to address target population needs during and after the COVID-19 pandemic.
	6.3 Strategy: Assure target populations of safe travel conditions through information, outreach and communication.
	6.4 Strategy: Upgrade and modify vehicles with safety measures to increase social distancing and provide devices to limit exposure.
	6.5 Strategy: Support the operation of additional or larger vehicles to increase social distancing during travel for target populations.

Source: Metro 2021.

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Projects and Programs

Project and program concepts are identified and associated with each of the goals and strategies. This chapter includes a description of each of the project and program types, discusses their eligibility for Section 5310 funding, and provides examples. The list of potential projects and programs derive from project concept forms that were distributed to the service agencies. To supplement the breadth of types of projects and programs for the Plan, previously-awarded Section 5310 projects were also included as part of the concept list.

Projects and Programs

As part of the outreach process, project concept forms were distributed to approximately 7,000 service agencies to understand the potential project and program needs for the Plan. Collected from November 9, 2020 to January 8, 2021, a total of 40 project concept forms were completed and submitted. Previous Section 5310 awarded projects and programs were also included as part of the concept list to supplement the types of projects and programs that may be applied for in the next grant offering.

These "Traditional" capital and "Other" capital and operating projects and programs represent a comprehensive list of activities that would enhance mobility for seniors and persons with disabilities in LA County and that are eligible for future Metro Section 5310 funding. Note that other target populations groups such as low-income individuals and veterans may benefit from these projects; however, Section 5310 funds are directed to specifically serving seniors and persons with disabilities. This list also reflects information gathered through the outreach process and efforts during the past Coordinated Plans, and feedback collected through the review of this Plan may expand the project and program types.

Categorized by goal, Figure 16 presents a list of project and programs type concepts. The project type, project description, Section 5310 eligibility (Traditional or Other) and examples, provide potential funding applicants context and guidance for future Section 5310 applications.

Figure 16: Projects and Program Concepts

Goal 1: Fund Mobility Options

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Vehicle and fleet expansion and replacement	Acquisition of expansion accessible rolling stock (e.g., buses, vans, minivans) for additional service areas; acquisition of replacement accessible vehicles for existing service areas	Traditional	Purchase of expansion accessible vehicles to provide service to new geographic areas; purchase of replacement accessible vehicles for reliable and continued transportation
Capacity and service level improvements	Acquisition of expansion accessible rolling stock for increased service levels; procurement of internal systems, equipment, or passenger facilities to allow enhanced capacity, frequency and/or service levels	Traditional	Purchase of expansion accessible vans and new dispatching system to increase hours of operation
Dial-a-ride services for First/Last Mile access to stations	Procurement of internal systems; operating assistance; staffing resources	Other	Funds for new or continued operating assistance
New door-through door transportation	Procurement of internal systems; operating assistance; staffing resources	Other	Funds for new or continued operating assistance
Subsidized vanpool/ carshare programs	Procurement of internal systems; operating assistance; staffing resources	Other	Promote and subsidize vanpool initiative

Goal 2: Address Mobility Service Gaps

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Programs to serve inter-county and multi-city trips	Provision of new mobility services between multiple jurisdictions within LA County; provision of connections to locations outside LA County	Other	Coordination of service hours and operational parameters among cities throughout San Gabriel Valley
Programs to serve same-day transportation for critical and non-critical need trips	Provision of new on-demand services for daily travel needs; staffing resources; internal systems	Other	Providing multi-jurisdictional shuttle to access regional facilities.
Pool multi-city agency resources	Establish resource pooling and allocation process; staffing resources, internal systems	Other	Funds for new or continued operating assistance
Fare integration among operators	Study of consistent fare structure and payment methods; internal systems; staffing resources	Other	Study to assess viability of using Transit Access Pass (TAP) card for dial-a-ride payments
First/Last Mile plans and improvements	Construction for First/ Last Mile projects to improve access to transit facilities	Other	Widening sidewalks around obstacles near light rail platform

Goal 3: Provide Support Services

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Travel training programs	Establish programs to educate target populations on travel options, fares, and reimbursement processes; internal systems; staffing resources	Traditional (mobility management)	One-on-one travel counseling to residents at retirement communities
Mileage reimbursement programs for difficult-to-serve trips	Establish programs to provide direct payment for miles traveled by personal vehicles for trips that cannot be served by available transportation options; internal systems; staffing resources; funds for distribution	Other	Establishing travel bank for reimbursement of personal vehicle trips
Expand door-to-door and door-through-door services	Implementation of new door-to-door or door-through-door activities; training programs; staffing resources	Other	Providing training to vehicle operators to safely transport riders to and within buildings
Street improvement projects for access to stops and stations.	Construction for roadway projects to improve access to transit facilities	Other	Paving sidewalks and adding ADA ramps at transit bus and rail stops near key destinations
Subsidies and voucher-based programs	Establish program to provide help funding travel options by target populations; internal systems; staffing resources; funds for distribution	Other	Implementing voucher systems for seniors to utilize shared-ride services

Goal 4: Promote and Improve Information Portals

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Find-a-ride trip planner	Implementation of software to facilitate identification of nearby mobility options; internal systems; staffing resources	Traditional (mobility management)	Developing an app to identify nearest transit options from a destinated location
Social media to promote mobility options	Developing information to share through social media (e.g., Facebook, NextDoor) regarding mobility services a nd operators	Other	Posting service hours, fares and service areas on operator's Facebook page
Real-time transit information	Implementation of provision of real-time transit arrival and departure information (at transit stop or through web portal); internal systems; equipment; staffing resources	Other	Installing variable message signs at community center to display next bus information
Multi-language format guides	Developing and publishing mobility service information in English and non-English languages	Other	Publishing and distributing travel guides in Spanish
Integration of mobility management for target groups into transit centers	Establish mobility management facilities (e.g., information kiosks) and related staffing	Traditional (mobility management)	Establishing an information kiosk at LA Union Station to provide information on transit fares and applicable senior discounts

Goal 5: Enhance Performance Monitoring Systems

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Expand satisfaction surveys	Developing, administering and/ or assessing surveys regarding the satisfaction of current system users; internal systems; staffing resources	Other	Email survey to users of transit system to obtain feedback on timeliness of service
Fund local trip coordinators	Funding of staffing resources for trip coordinators to assist in local trip-making	Traditional (mobility management)	Hourly costs for trip coordinator at local medical center
Promote senior-friendly vehicle operator training	Implementing and/or publicizing of training for operators to improve relations and safety for senior travelers	Other	Enrolling vehicle operators in certified senior-related training program
Performance measurement monitoring and reporting program	Administering and/ or reporting of systemwide performance indicators; internal systems; staffing resources	Other	Collecting data on ridership levels of transit vehicles to determine potential overcrowded conditions

Goal 6: Provide COVID-19 Support Services

PROJECT TYPE	PROJECT DESCRIPTION	SECTION 5310 ELIGIBLE (TRADITIONAL OR OTHER)	EXAMPLE
Safety protocols and standards	Establish protocols and standards for vehicles, facilities and/or staff interactions	Other	Preparation of written safety procedures regarding interactions between staff and drivers
Safety equipment, supplies and services	Purchasing of cleaning and/or disinfectant equipment and supplies, including masks and other PPE supplies; installation of sneeze guards and safety shields; staffing resources; contracting with outside cleaning and disinfecting services	Other	Contract with daily cleaning and disinfecting crew for each vehicle in service
Information, outreach, and communication	Programs to inform target populations about safety measures and processes	Other	Publishing of website content regarding cleaning and disinfecting protocols
Vehicle modifications and upgrades	Modifying vehicles with measures to increase safety and distancing for drivers and passengers, including the installation of safety barriers and modifications to vehicle interior layout to create distance between passengers and drivers	Traditional	Overhaul vehicle interior layout to protect drivers and customers

Source: 2020 Focus Groups; 2021-2024 Human Service Agency Survey and Project Concept Forms; 2021 Community Meeting and Stakeholder Briefings, and FTA Section 5310 Award Recommendations (FY2019).

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Prioritization and Implementation

This chapter presents the methodology and results of the project and program concepts prioritization process. The criteria used in this process included: (1) ranking of importance by service agencies, (2) ability to address mobility needs and service gaps, and (3) feasibility and ability to implement. The prioritized list of projects and programs incorporated the outreach and public input, as well as implementation considerations such as resources, benefits and costs. The purpose of this ranking is to identify Metro's priorities for investments and to help guide private and public transportation operators in planning their own investment approaches.

Prioritization and Implementation

One of the key outcomes of the Plan is to provide a prioritized list of projects and programs to address the mobility needs and service gaps identified for target populations. The Plan's prioritization process, results, and recommendations are based on a comparative evaluation of the projects and program types identified under each goal. The outreach and public input obtained through focus groups, surveys, and project concept forms created the foundation of understanding the critical needs of target populations over the next four years. Coupled with implementation considerations such as availability of resources, feasibility and timeline, evaluation criteria identified priorities among the 29 projects and program types. The purpose of providing a comparison priority ranking is to identify Metro's priorities for investment toward human service transportation and to guide LA County private and public transportation operators in planning their own investment approaches.

In the evaluation process, some projects typically perform well in some criteria, but less satisfactory in others. The overall summary of a project's and program's performance provides an understanding of the advantages and tradeoffs, which allows Metro to incorporate this consideration in the evaluation of Section 5310 funding applications.

Methodology

Evaluation criteria were developed to assess how well each project/program concept satisfies the overall goals and strategies established for the Plan.

Based on the six goals and the resultant strategies, the following were used to assess the overall priority of each project and program type:

> Priorities identified by service agencies

> Addresses target population mobility needs and service gaps

> Ease of implementation and feasibility

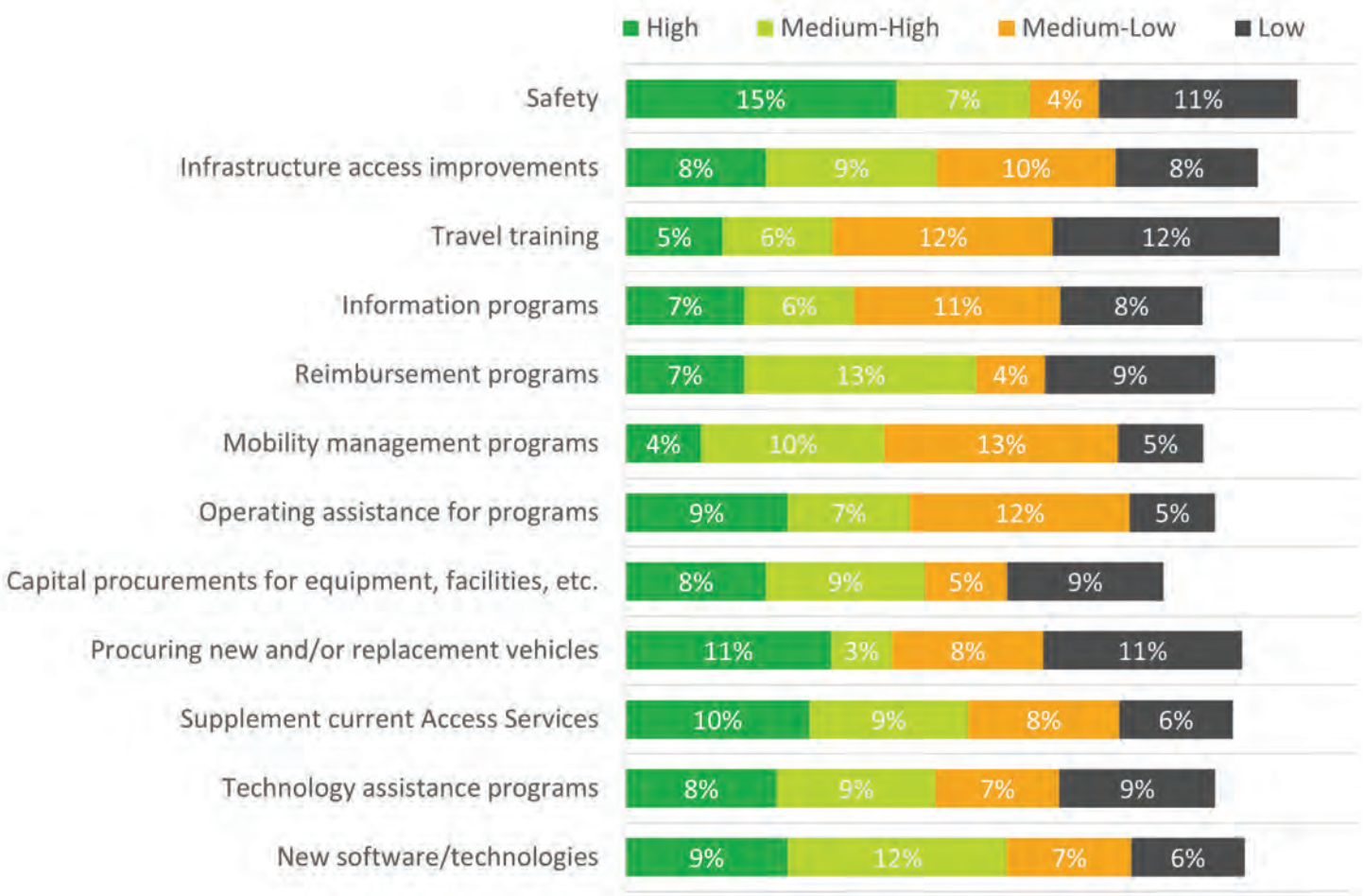
Evaluating Agency Priorities

Evaluating priorities identified by service agencies is important because they reflect the transportation service and operational needs. As part of the agency surveys, the agencies identified and ranked the strategies, activities, and programs that were most important within the next four years (2021-2024). Based on the responses, priorities were ranked as either "high," "medium-high," "medium-low," or "low." Figure 17 presents the priorities identified by the service agencies.

Note that "other" was also given as an open response option. Open-ended responses provided included: educating the public on the cost-effectiveness of transportation systems; the need for seamless, integrated systems for seniors in LA County; and reliable transportation options to augment current services.

Based on the evaluation of service agency responses, safety, procuring new and/or replacement vehicles, and supplementing current Access Services had the highest priorities. Reimbursement programs and new software/ technologies were most often ranked as medium-high priorities. Travel training was most often ranked as a lowest priority compared to the other types of projects and programs.

Figure 17: Priorities by Service Agencies



Source: 2021-2024 Coordinated Plan Update Agency Survey, Question #19

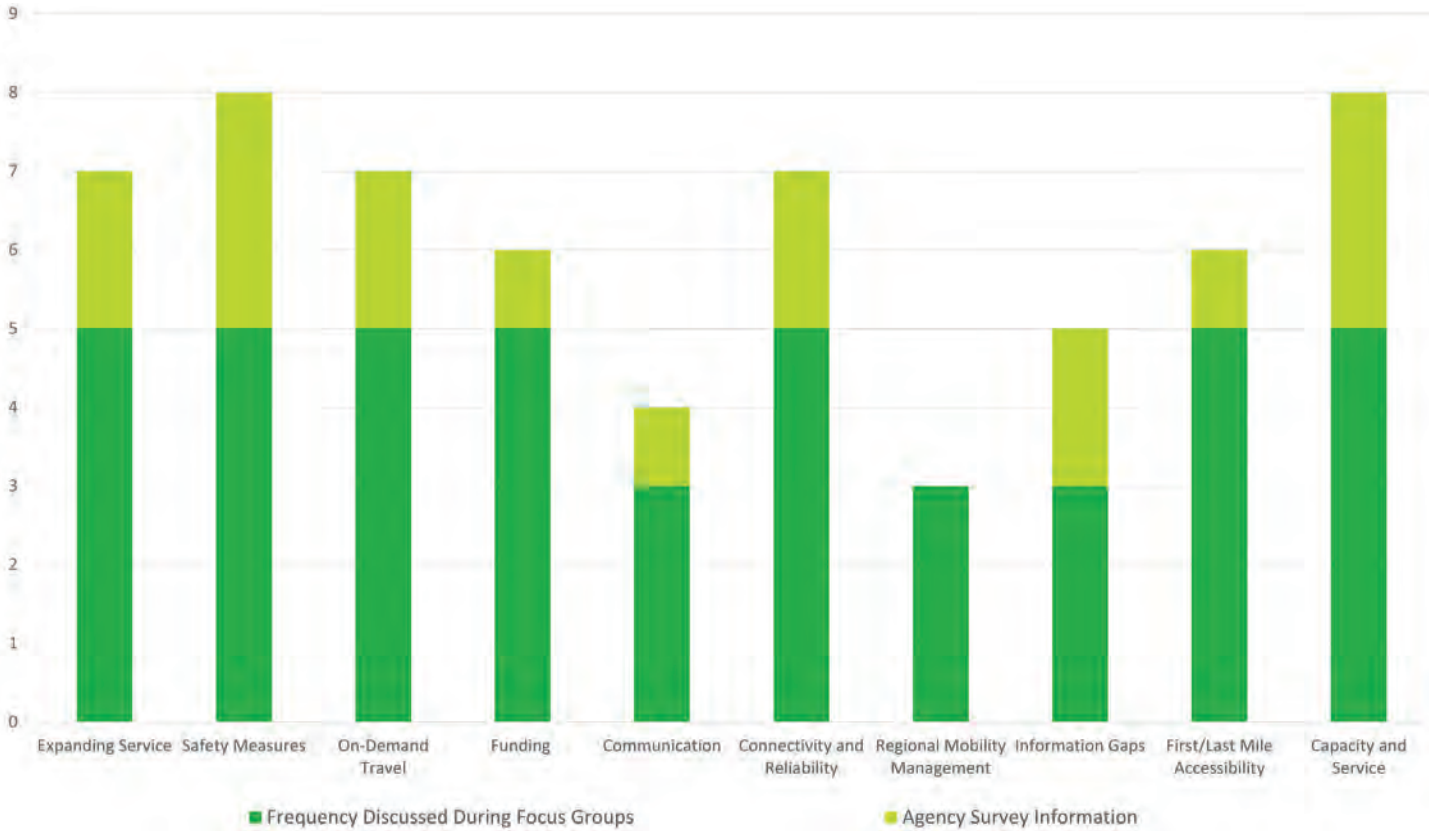
Evaluating Mobility Needs and Service Gaps

The focus group outreach, agency surveys and the demographic analysis for LA County's UZAs identified major mobility needs and service gaps for target populations. Overall, more than 23 percent of LA County's population are seniors and persons with disabilities, and this percentage is expected to continue to increase since these target groups have grown by 22 percent and 94 percent, respectively, over the past four years. As such, existing transportation services for target populations will be strained unless new funding opportunities are identified, and available resources are deployed more efficiently and equitably. The needs and service gaps of the target populations reflect the travel constraints, risks and challenges these population groups will encounter.

The major themes identified from the focus groups guided the ranking of the project and program types. Based on how often the topics were discussed during focus groups, the mobility needs were scored on a 1 (least discussed) to 5 (most discussed) scale. In addition, bonus points were added if the topics were mentioned as either issues or barriers in the agency survey questions. Figure 18 presents the key mobility needs and service gap priorities identified during the outreach process and their representative scores and priority rankings.

As shown in the figure, the major discussion topics cited throughout the outreach process were the need for safety measures as well as capacity and service, followed by expanding services, on-demand travel and connectivity and reliability.

Figure 18: Priorities Identified by Outreach



Source: 2020 Focus Groups; 2021-2024 Coordinated Plan Update Agency Survey and Project Concepts Forms

Feasibility and Implementation

The ease of implementation is also a reflection of the feasibility of the various project and program types. This criterion considers several aspects of implementation including magnitude of capital/operational cost, availability of funding resources, and cost-effectiveness. Although through the Section 5310 application process specific projects will have varying degrees of funding commitments and schedules, this evaluation considers the magnitude of costs, funding commitments and overall ease of implementation for project and program types.

Information gathered through project concept forms included estimated magnitude of capital and operational costs, identification of funding sources that could be leveraged, and cost-effectiveness (level of benefits commensurate of costs) of potential projects.

To reflect the magnitude of costs, capital and operating costs were sorted based on the relatively higher versus lower cost of projects and programs. The "high" versus "low" rating was based on information provided in the project concept forms and previous Section 5310 project allocations. For example, vehicle and fleet expansion and replacement projects had estimated capital costs ranging from $93,000 to $40 million, and the relative operational costs would also be high for new fleet vehicles. As such, these projects would have a high-cost finding. In comparison, information, outreach, and communication programs would have relatively lower capital and operational costs, and therefore received a low-cost finding.

In terms of benefits, the project concept forms identified projects that may provide a higher level of annual passenger trips, vehicle trips, or would directly support seniors, persons with disabilities, or other target populations. As such, projects were scored based on high, medium or lower level of benefits. After identifying the level of benefits, this was compared to the relative magnitude of costs (both capital and operational), and a benefit to cost ratio was developed for each project and program type. In addition, bonus points were added if the project or program had identified potential funding commitments on the project concept forms.

Prioritization of Project and Programs Types

Based on the prioritization methodology, the identified project and program types were evaluated and ranked. From this approach, the overall prioritization rank was determined by accounting for the performance of each concept with respect to: priorities identified by service agencies; addressing the mobility needs and service gaps of the target populations; and feasibility and ease of implementation.

Note that the resulting ranking was based on the relative value of each project or program (i.e., concepts that were determined to better address the three criteria were assigned a higher ranking). Figure 19 presents the overall prioritization ranking of the project and program types.

Figure 19 : Overall Prioritization Ranking

PRIORITY RANKING	PROJECT AND PROGRAM TYPES
Priority 1	Safety protocols and standards
	Safety equipment, supplies and services
	Vehicle and fleet expansion and replacement
	Programs to serve same-day transportation for critical need trips
	Vehicle modifications and upgrades
	Programs to serve inter-county and multi-city trips
	Capacity and service level improvements
	Dial-a-ride services for First/Last Mile access to stations
	New door-through-door transportation
	Pool multi-city agency resources
	Promote senior-friendly vehicle operator training
Priority 2	Expand door-to-door and door-through-door services
	Information, outreach and communication
	Travel training programs
	Mileage reimbursement programs for difficult-to-serve trips
	Real-time transit information
	Integration of mobility management for target groups into transit centers
	Fund local trip coordinators
	Subsidized vanpool/carshare programs
	Programs to serve same-day transportation for non-critical need trips
	First/Last Mile plans and improvements
	Street improvement projects for access to stops and stations
	Subsidies and voucher-based programs
	Multi-language format guides
Priority 3	Find-a-ride trip planner
	Fare integration among operators
	Social media to promote mobility options
	Performance measurement monitoring and reporting program
	Expand satisfaction surveys

Source: Metro 2021. Note: Projects and programs are listed by total scoring value.

Conclusions

Addressing mobility needs and service gaps of target populations requires sustained public participation opportunities to help identify and develop the projects and programs that require investments. This includes supporting existing transportation services, investing in new or expanded transportation services, adapting to changing demographics, responding to unforeseen circumstances related to the COVID-19 pandemic, and continuing our commitment to bridge connections with communities and individuals who have deep relationships and insights into community-specific needs and opportunities.

As the Designated Recipient of urbanized areas within LA County, Metro will allocate Section 5310 funds for projects and programs included in this Plan. Developed through a comprehensive process that included participation by seniors, individuals with disabilities, low-income individuals, veterans, representatives of public, private, and nonprofit transportation and human service providers, and other members of the public, it allows Metro to fulfill its responsibilities as the Designated Recipient of FTA Section 5310 funds. Metro can also certify that Traditional and Other projects and programs selected for funding under the Section 5310 program (or other federal, state, and local funding programs with similar requirements) are included in this locally developed Plan and are therefore eligible for a grant award by the FTA (or by other funding agencies, as applicable).

The highest priorities for service agencies and target population groups are safety protocols and standards and safety equipment, supplies and services; followed by programs to serve same-day transportation and serving critical need trips. More traditional capital investment in vehicle and fleet expansion/replacement, upgrading and modifying vehicles, and better mobility management/pooling multi-agency resources are also high on the priority list.

Given trends identified in the assessment of transportation services, input received during the public participation process, and the goals and strategies developed for the next four years, the highest priority projects and programs have been established. These prioritized projects and programs serve to guide private and public transportation operators in planning their own investment approaches and establishes the list of eligible activities under the Section 5310 program. Overall, the Plan is a roadmap to address the mobility needs and service gaps for seniors, persons with disabilities, as well as low-income individuals and veterans for LA County.

References

Access Services (2017). Access Services Comprehensive Operations Review. Retrieved from *https://accessla.org/uploads/files/Access%20COR%20Final%20Report.pdf*. Accessed on February 20, 2021.

Access Services (2017-2020). Annual Reports. Retrieved from *https://accessla.org/about_us/publications.html*. Accessed on February 20, 2021.

CA Department of Aging, (2021), Facts About California's Elderly. Retrieved form https://aging.ca.gov/Data_and_Reports/Facts_About_California's_Elderly/. Accessed on: March 13, 2021.CCAM (2019). CCAM Strategic Plan 2019-2022. Retrieved from https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations- and-guidance/ccam/about/134436/ccam-strategic-plan-2019-2022.pdf . Accessed on September 30, 2020.

CCAM (2019). CCAM Strategic Plan 2019-2022. Retrieved from *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/ccam/about/134436/ccam-strategic-plan-2019-2022.pdf* . Accessed on September 30, 2020.

City of Los Angeles (2020). Department of Aging. Multipurpose Senior Centers. Retrieved from *https://aging.lacity.org/older-adults/multipurpose-senior-centers-mpcs*. Accessed on September 24, 2020.

Decennial Census (2019). Urbanized Areas. Retrieved from *https://catalog.data.gov/dataset/tiger-line-shapefile-2019-2010-nation-u-s-2010-census-urban-area-national*. Accessed November 4, 2020.

Department of Public Social Services (2020). Greater Avenues for Independence (GAIN) Program. Retrieved from *https://dpss.lacounty.gov/en/jobs/gain.html*. Accessed on September 23, 2020.

Federal Transit Administration (2020). Fact Sheet: Enhanced Mobility of Seniors and Individuals with Disabilities Chapter 53 Section 5310. Retrieved from *https://blog.apastyle.org/apastyle/2018/09/how-to-cite-a-government-report-in-apa-style.html*. Accessed on September 17, 2020.

Federal Transit Administration (2014). FTA C 9070.1G. Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions. Retrieved from *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/C9070_1G_FINAL_circular_4-20-15%281%29.pdf*. Accessed on September 21, 2020.*multipurpose-senior-centers-mpcs*. Accessed on September 24, 2020.

Internal Revenue Service (IRS) (2018). California Opportunity Zones Definition. Retrieved from *https://opzones.ca.gov/faqs/*. November 4, 2020.

Los Angeles County (2020). America's Job Center of California. Senior Services. Retrieved from *https://workforce.lacounty.gov/job-seekers/senior-services/*. Accessed on September 24, 2020.

Los Angeles County (2020). GAIN Online Data System (GOLD). Retrieved from *https://gain.lacoe.edu/home/home.aspx*. Accessed on September 25, 2020.

Metro (2019). 2019 Aging and Disability Transportation Report. Retrieved from *http://media.metro.net/docs/2019_aging_and_disability_transportation_report.pdf*. Accessed on September 23, 2020.

Metro (2019). Accessibility on Metro. Retrieved from *https://www.metro.net/riding/riders-disabilities/*. Accessed on September 23, 2020.

Metro (2020). Board Report. Planning and Programming Committee (Report No. 2019-0807). Retrieved from *https://metro.legistar.com/Legislation.aspx*. Accessed on September 30, 2020.

Metro (2017). Board Report. Planning and Programming Committee (Report No. 2017-0321). Retrieved from *https://metro.legistar.com/Legislation.aspx*. Accessed on September 30, 2020.

Metro (2015). Board Report. Planning and Programming Committee (Report No. 2015-0878). Retrieved from *https://metro.legistar.com/Legislation.aspx*. Accessed on September 30, 2020.

Metro (2018). Board Report. Revised Executive Management Committee (Report No. 2017-0912). Retrieved from *https://metro.legistar.com/Legislation.aspx*. Accessed on September 30, 2020.

Metro (2016). 2016-2019 Coordinated Public Transit – Human Services Transportation Plan for Los Angeles County. Retrieved from *https://media.metro.net/projects_studies/fta5310/images/2016-2019_coordinated_plan_072015.pdf*. Accessed on December 19, 2020.

Metro (2019). Defining Equity Focused Communities. Retrieved from *https://investinginplace.org/wp-content/uploads/2019/08/June-2019-Equity-Focus-Communities-Motion-Map.pdf*. Accessed on December 13, 2020.

Metro (2014). First/Last Mile Strategic Plan. Retrieved from *https://media.metro.net/docs/First_Last_Mile_Strategic_Plan.pdf* . Accessed on September 30, 2020.

Metro (2020). 2020 Long Range Transportation Plan. Retrieved from *https://boardagendas.metro.net/board-report/2020-0465/*. Accessed on September 30, 2020.

Metro (2014). 2014 Short Range Transportation Plan. Retrieved from *https://www.metro.net/projects/short-range-transportation-plan/*. Accessed on September 30, 2020.

Metro (2019). On the Move Riders Program. Retrieved from *https://www.metro.net/around/senior-tips/move-riders-club/*. Accessed on September 23, 2020.

Metro (2019). Next Gen Bus Plan. Retrieved from *https://www.metro.net/projects/nextgen/*. Accessed on September 28, 2020.

Metro (2018). Vision 2028 Strategic Plan. Retrieved from *http://media.metro.net/about_us/vision-2028/report_metro_vision_2028_plan_2018.pdf*. Accessed on September 30, 2020.

Metro (2019). WDACS New Freedom. Retrieved from *https://newfreedom.lacounty.gov/about-us/*. Accessed on September 29, 2020.

Purposeful Aging Los Angeles (2018). Age-Friendly Action Plan 2018-2021. Retrieved from *https://www.purposefulagingla.com/sites/default/files/Age-Friendly%20Action%20Plan%20for%20the%20Los%20Angeles%20Region%202018-2021-V12-compressed.pdf*. Accessed on September 30, 2020.

SCAG (2020). Adopted Connect SoCal, The 2020-2045 RTP/SCS of SCAG. Retrieved from *https://www.connectsocal.org/Documents/Adopted/0903fConnectSoCal-Plan.pdf. Accessed on September 30, 2020.*

U.S. Census Bureau (2019). American Community Survey 1-year estimates. Retrieved from Census Reporter Profile page for Los Angeles-Long Beach-Anaheim, CA Metro Area *http://censusreporter.org/profiles/31000US31080-los-angeles-long-beach-anaheim-ca-metro-area/*. Accessed on March 13, 2021.

U.S. Census Bureau (2019). American Community Survey 1-year estimates. Retrieved from Census Reporter Profile page for New York-Newark-Jersey City, NY-NJ-PA Metro Area *http://censusreporter.org/profiles/31000US35620-new-york-newark-jersey-city-ny-nj-pa-metro-area/*. Accessed on March 13, 2021

U.S. Census Bureau (2015). Estimates from American Community Survey (ACS) Age and Sex estimated from 2014 to 2018. Retrieved from *https://data.census.gov/*. Accessed November 4, 2020.

U.S. Census Bureau (2015). Estimates from American Community Survey (ACS) Commuting estimated from 2014 to 2018. Retrieved from *https://data.census.gov/*. Accessed November 4, 2020.

U.S. Census Bureau (2015). Estimates from American Community Survey (ACS) Disability estimated from 2014 to 2018. Retrieved from *https://data.census.gov/*. Accessed November 4, 2020.

U.S. Census Bureau (2015). Estimates from American Community Survey (ACS) Income and Poverty estimated from 2014 to 2018. Retrieved from *https://data.census.gov/*. Accessed November 4, 2020.

U.S. Census Bureau (2019). Income and Poverty in the United States. Retrieved from *https://www.census.gov/library/publications/2020/demo/p60-270.html*. Accessed December 18, 2020.

U.S. Census Bureau (2015). Estimates from American Community Survey (ACS) Veterans estimated from 2014 to 2018. Retrieved from *https://data.census.gov/*. Accessed November 4, 2020.

U.S. Census Bureau (2013). Estimates from American Community Survey (ACS) Veterans estimated from 2009 to 2013. Retrieved from *https://data.census.gov/*. Accessed December 18, 2020.

U.S. Department of Housing and Urban Development (HUD) (2020). Opportunity Zones Shapefiles. Retrieved from *https://hudgis-hud.opendata.arcgis.com/datasets/ef14329984584 1f8abb95969c01f88b5_0*. Accessed November 4, 2020.

Glossary of Acronyms and Abbreviations

ACC	Accessibility Advisory Committee
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADTN	Aging and Disability Transportation Network
ASL	American Sign Language
AVTA	Antelope Valley Transit Authority
CBO	Community Based Organizations
CCAM	Coordinating Council on Access and Mobility
COR	Comprehensive Operational Reviews
Coordinated Plan	Metro 2021-2024 Coordinated Public Transit-Human Services Transportation Plan
DASH	City of Los Angeles Downtown Area Shuttle
FTA	Federal Transit Administration
FY	Fiscal Year
Guide	Metro Funding Sources Guide
IRS	Internal Revenue Services
LA County	Los Angeles County
LRTP	Long Range Transportation Plan
LTSS	Local Transit Systems Subcommittee
Metro	Los Angeles County Metropolitan Transportation Authority
NTD	National Transit Database
Plan	Metro 2021-2024 Coordinated Public Transit-Human Services Transportation Plan
PPE	Personal Protective Equipment
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
TAC	Technical Advisory Committee
TNCs	Transportation Network Companies
TOC	Transit Oriented Communities
UCLA	University of California, Los Angeles
UZA	Urbanized Areas

Metro®

Los Angeles County
Metropolitan Transportation Authority

Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

File #: 2021-0024, **File Type:** Program **Agenda Number:** 47.

EXECUTIVE MANAGEMENT COMMITTEE
JUNE 17, 2021

SUBJECT: LOS ANGELES AERIAL RAPID TRANSIT PROJECT UPDATE

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE status report on the Los Angeles Aerial Rapid Transit project.

ISSUE

This Board report updates the Board of Directors on the status of the Los Angeles Aerial Rapid Transit project ("Project"). Metro is serving as the California Environmental Quality Act (CEQA) lead agency for the Project, which is completely funded by Aerial Rapid Transit Technologies LLC (ARTT), including Metro staff time. Project status updates to the Board have been presented twice in the past two years, in April 2019 and September 2020.

BACKGROUND

ARTT, a private company, submitted an Unsolicited Proposal to Metro in April 2018 to fund/finance, design, construct, operate, and maintain the Los Angeles Aerial Rapid Transit gondola connecting Union Station and Dodger Stadium. After reviewing the Phase 1 submittal, Metro requested a Phase II of ARTT's Unsolicited Proposal for the Project. In December 2018, Metro formally concluded the Unsolicited Proposal process and began exclusive negotiations with ARTT. The Memorandum of Agreement (MOA) between ARTT and Metro was executed in April 2019. In accordance with the MOA, Metro will act as the lead agency for the Project's environmental clearance.

CEQA lead agency as defined under CEQA is the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment. Cities and counties are frequently CEQA lead agencies for real estate developments, but this is the first time Metro is serving as the CEQA lead agency for a privately initiated and funded project.

DISCUSSION

Alignment
The Project would connect Union Station and the Dodger Stadium via an aerial gondola system. The Project will be generally located in the public right-of-way with stations, towers, and a junction at

various points along the alignment. The Notice of Preparation included two alignment alternatives, referred to as the Broadway Alignment and Spring Street Alignment. Based on stakeholder comments, ARTT is now focusing on the Broadway Alignment as the preferred alignment. Commencing at Union Station, the alignment follows Alameda Street and then continues along Spring Street in a northeast direction through the community of Chinatown to the southernmost corner of the Los Angeles State Historic Park. The alignment would then continue northeast over the western edge of the Los Angeles State Historic Park and the Metro L Line (Gold) to the intersection of North Broadway and Bishops Road. At this intersection, the proposed Project alignment would turn and continue northwest following Bishops Road toward its terminus at Dodger Station. The terminus stations are proposed above Alameda Street adjacent to Union Station and El Pueblo and at Dodger Stadium.

On May 19, 2021, ARTT announced the decision to select its preferred route as the Broadway Alignment, which proposes an intermediate Chinatown / State Park Station at the southern entrance to the Los Angeles State Historic Park. The Chinatown / State Park Station will offer convenient transfers to the Metro L Line (Gold) Chinatown Station. The Station would enhance access to the Los Angeles State Historic Park, identified in Metro's "Transit to Parks Strategic Plan," and include enhancements and additions to the Park's current facilities. The Project also proposes pedestrian improvements between the L Line (Gold) Chinatown Station and the Chinatown / State Park Station.

The Project includes a non-passenger junction at the intersection of North Broadway and Bishops Road and three towers to support the cables and cabins, two along Alameda Street and one on the Dodger Stadium property. Included as Attachment A is the Broadway Alignment with station locations.

Fares

Fares for the Project are still being determined, however ARTT has committed to incorporating equity principles into the community outreach plan, such as providing affordable fares to residents and employees of businesses in adjacent communities (see Attachment B).

Community Engagement

Per the MOA between ARTT and Metro, ARTT bears responsibility for all costs associated with community outreach and public coordination. ARTT established a community outreach plan to garner meaningful engagement and feedback which occurred in four phases. The first phase consisted of the project's kick-off (pre-scoping) period, which included preparation of the community outreach plan. The outreach plan, in accordance with CEQA requirements, was approved by Metro staff in December 2019. The second phase consisted of the Notice of Preparation (NOP) and scoping meetings. The third phase will be the release of the Draft Environmental Impact Report (DEIR). The fourth and final phase will be the approval of the Environmental Impact Report.

The NOP was released in October 2020, followed by the public scoping period that lasted through mid-November 2020. In connection with the NOP and public scoping period, Metro mailed 1,312 NOP postcards and ARTT mailed 1,312 mailers to owners and occupants within 500 feet of the alignment, with additional printed advertisements in the Los Angeles Times, the Chinese Daily, and La Opinion. ARTT sent five email blasts, with approximately 3,250 total (cumulative) emails sent, including five Instagram posts and six Twitter posts. The Project's website via Metro or the Project

website was accessed by 4,617 users.

Due to the pandemic and stay-at-home orders, the scoping meeting was held virtually and had 75 attendees. Comments during the public scoping period were accepted through the virtual open house, email, and mail. Over 300 comments were received during the NOP public scoping process. The virtual open house was open for the entire scoping period and had 741 visitors (Attachment C).

ARTT launched a robust online social media approach in March 2021 and began a neighborhood walk program in April 2021 that includes multilingual walkers and language-specific flyers. As of May 24, 2021, ARTT's walkers had knocked on over 2,500 doors and directly connected with over 1,500 households. ARTT plans to continue its neighborhood walk efforts over the coming months. In May 2021, ARTT commenced a business engagement program, also including multilingual walkers and language-specific flyers.

ARTT held additional local community outreach meetings on June 3, 2021, at 6:00 p.m. and June 5 at 10:00 a.m. to ensure the surrounding communities and stakeholders remain informed with the most up to date information. The meeting notice was advertised on the Project website, Metro's website, via email, text messages, social media, as well as added notice from local elected officials in the area.

Metro/ARTT coordination
Among other items, Metro and ARTT are having an ongoing dialogue regarding the use of Union Station (during and after construction) and potential parking and Transportation Network Company impacts. Metro and ARTT will continue to coordinate schedules for future Forecourt, Link US, West Santa Ana Branch and Alameda Street improvements.

Equity Platform
Metro is the CEQA oversight agency, and that role includes defining impacts on the surrounding communities and addressing mitigations for any adverse impacts. ARTT has voluntarily agreed to adopt Metro's Equity Platform and Metro staff will provide its oversight and review through the parameters of the Equity Platform.

FINANCIAL IMPACT

There is no financial impact to Metro for the CEQA process as all costs will be paid for by ARTT. The MOA between ARTT and Metro provides that no Metro funds will be used in the design, construction, or operation of the Project and all of Metro's staff and consultant time will be paid by ARTT.

Impact to Budget
There is no impact to the budget.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The proposed Project aligns with Strategic Plan Goal 1: Provide high-quality mobility options that enable people to spend less time traveling. The Project has the potential to provide an efficient mobility alternative for people to travel to Dodger Stadium car-free.

NEXT STEPS

The DEIR is expected to be released during fall 2021. Staff will continue to oversee the CEQA process and will report back to the Board at key milestones, including the release of the DEIR and certification of the Final EIR prior to approving the Project.

ATTACHMENTS

Attachment A - Broadway Alignment with Station Locations
Attachment B - Fare Letter to Metro from ARTT
Attachment C - Community Outreach During NOP Scoping Period

Prepared by: Kimberly Sterling, Sr. Transportation Planner, Countywide Planning and Development (213) 922-2559
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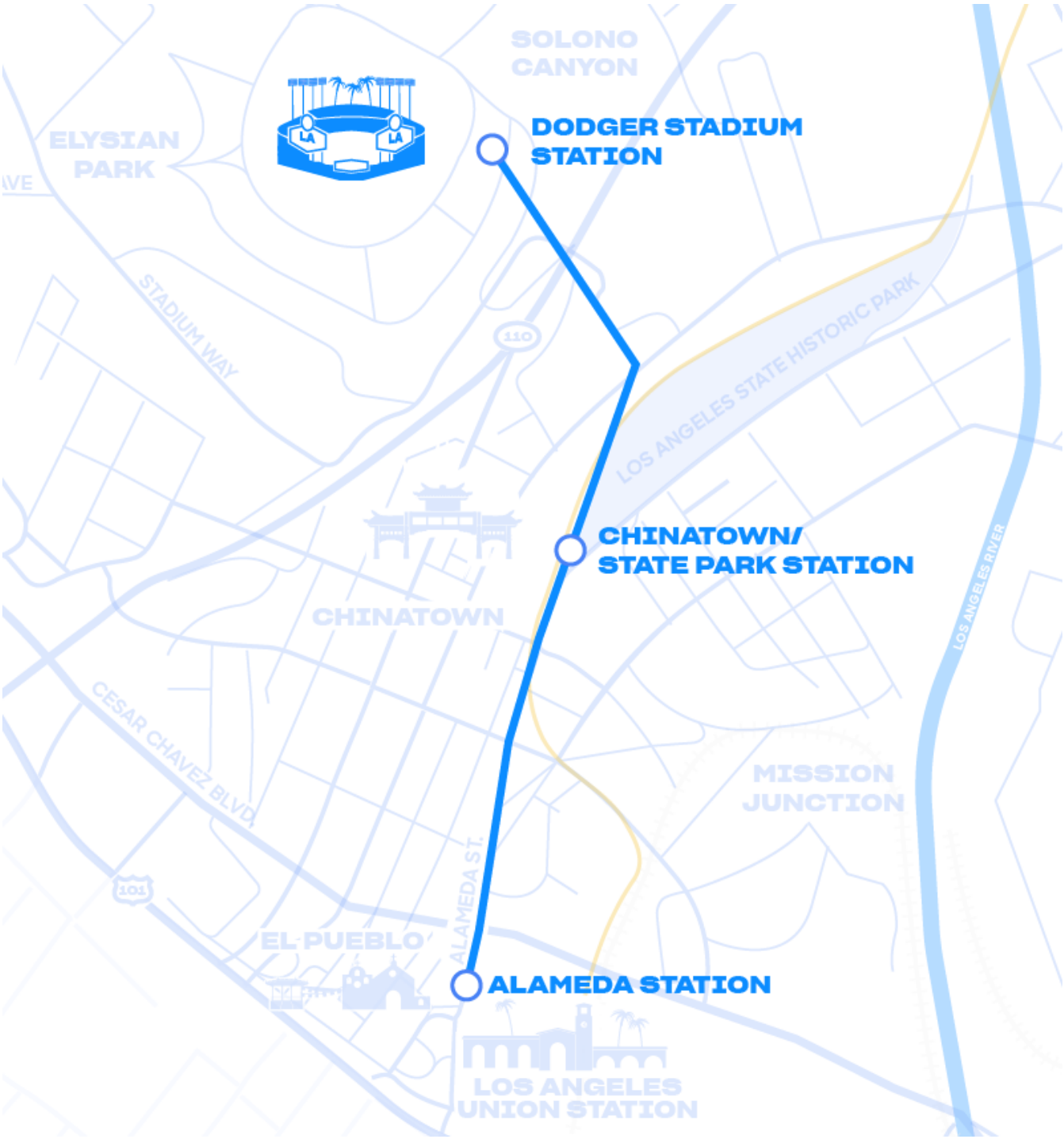
Reviewed by: Jim de la Loza, Chief Planning Officer, (213) 922-2920

Stephanie N. Wiggins
Chief Executive Officer

Attachment A



ATTACHMENT B

LA ART

June 2, 2021

Ms. Holly Rockwell, Senior Executive Officer
Los Angeles County Metropolitan Transportation Authority
1 Gateway Plaza, 22nd Floor
Los Angeles, CA 90012

Dear Ms. Rockwell,

On behalf of Los Angeles Aerial Rapid Transit (LA ART), we would first like to thank you and your colleagues at the Los Angeles County Metropolitan Transportation Authority (Metro) for your partnership as we work together to bring a zero-emission permanent transit link via an aerial rapid transit system to Dodger Stadium. As you know, the preferred alignment has now been identified after public input from the fall 2020 Notice of Preparation scoping process. That alignment, referenced as the Broadway Alignment, travels north from Metro's Union Station along Alameda Street to an intermediate LA ART station proposed adjacent to Metro's Chinatown L Line (Gold) station, and then flying directly adjacent to Metro's tracks adjacent to the Los Angeles State Historic Park, before crossing above North Broadway and along Bishops Road to the Dodger Stadium property.

During the Notice of Preparation scoping process, we received comments about the potential to provide increased transit access to several communities and parks in close proximity to the proposed route. Such community access supports LA ART's and Metro's shared objective to improve connections for regional public transit access by connecting LA ART to Union Station and the growing Metro transit system so that in addition to Dodger fans, improved transit access will be provided for community residents and businesses, as well as park visitors, to enhance the viability of public transit as an additional mobility option. Metro's Transit to Parks program also identifies the potential for Metro system riders from other areas of Los Angeles to

take transit to parks including Elysian Park and Los Angeles State Historic Park.

LA ART's primary goal is to provide service to Dodger games and stadium events, estimated at approximately 100 days per year, mostly in afternoon and evening hours. This goal also maximizes the emission reduction benefits of the LA ART project by replacing automobile trips that are currently utilized for stadium access through adjacent local communities (targeting replacement of 3,000 car trips per event day). To ensure convenient access for event attendees during those pre- and post-event times, LA ART anticipates coordinating special fares for system access reserved for event attendees including time-window ticket reservations.

In addition to event service, LA ART would continue operations daily and provide first/last mile transit service connections to/from the Metro system in communities adjacent to the LA ART route. To that end, we have been working with Metro staff to explore the viability of ensuring that outside of event times, residents and employees of businesses in adjacent communities can ride the system at an affordable fare to access Metro's regional transit system (the "Community Access Program"). We recognize that the Historic Cultural North Neighborhood Council encompasses the route and many adjacent neighborhoods. We are also reaching out to local businesses and institutions, meeting recently with the Chinatown Business Improvement District as well as tenants and institutions in El Pueblo, for example, and will ensure that employees of such businesses and institutions are also included in the Community Access Program. Accordingly, attached is a map with proposed boundaries to identify the locations where this special program will apply for LA ART access outside of event-day periods (the "Community Access Program Area") (see attached map).

Recognizing that the LA ART project will need to reach operational coordination agreements with Metro, including to encourage seamless transfers from Metro's regional transit hub at Union Station to the LA ART system, we propose that outside of event-day periods, residents and employees of businesses located within the Community Access Program Area should be able to utilize their Metro system access pass or individual fare in order to also utilize the LA ART system at no additional cost. If an individual already utilizes one of Metro's special fare offerings (e.g., LIFE program fares, etc.) to encourage transit access for which many Community Access Program Area residents are already eligible, including for seniors and students, or if Metro implements its *Fareless System Initiative,* LA ART access would be consistent with such programs. Coordinating with Metro staff who have developed other innovative transit access programs, we believe this approach is technically feasible. Importantly, it provides significant equity benefits: in addition to reducing emissions in the area adjacent to the LA ART route, the LA ART project can enhance mobility for local residents, including those with limited financial resources and no access to a vehicle.

We respectfully request that Metro work with LA ART to determine the details so that under the Community Access Program, we can ensure LA ART access and seamless transfers between LA ART and the Metro system on the same terms available to Metro riders. Your consideration is very much appreciated, as this offer to provide communities adjacent to LA ART with affordable and enhanced mobility options is consistent with our shared goals including cleaner air, a thriving economy, and improving equity in Los Angeles.

Thank you.

Sincerely,

Jennifer Rivera
Vice President, External Affairs

Cc: David Grannis
Lucinda Starrett, Esq.
Beth Gordie, Esq.


LA ART Community Access Program Area (as proposed June 2021)
DODGER STADIUM
SOLANO CANYON
LOS ANGELES RIVER
DODGER STADIUM STATION
LA STATE HISTORIC PARK
VICTOR HEIGHTS
MISSION JUNCTION
CHINATOWN / STATE PARK STATION
CHINATOWN
WILLIAM MEAD HOMES
EL PUEBLO
ALAMEDA STATION
LA ART ROUTE
ALAMEDA ST
UNION STATION
LOS ANGELES RIVER
110
101

Attachment C

- Virtual Open House during entire Scoping Period
    - 741 visitors
- Virtual Scoping Meeting
    - 75 attendees
- Metro Website
- Project Website
    - 4,617 Users
- NOP Mailing
    - 1,312 – 500 owners and occupants
    - 132 – agency and interested party mailing list
- NOP Print Advertisements
    - LA Times
    - Chinese Daily
    - La Opinion
- ARTT Mailer
    - 1,312 – 500 owners and occupants
    - 132 – agencies and interested parties
- Social Media
    - Instagram – 5 posts
    - Twitter – 6 posts, with 30 re-tweets from other users
- E-Blasts
    - 5 E-blasts, approx. 3,250 total emails sent (cumulative)
- Project Briefings
    - Stakeholders and public sector leadership
- NOP Total Comments
    - 303
    - 65 – Virtual Open House
    - 51 – Virtual Scoping Meeting
    - 11 – Verbal
    - 40 – Written
    - 185 – Emails to Metro

LA ART

Metro EMC Meeting

June 17, 2021

LA ART offers environmental and safety benefits

High-Capacity, Zero-Emission, Quiet Operation

- LA ART's system capacity can move 8,000 to 10,000 people to/ from each Dodger game using environmentally friendly, zero-emission technology
- Aerial technology offers wonderful views of Los Angeles with quiet operations

Reduce Congestion and GHG Emissions, Improve Safety and Air Quality

- LA ART's capacity could replace 3,000 cars trips to/from Stadium events to ease congestion, including on neighborhood streets and SR-110
- Reductions in VMT and congestion lead to reduced GHG emissions and improved air quality and safety
- The emission reductions benefit communities burdened by pollution

LA ART offers many community benefits

Provide Community Access

- Operate daily to connect communities from Elysian Park to Union Station, including El Pueblo, Chinatown, Mission Junction, and Solano Canyon

Increase Park Access

- Provide a transit connection to Elysian Park and at Los Angeles State Historic Park

Link Chinatown and the Los Angeles State Historic Park

- Create a pedestrian link between Metro's L Line (Gold) Chinatown Station and the Park, including landscape and hardscape improvements and shade structures

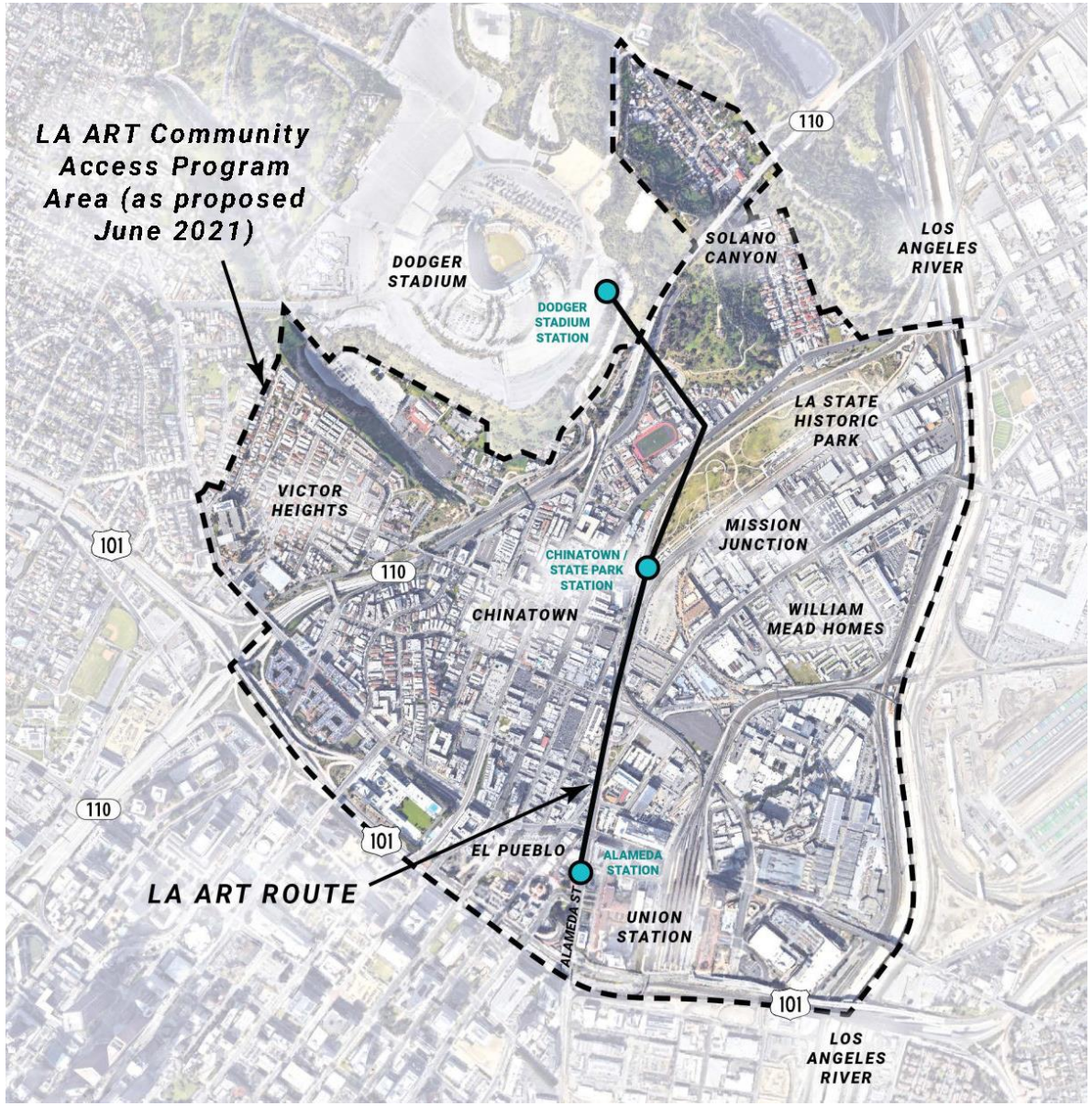
Connect the Los Angeles State Historic Park and North Broadway

- Support State Park's proposed but unfunded pedestrian/bicycle bridge to North Broadway

Enhance visibility and increase visitors to El Pueblo and Chinatown

- Proximity of LA ART to El Pueblo and Chinatown encourages visitors to support local businesses and cultural institutions, and encourage Dodger fans to dine in local restaurants before games

LA ART is committed to providing accessible fares to encourage fan and community ridership



- Fan ridership will be encouraged during event periods (before and after events), likely with time-reserved tickets coordinated with event attendance
- Important to maximize emission reduction benefits and traffic reduction, including transfers from transit
- For the majority of daily operations, for community ridership, LA ART has proposed to Metro that residents and employees of businesses in adjacent communities could utilize their Metro system access for LA ART system rides (LA ART Community Access Program)

LA ART conducted robust outreach during the NOP Scoping Period and project updates respond to stakeholder comments

Overview of NOP Scoping Period Community Outreach

- Virtual Open House during entire Scoping Period (740+ visits)
- Virtual Scoping Meeting (75 attendees)
- Metro Website and LA ART Website (4,615+ visits)
- NOP Mailing and ARTT Mailer (2,880+ mailed)
- NOP Print Advertisements
  - LA Times
  - Chinese Daily
  - La Opinion
- Social Media, E-Blasts (approx. 3,300 posts/emails)
- Project Briefings
  - Stakeholders and Public Sector Leadership

Key thematic comments during NOP Scoping Period

Support Broadway v. Spring Street Alignment

- Support for Broadway Alignment over Spring Street Alignment
- ~75% of comments could support or do support the Broadway Alignment

Support Chinatown Station

- Requests for a "Chinatown Station" closer to the core of Chinatown
- Support for easy connection to Metro's L Line Station

Design

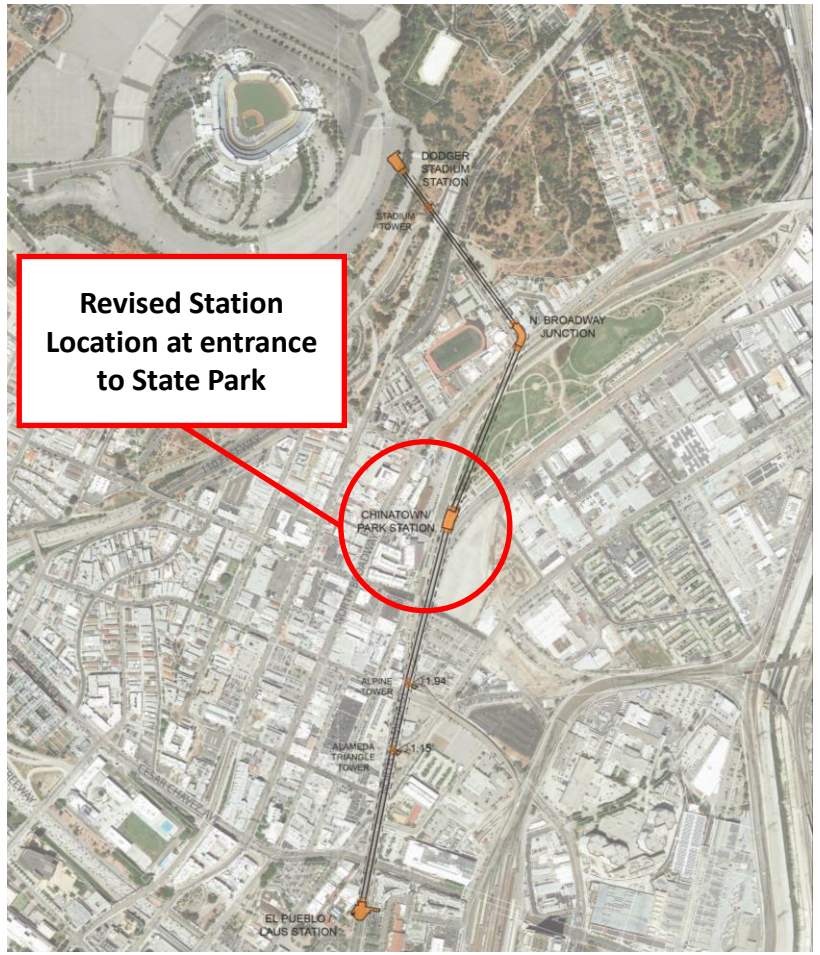
- Concern about size and scale of stations
- Requests for a revised station design that acknowledges the context of the surrounding area

Support Accessible Fares

- Supports accessible fares for local community members

In response to stakeholder comments, the Broadway Alignment will be analyzed in the Draft EIR

Spring Street Alignment



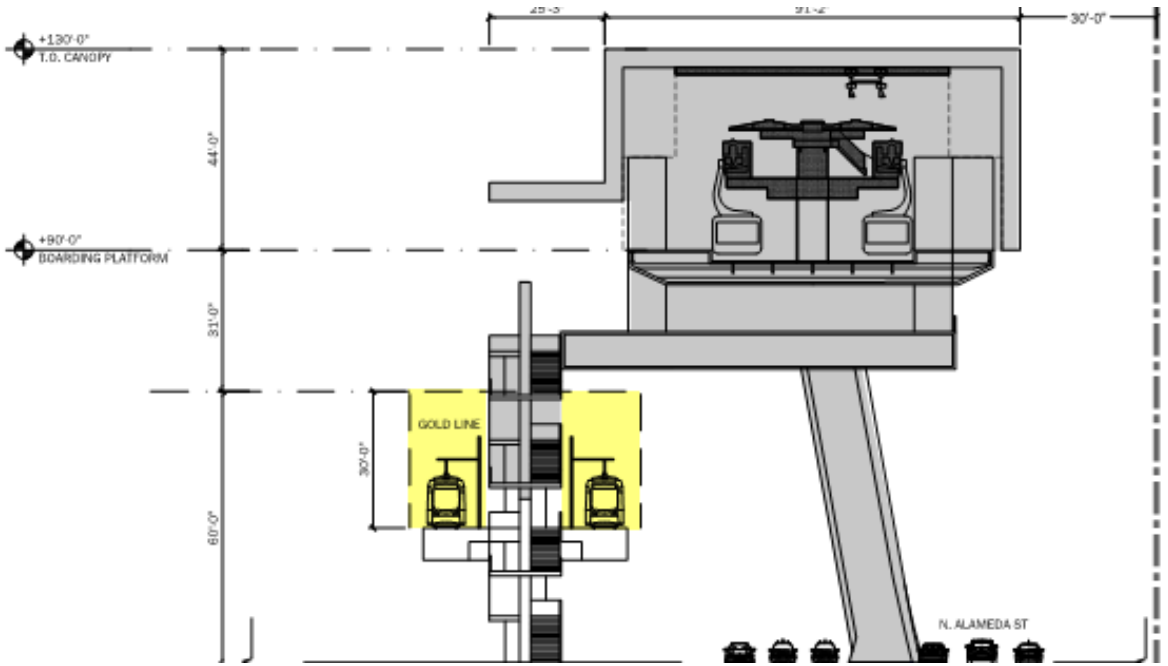
Broadway Alignment

- The Broadway Alignment is primary alignment in the Draft EIR, rather than Spring Street
- Broadway Alignment includes proposed station to respond to stakeholders requests for an intermediate "Chinatown Station"
- Responds to Metro request for a closer connection to the L Line (Gold) Chinatown Station
- Provides access to Chinatown, Los Angeles State Historic Park, William Mead Homes, and the Los Angeles River

The proposed Chinatown / State Parks Station is a short walk from the L Line (Gold) Chinatown Station

- Chinatown / State Parks Station and Metro's L Line Chinatown Station are approximately **500 feet apart**
- **Ground level walk about ~3 minutes** and does not require crossing any streets
  - With additional station walk time for platforms and vertical circulation, passenger can transfer in about 4-5 minutes
- Attractive ADA-compliant walking path for pedestrian transfers can be created including landscaping and driveway safety measures

LA ART and Metro analyzed a direct connection to the L Line (Gold) Chinatown Station, which was found to be infeasible



Impacts and Required Coordination

- LA ART station would need to be located in Alameda near College Street, creating a large structure with height required above L Line
- With high location above Metro catenary system, platforms, vehicles, tracks and passengers, additional infrastructure would be needed to ensure protection from damage from above
- Insertion of stair between Metro's tracks would impact the foundation of the L Line Station
- L Line Station would need to be closed during construction requiring a "bus bridge"
- Future maintenance and repair activities would likely require closure of both Stations
- Ability of existing L Line platform and vertical circulation to handle passenger transfer capacity would require further study
- Metro bus stops at the L Line Station would likely need to be relocated

The Chinatown/State Park Station will enhance pedestrian access to Chinatown and the L Line and provide Park amenities

Proposed Chinatown / State Park Station footprint with potential Park amenities

Walkway improvements along Alameda Street to connect from Metro's L Line (Gold) station to the Park

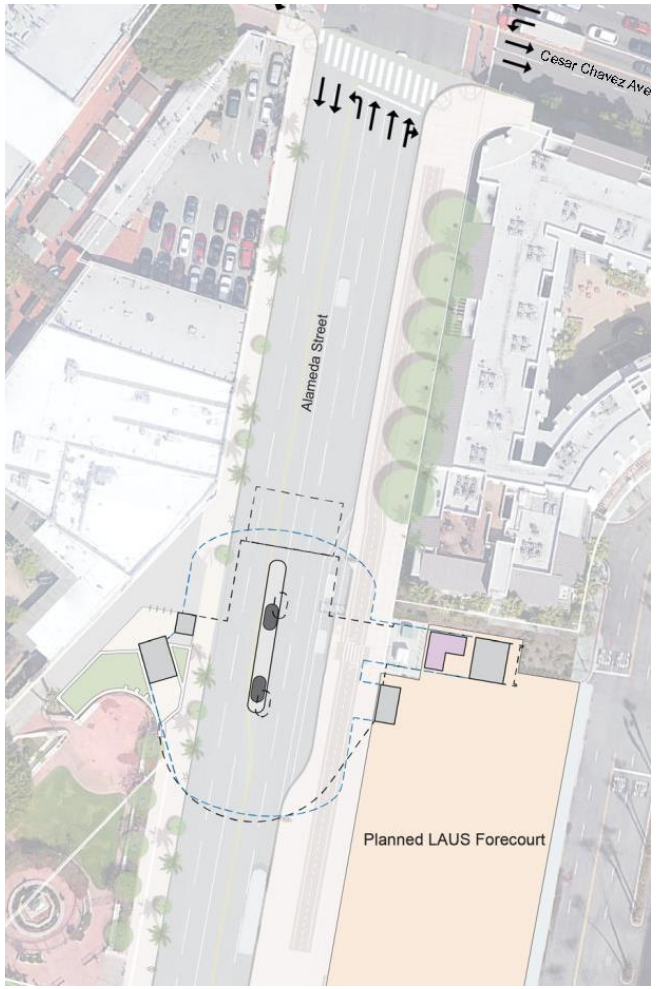
Proposed plaza and potential location for the Park's farmers market at base of Chinatown / State Park Station

View of Chinatown / State Park Station from the northern end of the Park

Potential restrooms and concession and seating improvements in the Park

Potential public access improvements to Los Angeles State Historic Park

Redesigned Alameda Station considers the context of Union Station and El Pueblo



Potential pedestrian plaza at El Pueblo

View looking north towards Alameda Station along Alameda Street

View of Alameda Station through the planned Forecourt at Union Station

Station is not visible from Los Angeles Street looking towards Union Station

Dodger Stadium Station will provide an improved pedestrian experience at Dodger Stadium

Projected Project Review and Implementation Schedule[1]

- **Fall 2020** Notice of Preparation
- **Fall 2021** Draft EIR with Public Comment Period and Two Public Meetings
- **2022** Final EIR with Responses to Comments and Metro Board
- **2022 – 2023** Right of Way Approvals, Commencement of Construction Planning, and Financing Implementation Process
- **2024 – 2026** Financing Implementation, Bidding Process, and Construction
- **2026 – 2027** Completion of Construction, Commencement of System Testing and Inspections
- **2028** Commencement of Operations

[1] Subject to change; each step builds on successful/timely completion of prior tasks

LA ART is underway with an active outreach program in Spring/Summer 2021

- **Community Meetings (June 3rd and 5th)** – over 100 participants
- **Door to Door Canvassing and Local Business Outreach**
- **Phone/Text Outreach, Mailers, Email Communication**
- **Additional Community Organization Briefings**
- **Social Media Communication/Friends of the Gondola**
- **Website Updates**
- **Print Advertisement** – LA Times, La Opinion, Chinese Daily

Metrics as of June 6

1300+

Individuals and businesses near route support project

Informational pamphlet being handed out in local communities available in Chinese, Spanish, and English