ALAMEDA-CONTRA COSTA TRANSIT DISTRICT

STAFF REPORT

MEETING DATE: 1/22/2020 **Staff Report No.** 20-017

TO: **AC Transit Board of Directors**

FROM: **Michael A. Hursh, General Manager**

SUBJECT: **Clean Corridors Plan 2020 Update**

ACTION ITEM

RECOMMENDED ACTION(S):

Consider adopting the AC Transit Clean Corridors Plan 2020, which updates the original Clean Corridors Plan, to coordinate the rollout of zero-emission buses to equity goals while considering vehicle range.

STRATEGIC IMPORTANCE:

Goal - Environmental Improvement
Initiative - Zero Emission Programs

This Plan ties the District's transition to a complete zero-emission fleet directly to equity goals to ensure the disadvantaged communities within the service area are prioritized for zero-emission bus assignments. It identifies specific lines and vehicle assignments for zero-emission conversion based on the communities they serve, their operating divisions, their service levels, and the length of the vehicle assignments themselves.

BUDGETARY/FISCAL IMPACT:

The Clean Corridors 2020 Plan update does not obligate the District to spend any money on buses or infrastructure. It lays out the approximate costs associated with implementing zero-emission vehicles in areas identified by SB 535 as Disadvantaged Communities (DACs). The District's fleet will be required to be entirely emissions-free by 2040 based on the California Air Resources Board (CARB) Innovative Clean Transit (ICT) regulation and as such, the District will be purchasing increasing numbers of zero-emission vehicles over the next two decades to meet that requirement.

BACKGROUND/RATIONALE:

In 2019, the California Air Resources Board (CARB) adopted a new rule, the Innovative Clean Transit (ICT) regulation, which mandates public transit fleets be entirely emission-free by 2040. This new regulation requires that the Alameda-Contra Costa Transit District (District) purchase no more diesel or hybrid buses starting in 2028 given the standard 12-year lifespan of a heavy-duty transit coach, and 2026 given the 14-year lifespan of commuter coaches.

The District is in the enviable position of having operated zero-emission buses (ZEBs) since 2003, beginning with a 30-foot hydrogen fuel-cell electric bus as a pilot test to learn how the technology works. In 2006, the

District purchased and operated three first generation 40-foot hydrogen fuel-cell electric buses and then expanded in 2010 to thirteen second generation 40-foot hydrogen fuel-cell electric buses operated out of the Emeryville and East Oakland bus divisions. In addition, the District has received and will put into service another ten 40-foot and one 60-foot hydrogen fuel-cell electric buses in 2020. The District has also received five battery-electric buses for use out of Division 4 in East Oakland and is in the process of procuring additional zero-emission buses through grants from the Transit and Intercity Rail Capital Program (TIRCP) and the Affordable Housing Sustainable Communities (AHSC) program. The existing TIRCP grant is funding the implementation of the Macarthur-Grand corridor from the Original Clean Corridors Plan and serves as a model for how this update can be used to secure more funding moving forward.

The District adopted the original Clean Corridors Plan in 2017 to begin planning where to prioritize future ZEBs to ensure they are distributed equitably around the service area as well as contribute to meeting regional and state-wide emission-reduction goals. This update of the Clean Corridors Plan ensures the District is well-positioned to continue to apply for and compete for various grant opportunities. The analysis supports specific lines that maximize the benefit of zero-emission buses as they enter the fleet.

Zero-emission bus technologies are in a period of rapid development and change. At this stage, it is too early to tell which technology will dominate the market 10-20 years from now. Having capability to deploy both ZEB technologies creates an opportunity for AC Transit to fully assess battery-electric buses and fuel-cell electric buses, as the technologies matures, to determine which technology can best meet the operational range requirements while being financially efficient and sustainable. The Clean Corridors Plan provides a strategic approach to deploy ZEBs in a manner that is responsive to the needs of customers with a focus on disadvantaged communities. It also coordinates with other concurrent zero-emission studies and plans and serves as the service planning and vehicle assignment element of the District's approach to compliance with the ZEB Rollout Plan required by CARB ICT regulation.

The corridors and communities identified in the Clean Corridors Plan reflect those areas that will be prioritized for zero-emission buses as the District procures more ZEBs. The overall goal of the plan is to have vehicles used on all lines serving these corridors and communities be completely zero-emission by 2040. Staff will update this plan as progress is made on achieving implementation or as conditions/priorities change.

Zero-Emission Vehicle Assignment

The current fleet of 40-foot ZEBs are not dedicated on any specific lines but can be generally found on some of the most frequent lines with the highest ridership such as the 51A and 51B. The new battery-electric buses will be assigned to lines at Division 4. While all vehicles will be zero-emission by 2040 and as such there will be no issue with where they are assigned, it is critical that as these buses enter the fleet, they are distributed throughout the service area based on four key criteria:

1) Environmental Justice and Social Equity,
2) Service Frequency and Ridership,
3) Daily vehicle assignment mileage, and
4) Facility Capability.

The original Clean Corridors Plan identified four key corridors or communities for zero-emission prioritization:

- Richmond: 70, 71, 74, 76, L, LA.
- San Pablo: 72, 72M, 72R.
- Macarthur/Grand: 57, NL, NX-series.
- West Oakland: 14, 29, 36, 62, 88, NL.

The 2020 update expands to include all lines serving DACs, resulting in 13 designated Clean Corridors and 395 peak buses (474 including spares). The 161 buses not serving DACs will be the last to receive zero-emissions vehicles. The Corridors in this update are as follows:

- Foothill: 40
- International: 1/1T (BRT)
- Fruitvale: 19, 20, 21, 39, 47, 51A, 54, O
- North Oakland: 6, 12, 18
- West Berkeley: 51B, 52, 80, C, F, J, Z
- San Pablo: 72, 72M, 72R.
- Coliseum: 45, 46, 46L, 73, 90, 98
- West Oakland: 14, 29, 36, 62, 88.
- Downtown Oakland: 33, 96, Broadway Shuttle
- Richmond: 70, 71, 74, 76, L, LA.
- Macarthur/Grand: 57, NL, NX-series.
- Hayward: 41, 56, 60, 83, 86, 97, M, S
- Fremont: 200, 212, 216, 232, 251, SB

Implementation

In the interest of ensuring the District has flexibility with respect to procuring and assigning ZEBs in the future, the Clean Corridors Plan is not prescriptive in terms of which corridors will be the first to go completely zero-emission. However, with the existing and planned ZEB infrastructure at Divisions 2 and 4, staff anticipate corridors served by those Divisions to be the first to be implemented until ZEB fueling/charging capacity is maximized. The Facilities Unitization Plan, approved by the Board in February 2019, allows for ZEB infrastructure upgrades. As funding is secured to deliver the plan, this will be another opportunity to phase in more ZEB infrastructure capacity at the Divisions.

ADVANTAGES/DISADVANTAGES:

Advantages

The Clean Corridors 2020 Plan provides staff with clarity regarding which lines and facilities should be prioritized for zero-emission vehicles as the District transitions to a completely zero-emission fleet by 2040. Staff will be able to use the direction provided by the Board through the adoption of this plan to make decisions regarding where to install zero-emission infrastructure and ensure operation of ZEBs are prioritized where they will have the greatest impact.

In addition, the Plan provides staff with clarity regarding which lines should be prioritized for inclusion within grant applications for dollars necessary to procure new or replacement zero-emission vehicles.

The Clean Corridors 2020 Plan is not binding and will be revised regularly to reflect changing conditions or priorities.

Disadvantages
The plan lays out specific lines and communities which should be prioritized for zero-emission buses, but it is not a binding document, only an effort to set a vision for where to prioritize zero-emission buses and infrastructure as they are procured by the District.

ALTERNATIVES ANALYSIS:

There are two alternatives to adopting the Clean Corridors Plan: 1) request staff make adjustments to the criteria used to select the communities/corridors included in the plan, or 2) decline to approve the plan. Staff recommend neither of these since the criteria prioritize equity, community benefit, usage and feasibility. In addition, without a plan, the District would not be in a strategic position to apply for ZEB and ZEB infrastructure grant funding or in compliance with CARB ICT regulation.

PRIOR RELEVANT BOARD ACTION/POLICIES:

SR 17-325 Clean Corridors Plan
SR 19-054 Zero Emissions Bus Study
SR 19-057 Facilities Utilization Plan

ATTACHMENTS:

1. Clean Corridors 2020 Update

Prepared by:
Michael Eshleman, Service Planning Manager

In Collaboration with:
Sally Goodman, Title VI Program Administrator
Diann Castleberry, External Affairs Representative
Evelyn Eng, Capital Planning & Grants Manager
Mika Miyasato, Senior Transportation Planner
Jim Cunradi, Transportation Planning Manager

Approved/Reviewed by:

Claudia Burgos, Director of Legislative Affairs & Community Relations
Beverly Greene, Executive Director of External Affairs, Marketing & Communications
Chris Andrichak, Director of Management and Budget
Salvador Llamas, Chief Operating Officer
Robert del Rosario, Director of Service Development and Planning
Ramakrishna Pochiraju, Executive Director of Planning & Engineering