



# Orange County Transportation Authority

## Transit Committee Agenda Thursday, March 12, 2026 at 9:30 a.m.

Board Room, 550 South Main Street, Orange, California

### **Committee Members**

Fred Jung, Chair  
Vicente Sarmiento, Vice Chair  
Valerie Amezcua  
Lauren Kleiman  
Stephanie Klopfenstein  
Carlos A. Leon  
Janet Nguyen  
Tam T. Nguyen

### **Accessibility**

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the Orange County Transportation Authority (OCTA) Clerk of the Board's office at (714) 560-5676, no less than two business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

### **Agenda Descriptions**

Agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Committee may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

### **Public Availability of Agenda Materials**

All documents relative to the items referenced in this agenda are available for public inspection at [www.octa.net](http://www.octa.net) or through the Clerk of the Board's office at the OCTA Headquarters, 600 South Main Street, Orange, California.

### **Meeting Access and Public Comments on Agenda Items**

Members of the public can either attend in-person or access live streaming of the Committee meetings by clicking this link: <https://octa.legistar.com/Calendar.aspx>

### **In-Person Comment**

Members of the public may attend in-person and address the Board regarding any item within the subject matter jurisdiction of OCTA. Please complete a speaker's card and submit it to the Clerk of the Board and notify the Clerk regarding the agenda item number on which you wish to speak. Speakers will be recognized by the Chair at the time of the agenda item is to be considered by the Board. Comments will be limited to three minutes. The Brown Act prohibits the Board from either discussing or taking action on any non-agendized items.

# TRANSIT COMMITTEE MEETING AGENDA

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## Written Comment

Written public comments may also be submitted by emailing them to ClerkOffice@octa.net, and must be sent by 5:00 p.m. the day prior to the meeting. If you wish to comment on a specific agenda item, please identify the item number in your email. All public comments that are timely received will be part of the public record and distributed to the Board. Public comments will be made available to the public upon request.

## Call to Order

## Pledge of Allegiance

Director Kleiman

## Closed Session

There are no Closed Session items scheduled.

## Special Calendar

There are no Special Calendar matters.

## Consent Calendar (Items 1 through 4)

All items on the Consent Calendar are to be approved in one motion unless a Committee Member or a member of the public requests separate action or discussion on a specific item.

### 1. Approval of Minutes

Clerk of the Board

#### **Recommendation(s)**

Approve the minutes of the February 12, 2026, Transit Committee meeting.

#### **Attachments:**

[Minutes](#)

### 2. Amendment to Agreement for Rideshare and Vanpool Marketing, Design, and Advertising Services

Kristopher Hewkin/Maggie McJilton

#### **Overview**

On February 26, 2024, the Orange County Transportation Authority Board of Directors approved an agreement with Jovenville, LLC, doing business as We The Creative, for consultant support services for rideshare and vanpool marketing, design, and advertising services for a two-year initial term, with two, two-year option terms. Staff is requesting Board of Directors' approval to exercise the first option term effective May 1, 2026, through February 29, 2028.

#### **Recommendation(s)**

Authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-3-2607 between the Orange County Transportation Authority and Jovenville, LLC, doing business as We The Creative, to exercise the first option term, effective May 1, 2026 through February 29, 2028, in the amount of \$490,000, for continued

## TRANSIT COMMITTEE MEETING AGENDA

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consultant support services for rideshare and vanpool marketing, design, and advertising services. This will increase the maximum obligation of the agreement to a total contract value of \$1,106,667.

**Attachments:**

[Staff Report](#)

[Attachment A](#)

**3. Master Agreements for Transit and Intercity Rail Capital Program and State-Funded Transit Projects**

Louis Zhao/Rose Casey

**Overview**

The Orange County Transportation Authority must execute two master agreements with the California Department of Transportation to access Transit and Intercity Rail Capital Program funding and other state funding for transit capital and operations projects. Board of Directors' approval is requested to execute these agreements.

**Recommendation(s)**

- A. Authorize the Chief Executive Officer to negotiate and execute Master Agreement No. 64OCTAMA2026 for the Transit and Intercity Rail Capital Program and all necessary program supplement agreements with the California Department of Transportation for the reimbursement of Transit and Intercity Rail Capital Program-funded projects.
- B. Authorize the Chief Executive Officer to negotiate and execute the Master Agreement for state-funded transit projects, Agreement No. 64A0172 2026, and all necessary program supplement agreements with the California Department of Transportation for the reimbursement of state-funded transit projects.
- C. Approve Orange County Transportation Authority Resolution No. 2026-013, as required by the California Department of Transportation, to execute the above agreements No. 64OCTAMA2026 and 64A0172 2026 and authorize the Chief Executive Officer, or his designee, to sign future program supplements.

**Attachments:**

[Staff Report](#)

[Attachment A](#)

[Attachment B](#)

[Attachment C](#)

# TRANSIT COMMITTEE MEETING AGENDA

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## 4. **May 2026 OC Bus Service Change**

Eric Hoch/Rose Casey

### **Overview**

The proposed May 2026 OC Bus service change implements changes consistent with Orange County Transportation Authority's regular service change process. These changes will result in updated schedules and improved service reliability. Minor adjustments to bus schedules in response to customer comments and coach operator feedback are also included.

### **Recommendation(s)**

Receive and file as an information item.

### **Attachments:**

[Staff Report](#)

[Attachment A](#)

[Attachment B](#)

## **Regular Calendar**

## 5. **Zero-Emission Bus Program Update**

Cliff Thorne/Johnny Dunning, Jr.

### **Overview**

The Orange County Transportation Authority Board of Directors adopted the zero-emission rollout plan in 2020 and subsequently approved the purchase of zero-emission buses and infrastructure to gain necessary operational and technological experience in preparation for transitioning the Orange County Transportation Authority's bus fleet to zero-emission technologies as required by the State. This report provides an update on the zero-emission bus program performance and deployment efforts.

### **Recommendation(s)**

Receive and file as an information item.

### **Attachments:**

[Staff Report](#)

[Presentation](#)

## **Discussion Items**

## 6. **Bimonthly Transit Performance Report**

Kim Tucker/Johnny Dunning, Jr.

### **Overview**

Staff will provide an update on the OC Bus and OC ACCESS services.

### **Attachments:**

[Presentation](#)

## **TRANSIT COMMITTEE MEETING AGENDA**

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7. **Public Comments**

8. **Chief Executive Officer's Report**

9. **Committee Members' Reports**

10. **Adjournment**

The next regularly scheduled meeting of this Committee will be held:

**9:30 a.m. on Thursday, April 9, 2026**

OCTA Headquarters  
550 South Main Street  
Orange, California



**Committee Members Present**

Fred Jung, Chair  
Vicente Sarmiento, Vice Chair  
Lauren Kleiman  
Stephanie Klopfenstein  
Janet Nguyen  
Tam T. Nguyen

**Staff Present**

Jennifer L. Bergener, Deputy Chief Executive Officer  
Sahara Meisenheimer, Clerk of the Board Specialist, Senior  
Erin Galang, Clerk of the Board Specialist, Assistant  
Andrea West, Clerk of the Board  
James Donich, General Counsel  
OCTA Staff

**Committee Members Absent**

Valerie Amezcua  
Carlos Leon

**Call to Order**

The February 12, 2026, meeting of the Transit Committee was called to order by Committee Chair Jung at 9:00 a.m.

**Special Calendar**

**1. Committee Meeting 2026 Schedule**

Jennifer L. Bergener, Deputy Chief Executive Officer (DCEO), presented this item and noted that the recommended start time of the meeting be moved to 9:30 a.m.

A motion was made by Committee Vice Chair Sarmiento, seconded by Director Klopfenstein, and declared passed by those present to approve the 2026 meeting schedule for the Transit Committee.

Director J. Nguyen was not present to vote on this item.

A public comment was heard from Don Hammonds.

**2. Roles and Responsibilities of the Transit Committee**

Jennifer L. Bergener, Deputy Chief Executive Officer (DCEO), presented this item.

A motion was made by Director Klopfenstein, seconded by Director T. Nguyen, and declared passed by those present to approve the 2026 Transit Committee Roles and Responsibilities.

Director J. Nguyen was not present to vote on this item.

A public comment was heard from Don Hammonds.



### **Consent Calendar (Items 3 and 4)**

**3. Approval of Minutes**

A motion was made by Committee Chair Jung, seconded by Director Klopfenstein, and declared passed by those present to approve the minutes of the December 11, 2025 Transit Committee meeting.

Director Kleiman abstained from this item.

**4. Sole Source Agreement for the Purchase of Six Cummins Compressed Natural Gas-Powered Engines**

A public comment was heard from Don Hammonds.

Cliff Thorne, Director of Maintenance, provided a presentation and explained why this is a sole source agreement.

A motion was made by Committee Chair Jung, seconded by Director Klopfenstein, and declared passed by those present to authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C255027 between the Orange County Transportation Authority and Cummins, Inc., in the amount of \$463,697 for the purchase of six replacement Cummins 8.9-liter L9N 280HP compressed natural gas-powered engines.

### **Regular Calendar**

**5. Award the Agreement for the Bus Stop Electronic Signage Expansion Project**

Jeff Tatro, Section Manager of Scheduling and Bus Operations Support, provided a PowerPoint presentation.

A public comment was heard from Paul Hyek and Don Hammonds.

A motion was made by Director Klopfenstein, seconded by Director Sarmiento, and declared passed by those present to:

- A. Approve the selection of Urban Solar Corporation as the firm to provide electronic signage for selected bus stop locations.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-5-4117 between the Orange County Transportation Authority and Urban Solar Corporation, in the amount of \$1,537,918, for a five-year term, to provide electronic signage for selected bus stop locations.



**6. Measure M2 Community-Based Transit Circulators Program Project V Ridership Report**

Charvalen Alacar, Section Manager of Local Programs, provided a PowerPoint presentation.

A public comment was heard from Don Hammonds.

A motion was made by Director Kleiman, seconded by Director Sarmiento, and declared passed by those present to:

- A. Receive and file the Project V Ridership Report.
- B. Due to sustained improvements in ridership and financial viability, approve an exception to the Project V program guidelines for the City of Dana Point to waive the requirement for city council action for falling below the performance standard in a prior semi-annual review reporting period.

**Discussion Items**

**7. Bimonthly Transit Performance Report**

Melissa Mungia, Department Manager of Scheduling and Bus Operations Support, provided a PowerPoint presentation.

Public comments were heard from Paul Hyek and Don Hammonds.

No action was taken on this item.

**8. Public Comments**

No public comments were received.

**9. Chief Executive Officer's Report**

Jennifer L. Bergener, DCEO, reported on the following:

- On Item Seven, the PowerPoint that was presented today is different than what is in the Agenda Packet. The last page of the PowerPoint is the correct version in the Agenda Packet.
- Metrolink's Annual Customer Appreciation Day

**10. Committee Members' Reports**

There were no Committee Member's Reports.



**11. Adjournment**

The meeting was adjourned at 9:51 a.m.

The next regularly scheduled meeting of this Committee will be held:

**9:30 a.m. on Thursday, March 12, 2026**

OCTA Headquarters  
550 South Main Street  
Orange, California



**March 12, 2026**

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer 

**Subject:** Amendment to Agreement for Rideshare and Vanpool Marketing, Design, and Advertising Services

**Overview**

On February 26, 2024, the Orange County Transportation Authority Board of Directors approved an agreement with Jovenville, LLC, doing business as We The Creative, for consultant support services for rideshare and vanpool marketing, design, and advertising services for a two-year initial term, with two, two-year option terms. Staff is requesting Board of Directors' approval to exercise the first option term effective May 1, 2026, through February 29, 2028.

**Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-3-2607 between the Orange County Transportation Authority and Jovenville, LLC, doing business as We The Creative, to exercise the first option term, effective May 1, 2026 through February 29, 2028, in the amount of \$490,000, for continued consultant support services for rideshare and vanpool marketing, design, and advertising services. This will increase the maximum obligation of the agreement to a total contract value of \$1,106,667.

**Discussion**

The Orange County Transportation Authority (OCTA) serves as the county transportation commission (CTC) for Orange County. OCTA and the following CTCs form the Regional Rideshare Partnership:

1. Los Angeles County Metropolitan Transportation Authority
2. Riverside County Transportation Commission
3. San Bernardino County Transportation Authority
4. Ventura County Transportation Commission

The CTCs have been jointly providing regional rideshare services to employers since the Southern California Association of Governments ceased to provide these services in 2003, at which time responsibility shifted to the five CTCs to allow for greater local control. In this context, rideshare refers to all modes of transportation other than driving alone to work, including commuting to work by bus, train, carpool, vanpool, walking, and bicycling – all which reduce congestion and improve air quality.

Similar to other CTCs in the South Coast Air Basin, OCTA conducts marketing campaigns and promotions that encourage commuters to rideshare and that help employers comply with the South Coast Air Quality Management District's Rule 2202 - On-Road Motor Vehicle Mitigation Options, which provides employers of 250 or more employees with a number of options to reduce mobile-source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements.

OCTA's rideshare programs and services include the following:

- Perk Pass – discounted bus passes for employers
- Average vehicle ridership survey calculation and data analysis
- Metrolink's Corporate Pass Program – discounted passes for employers
- Guaranteed Ride Home – provides employees who rideshare the opportunity to reimburse the cost of an emergency trip home
- Vanpool Program – promotes commuting as a group in a shared vehicle
- Employer outreach to encourage rideshare program participation
- Employer marketing training workshops and network meetings
- Marketing campaigns for Rideshare Week, Bike to Work Week, and Dump the Pump
- Ride matching and vanpool formation services
- Rule 2202 resources and support services

Since 2007, OCTA has provided a vanpool program, OC Vanpool Program, contracting with vanpool companies to provide commuters with a convenient and cost-effective transportation option. A vanpool consists of a group of four to 15 people who regularly commute to work in a shared vehicle. OCTA provides all marketing and customer outreach for the program and tracks the reduced vehicle miles traveled.

Over the last two years, OCTA has utilized Jovenville, LLC, doing business as We The Creative (We The Creative), to conduct marketing campaigns, promotions, and outreach in order to:

- Increase awareness of OCTA's rideshare programs and services
- Stimulate use of alternative transportation modes
- Grow ridesharing participation by commuters and employers
- Expand the OC Vanpool Program participation

These specific services have included:

1. Integrated strategic marketing plan development and campaign development
2. Email, social media, and mobile marketing
3. Digital and traditional media planning, buying, and optimization
4. Diversity marketing and translation services
5. Print and digital creative development, including website development, video production, and photography
6. Production and printing services

### ***Procurement Approach***

The original procurement was handled in accordance with OCTA's Board of Directors (Board)-approved procedures for professional and technical services. The original agreement was awarded on a competitive basis and includes a two-year initial term, in the amount of \$616,667, and two, two-year option terms. The agreement was previously amended as shown in Attachment A.

The proposed Amendment No. 4 is to exercise the first option term through February 29, 2028, and increase the maximum obligation in the amount of \$490,000, bringing the total contract value to \$1,106,667. The budget for this amendment is based on the rates as negotiated in the original agreement. Exercising the first option term will allow We The Creative to continue providing consultant support services for rideshare and vanpool marketing, design, and advertising services through February 29, 2028.

### **Fiscal Impact**

The cost of the program was included in OCTA's Fiscal Year 2025-26 budget. The program is funded with Congestion Mitigation and Air Quality grant funds in People and Community Engagement Division Account No. 1841-7519-A2237-L75.

**Summary**

In order to continue marketing, design, and advertising services for the OC Vanpool Program, staff recommends the Board of Directors authorize the Chief Executive Officer to negotiate and execute Amendment No. 4 to Agreement No. C-3-2607 between the Orange County Transportation Authority and Jovenville, LLC, doing business as We The Creative, to exercise the first option term of the agreement, in the amount of \$490,000, effective May 1, 2026 through February 29, 2028. This will increase the maximum obligation of the agreement to a total contract value of \$1,106,667.

**Attachment**

- A. Jovenville, LLC, doing business as We The Creative, Agreement No. C-3-2607 Fact Sheet

**Prepared by:**



Kristopher Hewkin  
Marketing Specialist, Senior  
Marketing  
(714) 560-5331



Pia Veesapen  
Director, Contracts Administration  
and Materials Management  
(714) 560-5619

**Approved by:**



Maggie McJilton  
Executive Director,  
People and Community Engagement  
(714) 560-5824

**Jovenville, LLC, doing business as We The Creative  
Agreement No. C-3-2607 Fact Sheet**

1. February 26, 2024, Agreement No. C-3-2607, \$616,667 approved by the Board of Directors (Board).
  - Jovenville, LLC, doing business as We The Creative to provide rideshare and vanpool marketing services.
  - Two-year initial term effective March 1, 2024 through February 28, 2026, with two, two-year option terms.
2. October 7, 2024, Amendment No. 1 to Agreement No. C-3-2607, \$0.00, approved by the Contracts Administration and Materials Management Department (CAMM).
  - Revised key personnel and added subcontractors.
3. July 30, 2025, Amendment No. 2 to Agreement No. C-3-2607, \$0.00, approved by CAMM.
  - Revised key personnel.
4. November 3, 2025, Amendment No. 3 to Agreement No. C-3-2607, \$0.00, approved by CAMM.
  - Revised key personnel.
  - Extended the term of the agreement effective March 1, 2026 through April 30, 2026.
5. March 23, 2026, Amendment No. 4 to Agreement No. C-3-2607, \$490,000, pending approval by the Board.
  - Exercise the first option term of the agreement effective May 1, 2026 through February 29, 2028.

Total committed to Jovenville, LLC, doing business as We The Creative, under Agreement No. C-3-2607: \$1,106,667.



**March 12, 2026**

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Master Agreements for Transit and Intercity Rail Capital Program and State-Funded Transit Projects

A handwritten signature in blue ink, appearing to read "Darrell E. Johnson", is written over the "From:" field.

**Overview**

The Orange County Transportation Authority must execute two master agreements with the California Department of Transportation to access Transit and Intercity Rail Capital Program funding and other state funding for transit capital and operations projects. Board of Directors' approval is requested to execute these agreements.

**Recommendations**

- A. Authorize the Chief Executive Officer to negotiate and execute Master Agreement No. 64OCTAMA2026 for the Transit and Intercity Rail Capital Program and all necessary program supplement agreements with the California Department of Transportation for the reimbursement of Transit and Intercity Rail Capital Program-funded projects.
- B. Authorize the Chief Executive Officer to negotiate and execute the Master Agreement for state-funded transit projects, Agreement No. 64A0172 2026, and all necessary program supplement agreements with the California Department of Transportation for the reimbursement of state-funded transit projects.
- C. Approve Orange County Transportation Authority Resolution No. 2026-013, as required by the California Department of Transportation, to execute the above agreements No. 64OCTAMA2026 and 64A0172 2026 and authorize the Chief Executive Officer, or his designee, to sign future program supplements.

**Background**

On May 24, 2019, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved Master Agreement No. 64OCTAMA for the Transit and Intercity Rail Capital Program (TIRCP). The master agreement governs the

general use of TIRCP funding. The current agreement with the California Department of Transportation (Caltrans) expired on September 30, 2024, and must be updated if OCTA is to access TIRCP funding for new grants and allocations.

On January 11, 2016, the Board approved Master Agreement No. 64A0172 A01 for state-funded transit projects. The Master Agreement governs the general use of state funds for transit projects in the County. The current agreement with Caltrans expired on February 1, 2026, and must be updated if OCTA is to access state funding for transit projects.

Ongoing projects covered by program supplements to the current master agreements will not be affected by these expirations. Caltrans monitors the execution and expiration of these master agreements. Master agreements are updated when new transportation funding legislation is enacted or if an agency is awarded new funding that requires updated agreements. The California State Transportation Agency has released a new TIRCP call for projects, with awards expected later this year, and a revised master agreement will allow OCTA to access these funds if OCTA is awarded a grant. A new master agreement for state-funded transit projects would allow OCTA to apply for transit projects under the upcoming release of SB 1 (Chapter 5, Statutes of 2017) grant programs.

### ***Discussion***

The execution of two master agreements is required by Caltrans to access state funds for transit projects. The master agreements include:

- Master Agreement No. 64OCTAMA Transit and Intercity Rail Capital Program required to access TIRCP funds.
- Master Agreement No. 64A0172 2026 for state-funded transit projects is required by Caltrans to access state funds.

The master agreements outline the overall funding requirements for all projects which receive state funding. Individual projects are amended into the master agreement through individual program supplements, which outline the more detailed requirements for each specific project, allowable costs and payments, funding, audits and reports, and special requirements. Both master agreements will be effective from April 1, 2026, through April 1, 2036.

The new master agreements include updated definitions, added requirements for reporting and final reports, and added repayment terms for projects that are cancelled. The remaining terms in the new agreements are unchanged from the prior agreements. Additional information on changes from the prior agreements to Master Agreement No. 64OCTAMA and 64A0172 2026 are included in Attachments A and B, respectively. Staff from OCTA's Finance and

Administration, Internal Audit, and Planning divisions, and OCTA's legal counsel, have reviewed the agreement and are confident that OCTA can meet the requirements.

These master agreements must be accompanied by a certifying resolution (Attachment C), which authorizes the Chief Executive Officer to sign and execute this agreement, as well as the necessary program supplement agreements.

**Summary**

On May 24, 2019, the Board approved the current TIRCP master agreement, which has expired. Staff is requesting that the Board approve Master Agreement No. 64OCTAMA2026 and the accompanying resolution to access future TIRCP funding.

On January 11, 2016, the Board approved the current master agreement for state-funded transit projects Agreement No. 64A0172 A01, which has expired. Staff is requesting that the Board approve the new Master Agreement No. 64A0172 2026 and accompanying resolution to access future state funding for transit projects.

**Attachments**

- A. Changes in Master Agreement No. 64OCTAMA2026 Transit and Intercity Rail Capital Program Projects
- B. Changes in Master Agreement No. 64A0172 2026 Master Agreement State Funded Transit Projects
- C. Resolution No. 2026-013, Authorization for the Execution of Master Agreements and Program Supplements for Transit and Intercity Rail Capital Program-Funded Projects and State-Funded Transit Projects

**Prepared by:**



Louis Zhao  
State and Federal Programming Manager  
(714) 560-5494

**Approved by:**



Rose Casey  
Executive Director, Planning  
(714) 560-5729

**Changes in Master Agreement No. 64OCTAMA2026  
Transit and Intercity Rail Capital Program Projects**

The revised Master Agreement No. 64OCTAMA2026 (Agreement) replaces the existing Master Agreement No. 64OCTAMA between the Orange County Transportation Authority (OCTA) and the California Department of Transportation (Caltrans) for Transit and Intercity Rail Capital Program (TIRCP)-funded projects.

The agreement includes the following provisions:

1. The termination date of the agreement is April 1, 2036.
2. New or Changed Definitions
  - “General Fund” shall mean the funds subject to Chapters 21, 69, and 240, Statutes of 2021, authorizing the State to fund capital improvements and investments for California’s transit systems and intercity, commuter, and urban rail systems.
  - “Program Supplement Last Expenditure Date” refers to the last date for recipient to incur valid project costs or credits.
  - Total project cost includes the cost of all phases of a project (plans, specifications, and estimates, project approval and environmental documentation, right-of-way, and construction, including rolling stock) from start to finish.
3. Cost Savings and Project Completion
  - Program supplements will indicate the project or component proration of funding match.
  - OCTA agrees to complete projects that are funded by TIRCP and accepts sole responsibility for the payment of any cost increases. If either the project or the funded components are not completed, OCTA shall be required to pay back TIRCP funds to Caltrans.
4. Reporting Requirements
  - Identification of whether the project deliverables are proceeding on schedule.

5. Final Delivery Report

- Requires before and after photos documenting the project.
- Add the final cost comparison to approved project budget by component and fund type, and an estimate of the TIRCP funds spent to benefit disadvantaged communities, low-income communities, and/or low-income households.
- Add project duration as compared to the project schedule in the project application.

6. Special Requirements and Terminations

- The program supplement will terminate upon the successful completion of all project deliverables and the fulfillment of all reporting obligations required by the TIRCP and California Air Resource Board guidelines.
- If the project obligations are not fully performed, as defined under this section, OCTA may be required to fully or partially repay funds.

**Changes in Master Agreement 64A0172 2026  
State-Funded Transit Projects**

The revised Master Agreement No. 64A0172 2026 (Agreement) replaces the existing Master Agreement No. 64A0172 A01 between the Orange County Transportation Authority (OCTA) and the California Department of Transportation for state-funded transit projects.

The new agreement includes the following provisions:

1. Termination date of the agreement is April 1, 2036.
2. Funding Sources
  - Inclusion of Proposition 1A, the Safe, Reliable High-Speed Passenger Train Bond Act (Proposition 1A).
  - Inclusion of Road Repair and Accountability Act of 2017, SB 1 (Chapter 5, Statutes of 2017).
  - Inclusion of other state funding sources (existing and future), except for the Transit and Intercity Rail Program.
3. Definitions
  - Total project cost includes the cost of all phases of a project (plans, specifications, and estimates, project approval and environmental documentation, right-of-way, and construction, including rolling stock) from start to finish.
4. Audits and Reports and Cost Principles
  - OCTA agrees to comply with Title 2 Code of Federal Regulations 200 (2 CFR 200), uniform administrative requirements, cost principles, and audit requirements for federal awards and with flow down requirements for contractors and subcontractors.
  - A provision that any project expenses that are later determined unallowable must be repaid to the state, within a certain timeframe.

5. Special Requirements

- OCTA agrees to comply with applicable California Transportation Commission (CTC) policies, as adopted or amended, governing eligibility, project management, and the use of funds, including but not limited to the “Timely Use of Funds” provisions as well as others listed in the agreement.
- OCTA agrees to comply with all CTC resolutions, as well as all applicable guidelines and policies governing state-funded programs or projects.

**RESOLUTION NO. 2026-013**

**AUTHORIZATION FOR THE EXECUTION OF MASTER AGREEMENTS AND PROGRAM SUPPLEMENTS FOR TRANSIT AND INTERCITY RAIL CAPITAL PROGRAM-FUNDED PROJECTS AND STATE-FUNDED TRANSIT PROJECTS**

**WHEREAS**, the Orange County Transportation Authority (OCTA) may receive state funding from the California Department of Transportation (Caltrans) now or sometime in the future for transit projects; and

**WHEREAS**, OCTA is eligible to receive Transit and Intercity Rail Capital Program (TIRCP) funding for certain transportation projects through Caltrans; and

**WHEREAS**, substantial revisions were made to the programming and funding process for the transportation projects programmed in the TIRCP, SB 362 (Chapter 36, Statutes of 2014); and

**WHEREAS**, the statutes related to state-funded transit projects require a local or regional implementing agency to execute an agreement with Caltrans before it can be reimbursed for project expenditures; and

**WHEREAS**, Caltrans utilizes separate master agreements for TIRCP-funded projects and for state-funded transit projects, along with associated program supplements, for the purpose of administering and reimbursing TIRCP and state transit funds to local agencies; and

**WHEREAS**, OCTA wishes to delegate authority to execute these agreements and any amendments thereto to the Chief Executive Officer.

**NOW, THEREFORE, BE IT RESOLVED** by the OCTA Board of Directors that the fund recipient agrees to comply with all conditions and requirements set forth in this agreement and applicable statutes, regulations and guidelines for all TIRCP-funded projects and state-funded transit projects; and

**BE IT FURTHER RESOLVED** that the Chief Executive Officer is authorized to execute the master agreements, all award agreements, and all program supplements for TIRCP-funded projects and for state-funded transit projects and any amendments thereto with Caltrans.

**ADOPTED, SIGNED, AND APPROVED** this 23rd day of March 2026.

AYES:

NOES:

ABSENT:

ATTEST:

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Andrea West  
Clerk of the Board

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Jamey M. Federico, Chair  
Orange County Transportation Authority



**March 12, 2026**

**To:** Transit Committee  
**From:** Darrell E. Johnson, Chief Executive Officer  
**Subject:** May 2026 OC Bus Service Change

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is written over the "From:" field of the header.

**Overview**

The proposed May 2026 OC Bus service change implements changes consistent with Orange County Transportation Authority's regular service change process. These changes will result in updated schedules and improved service reliability. Minor adjustments to bus schedules in response to customer comments and coach operator feedback are also included.

**Recommendation**

Receive and file as an information item.

**Background**

Orange County Transportation Authority (OCTA) implements regular schedule and route revisions to selected OC Bus routes four times a year (February, May, August, and November). The proposed bus service changes discussed herein are scheduled for implementation on May 10, 2026.

**Discussion**

OCTA regularly monitors OC Bus performance and makes adjustments as needed to respond to customer and operational demands. These adjustments consider changes in traffic conditions, school schedules, land use changes, customer comments, ridership demand, and coach operator feedback. The changes are intended to maintain the performance of individual bus routes and transit service overall.

The proposed changes for May 2026 will primarily focus on weekday frequency adjustments, on-time performance improvements, and minor schedule adjustments to enhance reliability. These changes include the following modifications:

- Frequency reductions on Routes 25, 30, 33, 35, 46, 50, and 70.
- Schedule adjustments to improve on-time performance on Routes 25, 56, 60, 70, and 79.
- Minor schedule adjustments to address customer feedback on Routes 53, 54, 66, 85, and 553.
- Seasonal transition to summer schedules on Routes 1, 29, 47, and 89 due to an increase in beach traffic.

The proposed changes include several frequency reductions that have been carefully planned through an analysis of OC Bus ridership to minimize the impact on customers by targeting low-ridership routes and off-peak periods. These proposed changes will ensure that OCTA maintains the revenue vehicle hours that have been budgeted for OC Bus service in fiscal year 25-26. OCTA staff will continue to monitor resource availability and evaluate opportunities to restore service frequencies on the affected routes as conditions allow.

As of early 2026, OCTA has nearly completed the implementation of the final Making Better Connections Plan changes with the extension of Route 57 short trips to California State University, Fullerton as one of the remaining changes. This change will improve service frequency to the university and is being planned for the August 2026 OC Bus service change to coincide with the start of the new school year, subject to available resources.

The proposed May 2026 changes are detailed in Attachment A and represented in Attachment B.

The proposed changes would result in a decrease in bus service levels of approximately 22,125 revenue vehicle hours annually. There will be a temporary increase of an additional 2,853 revenue vehicles hours on Routes 1, 29, 47, and 89 during the summer period. System-wide service levels would decrease to about 1.625 million annual revenue vehicle hours, consistent with budgeted resource levels.

### ***Summary***

The proposed May 2026 OC Bus service change will result in several changes to OC Bus service. These changes include frequency adjustments, improvements to service reliability, minor schedule adjustments, and the transition to the seasonal summer schedules on select routes. Customers will be notified of the changes three weeks prior to implementation.

**Attachments**

- A. May 2026 OC Bus Service Change: Recommendations by Route
- B. May 2026 OC Bus Service Change: Bus Route Recommendations Map

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**Approved by:**



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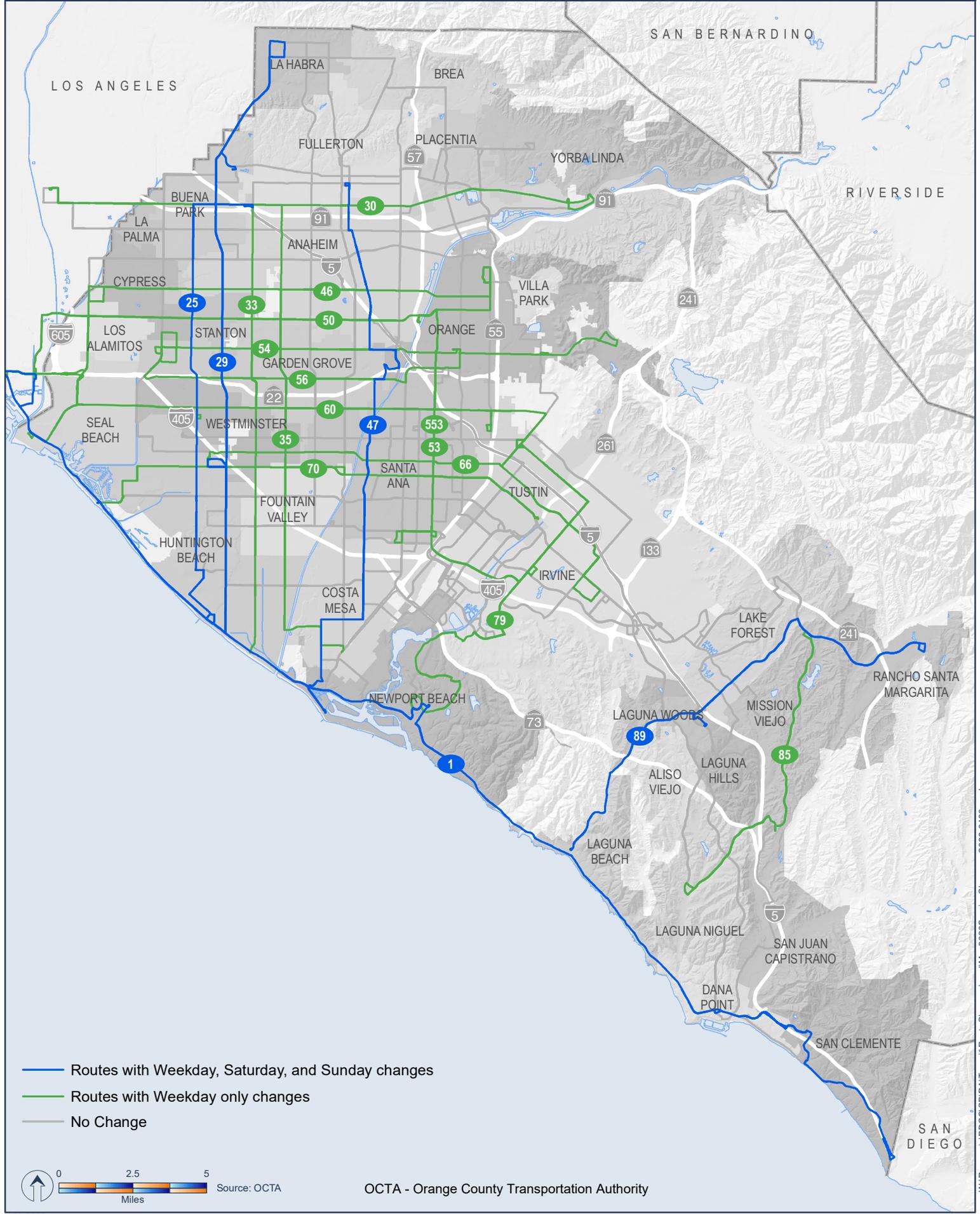
**May 2026 OC Bus Service Change: Recommendations by Route**

Route	Description	CHANGE IN SERVICE LEVELS				
		WKD RVH	SAT RVH	SUN RVH	Annual RVH	Peak Vehicles
25	Reduce WKD frequency to every 45 minutes during peak hours; Improve SAT/SUN OTP	(16.1)	0.2	0.2	(4,105)	(1)
30	Reduce WKD frequency to every 45 minutes after 6:00 p.m.	(12.0)	-	-	(3,072)	-
33	Reduce WKD frequency to every 40 minutes	(15.2)	-	-	(3,878)	(1)
35	Reduce WKD frequency to every 45 minutes after 6:30 p.m.	(11.5)	-	-	(2,936)	-
46	Reduce WKD frequency to every 55-60 minutes after 6:00 p.m.	(8.5)	-	-	(2,181)	-
50	Reduce WKD frequency to every 18 minutes during peak hours	(11.8)	-	-	(3,013)	(2.0)
53	Minor WKD schedule adjustment	0.2	-	-	59	-
54	Minor WKD schedule adjustment	0.6	-	-	161	-
56	Improve WKD OTP	1.2	-	-	307	-
60	Improve WKD OTP	1.4	-	-	346	-
66	Minor WKD schedule adjustment	(0.1)	-	-	(33)	-
70	Reduce WKD all day frequency to every 25 minutes for short trips ending at Lilac Avenue and Harbor Boulevard and every 50 minutes for long trips ending at Warner Avenue and Pacific Coast Highway; Improve WKD OTP	(15.5)	-	-	(3,960)	(2)
79	Improve WKD OTP	1.5	-	-	371	(1)
85	Minor WKD schedule adjustment	0.1	-	-	33	-
553	Minor WKD schedule adjustment	(0.9)	-	-	(223)	-
<b>Total of proposed year-round changes</b>		<b>(86.5)</b>	<b>0.2</b>	<b>0.2</b>	<b>(22,125)</b>	<b>(7.0)</b>
1	WKD/SAT/SUN summer schedules	4.0	7.7	7.7	463	1
29	WKD/SAT/SUN summer schedules	10.8	9.8	10.1	963	1
47	WKD/SAT/SUN summer schedules	13.5	11.7	11.7	1,180	1
89	WKD/SAT/SUN summer schedules	2.5	3.2	3.2	248	-
<b>Total of proposed summer-only changes</b>		<b>30.9</b>	<b>32.3</b>	<b>32.6</b>	<b>2,853</b>	<b>3.0</b>

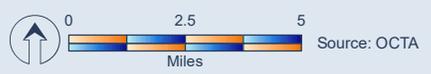
**Acronyms**

OTP - on-time performance  
 RVH - revenue vehicle hour  
 SAT- Saturday  
 SUN - Sunday  
 WKD - weekday

# May 2026 OC Bus Service Change: Bus Route Recommendations



- Routes with Weekday, Saturday, and Sunday changes
- Routes with Weekday only changes
- No Change



OCTA - Orange County Transportation Authority



**March 12, 2026**

**To:** Transit Committee  
**From:** Darrell E. Johnson, Chief Executive Officer  
**Subject:** Zero-Emission Bus Program Update

A handwritten signature in blue ink, appearing to read "Darrell E. Johnson", is positioned in the upper right corner of the page.

**Overview**

The Orange County Transportation Authority Board of Directors adopted the zero-emission rollout plan in 2020 and subsequently approved the purchase of zero-emission buses and infrastructure to gain necessary operational and technological experience in preparation for transitioning the Orange County Transportation Authority's bus fleet to zero-emission technologies as required by the State. This report provides an update on the zero-emission bus program performance and deployment efforts.

**Recommendation**

Receive and file as an information item.

**Background**

In 2018, the California Air Resources Board (CARB) passed the Innovative Clean Transit (ICT) rule requiring all public transit agencies to transition their bus fleets to zero-emission technologies by the year 2040. Transit agencies were required to develop and submit a rollout plan that describes how the agency will transition to a zero-emission bus (ZEB) fleet by 2040, with purchasing requirements beginning in 2023. In June 2020, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved the OCTA ZEB Rollout Plan, which included the deployment of a mix of hydrogen fuel-cell electric buses (FCEB) and battery-electric buses (BEB) to prepare for compliance with the ICT rule.

In anticipation of the ICT rule, OCTA developed a strategy to pilot both FCEB and BEB technologies using available grant funding. Piloting both technologies allows OCTA to gain direct experience with operational effectiveness, maintenance, and cost. In 2017, OCTA entered into an agreement to utilize grants provided by

CARB and the South Coast Air Quality Management District to purchase ten FCEBs in lieu of compressed natural gas (CNG)-powered buses to replace buses that had reached their useful life. The grant also funded critical infrastructure elements required for operations, including a hydrogen fueling station and maintenance shop upgrades.

On February 9, 2020, OCTA initiated the FCEB pilot, which included ten, 40-foot FCEBs operating in OC Bus fixed-route service, and a hydrogen fueling station, located at the Santa Ana Bus Base, capable of fueling up to 50 buses per day. The FCEBs were placed into service on February 10, 2020.

On October 12, 2020, the Board approved the purchase of ten plug-in BEBs as a pilot for operation in OC Bus fixed-route service. To support the charging of these vehicles, OCTA partnered with Southern California Edison (SCE) and the Charge Ready Transport Program to provide electrical infrastructure at the Garden Grove Bus Base. In addition to the equipment being provided by SCE, OCTA is required to provide the BEB charging station equipment.

On June 14, 2021, the Board approved the purchase of ten, 150-kilowatt (kW) BEB charging stations. The charging stations can supply power evenly or sequentially, which allows buses to be intelligently charged in a manner tailored to the power and logistical needs of each bus. BEBs can be fully charged in less than four hours. However, the charging stations were not fully operational until December 2023, due to delays from SCE completing the infrastructure upgrades required to install the ten BEB charging stations and other equipment issues. In the interim, the BEBs were charged using onsite pay-per-use fast chargers.

The first two BEBs arrived in December 2021. After acceptance testing and working through supply chain issues, the buses went into OC Bus fixed-route service in July 2022. The remaining eight buses arrived in December 2022. The delay in receiving the remaining eight BEBs was due to shortages to electronic components and other supply chain disruptions.

On June 24, 2024, the Board approved the purchase of ten battery-electric paratransit vans to replace ten gasoline OC ACCESS cutaway buses. OCTA applied for and was awarded funding through a competitive Federal Transportation Authority grant program. The ten battery-electric vans arrived in December 2025 and will be charged using temporary charging stations that were provided by the vehicle manufacturer at no additional cost. The permanent charging equipment is expected to be installed later this year.

On November 14, 2024, the Board approved the purchase of an additional 40 FCEBs, ten BEBs, and battery chargers to accelerate the operational and technological experience necessary to operate and maintain a ZEB fleet. The

50 ZEBs in this procurement will replace compressed natural gas buses that have met their useful life, moving OCTA closer to the required fleet conversion of OCTA’s current 464 buses to 100 percent zero-emission. The first of ten BEBs have been delivered and the first of 40 FCEBs is in production. The remaining BEBs are expected to arrive by the fourth quarter of this calendar year and the FCEBs by first quarter of 2027.

On January 9, 2025, the Board approved the short-listing of three design-build firms, the evaluation criteria and weightings, and the release of the request for proposals for the design and construction of a second hydrogen fueling station to be located at the Garden Grove Bus Base. Unfortunately, due to the low quantity of qualified bids, the procurement was cancelled. On September 22, 2025, the Board approved the second release of the request for qualifications and request for proposals. Staff anticipate returning to the Board later this year with a recommendation for award.

**Discussion**

The ten FCEBs have been in service for six years and the ten BEBs have been deployed consistently for three years. The performance data included in this report covers the period beginning February 2020 through December 2025. The performance of the ten FCEBs and ten BEBs is measured against the performance of ten CNG buses that were selected during the onset of the pilot to provide comparative performance analytics. General vehicle information on all three bus types is provided in the following chart.

Vehicle Information	CNG Bus	FCEB	BEB
Number of Buses	10	10	10
Manufacturer/Model	New Flyer Xcelsior	New Flyer Xcelsior	New Flyer Xcelsior
Model Year	2016	2018	2020
Deployment Date	Aug-18	Feb-20	Dec-22
Bus Purchase Price	\$580,000	\$1.3M	\$1.1M
Length	40-foot	40-foot	40-foot
Curb Weight	30,000 pounds	33,560 pounds	33,500 pounds
Propulsion System	CNG Engine 280 hp (209 kW)	Electric Motor 210 kW, 85kW Fuel Cell	Electric Motor 210 kW
Energy Storage	Six Fuel Cylinders	Five Fuel Cylinders 100 kWh Lithium-ion Battery	Lithium-ion Batteries 440kW
Total Operating Range	400 miles	300 miles	200 miles
Usable Operating Range	350 miles	250 miles	150 miles

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The key performance indicators for the pilot include bus availability, miles between road calls (MBRC), fuel economy, and cost per mile (CPM). Bus availability, which is a measure of reliability, is the percentage of days the buses are available compared to the total number of days that the buses are planned for revenue service. Buses available for service may be used in revenue service, training, special events, or they may be available but not used. Buses unavailable for service may have had mechanical issues with the propulsion system (fuel-cell system, electric drive system, engine), regularly scheduled maintenance, or required unscheduled repairs.

The OCTA performance standard for bus availability is 80 percent. However, for new bus technology, availability can be challenging as the system issues are analyzed and buses are out of service for a longer period. For 2025, both the FCEBs and BEBs fell below the target at 65 percent and 44 percent respectively, while CNG buses achieved the goal at 85 percent.

The FCEBs did not achieve the availability goal primarily due to electrical issues and degradation of fuel-cell components, compounded by long wait times for replacement parts. It has become common to see FCEBs out of service for 60 to 100 days at a time waiting for parts. Despite these challenges, FCEB availability improved from 49 percent in 2024 to 65 percent in 2025.

The BEBs also did not meet the availability goal, with availability dropping from 58 percent in 2024 to 44 percent in 2025. Like the FCEBs, the BEBs faced persistent electrical issues and long lead times for replacement parts; a replacement battery pack currently requires approximately 135 days to procure. Additionally, a manufacturer's battery recall in late September 2025 resulted in a temporary removal of the BEBs from service. The buses were returned to service after the manufacturer-issued software update limited battery charging to 75 percent to reduce the risk of overheating; this temporary solution does affect the range, limiting it to 110 miles per charge. Full battery replacements will proceed once the manufacturer secures a new battery supplier.

MBRC is a measurement of bus reliability. A road call is defined as a revenue vehicle mechanical or system failure that causes the bus to be replaced in route or causes a significant delay in the bus schedule.

The OCTA performance standard for MBRC is 14,000 miles. The ten designated CNG buses exceeded the goal in 2025, achieving 20,629 MBRC. This improvement over 2024 is primarily due to completing a scheduled mid-life overhaul, which included replacing the engine and transmission.

The FCEBs did not meet the MBRC standard in 2025, achieving 7,116 MBRC, a decline from 8,399 MBRC in 2024. While battery-related failures and fuel-cell

degradation remain the primary contributors to poor performance, a significant factor this year was the reduced operating mileage due to the hydrogen fueling station at the Santa Ana Bus Base being out of service, which is discussed further later in this report. With the station being unavailable for fueling, the FCEBs accumulated only 14,232 miles in 2025 compared to 270,462 miles in 2024. With such a low mileage denominator, just two road calls were sufficient to reduce MBRC below the standard. OCTA staff continues to apply lessons learned from these challenges to improve infrastructure resilience, supplier coordination, and overall fleet performance as the ZEB program evolves.

The BEBs also did not meet the MBRC standard in 2025, achieving 10,474 MBRC; however, this represents a significant improvement over 2024, when MBRC was 4,923. The BEBs experienced a range of issues during the year, primarily electrical in nature, including battery failures and electrical management system failures.

Fuel economy measures how efficiently a vehicle uses fuel to travel. Because the buses in OCTA's fleet run on different types of propulsion systems, CNG, hydrogen, and electricity, each fuel is measured differently: CNG in therms, hydrogen in kilograms, and battery power in kW. To fairly compare fuel efficiency across these technologies, the fuel types are converted to a common measurement, miles per diesel gallon equivalent (mpdge). This unit shows how far each bus can travel using the same amount of energy found in one gallon of diesel fuel, regardless of the fuel type used.

CNG buses are averaging 3.74 mpdge, which falls within the normal operating range. FCEBs are averaging and estimated 6.81 mpdge, representing an 11 percent decrease from 7.57 mpdge in 2024. The mpdge was estimated due to using an offsite commercial retail hydrogen fueling station. The reduction is attributed to fuel-cell degradation, which requires the fuel-cell system to consume more fuel to meet the electrical demands of the batteries. BEBs continue to achieve the highest efficiency, averaging 16.87 mpdge, an eight percent decrease from 18.14 mpdge in 2024.

OCTA calculates total CPM for each technology by tracking fuel, parts, and labor costs. CPM is used because it serves as the lowest common denominator across all bus technologies. Assigning daily, weekly, or monthly cost values can be misleading, as buses are deployed on different routes with varying mileage.

Fuel costs for the FCEBs increased in 2025 due to the unavailability of the on-site hydrogen fueling station, which required buses to be refueled at a commercial retail station. In 2025, the CPM was \$2.02, up from \$1.23 in 2024. For BEBs, electricity-related CPM rose to \$0.66, compared to \$0.32 in 2024. This increase is primarily due to rising electricity rates. It is important to note that

electricity cost is based on kW usage, and under the current rate structure, the cost per kW as total usage rises directly impacting overall CPM. CNG CPM increased from \$0.37 to \$0.40 in 2025, also due to price increases in renewable natural gas and electricity rates.

Parts and labor CPM for FCEBs increased significantly year over year, rising to \$3.67 from \$1.30 in 2024. The primary driver of this increase is reduced vehicle operation, resulting in a low mileage denominator that inflates CPM. Costs are expected to decrease once the vehicles return to normal operating mileage levels.

BEB parts and labor CPM decreased to \$1.13 from \$1.26 in 2024. This reduction is largely due to the buses reaching the end of their break-in period, with most early life failures now covered under warranty.

CNG bus parts and labor CPM increased to \$1.17 from \$0.99 in 2024. This increase is attributed to expanded use of the contingency fleet, which consists of 2008 model year CNG buses. The reliance on the contingency fleet is driven by pending deliveries of new bus orders and reduced FCEB availability.

Total CPM includes combining parts, labor, and fuel costs. The total CPM for FCEBs increased to \$5.69 from \$2.53 in 2024 due to cost increases in all areas. The total CPM for BEBs increased to \$1.79 from \$1.58 in 2024 primarily due to cost increases in fuel. Finally, the total CPM for CNG buses increased to \$1.57 from \$1.36 in 2024 primarily due to increased use of contingency buses. A summary of the CPM trends for the three technologies is provided in the table below:

<b>Cost Per Mile (CPM)</b>	<b>FCEB</b>			<b>BEB</b>			<b>CNG</b>		
<b>Year-Over-Year Comparison</b>	2025	2024	Trend	2025	2024	Trend	2025	2024	Trend
CPM - Fuel Costs	\$2.02	\$1.23	▲64%	\$0.66	\$0.32	▲106%	\$0.40	\$0.37	▲8%
CPM - Parts and Labor	\$3.67	\$1.30	▲182%	\$1.13	\$1.26	▼-10%	\$1.17	\$0.99	▲18%
CPM Total	\$5.69	\$2.53	▲125%	\$1.79	\$1.58	▲13%	\$1.57	\$1.36	▲15%

**Infrastructure Update**

On November 13, 2017, the Board approved an agreement with Trillium for the construction, operation, and maintenance of a hydrogen fueling station located at the Santa Ana Bus Base. This agreement also included hydrogen fuel supply, for a three-year term with a two-year option term. On February 9, 2020, when OCTA initiated the fuel cell electric bus pilot program, the hydrogen fueling station became operational. Trillium subcontracted the fueling station design, equipment, operation and maintenance, and fuel supply to Air Products and

Chemicals, Inc. (Air Products). Most of the fueling station equipment is owned by OCTA, except for the 18,000-gallon liquid hydrogen storage tank and associated vaporizers, which were leased from Air Products.

To ensure the continued operation of the hydrogen fueling station, OCTA staff began negotiations with Trillium and Air Products one year prior to the contract expiration on December 31, 2024. In parallel, staff initiated a separate solicitation for a mobile hydrogen fueling station and hydrogen fuel supply. Air Products ultimately refused to sell or lease the existing equipment and indicated its intent to remove the leased equipment, which would render the station inoperable.

As a result, on February 24, 2025, the Board approved a sole source agreement with Air Products to continue the operation, maintenance, and hydrogen fuel supply for the station until a more suitable solution could be implemented. After Board approval, Air Products proposed significant changes to the terms and conditions of the agreement. Despite months of negotiations, an agreement could not be reached. On January 22, 2026, Air Products removed the leased equipment from the Santa Ana Bus Base location.

During this interim period, OCTA has been utilizing a commercial hydrogen fueling station operated by Shell USA, Inc. near the City of Long Beach to maintain the FCEBs in a reliable state of operation. In addition, staff is in the process of procuring a temporary mobile hydrogen fueling station while the existing station is being rebuilt. As noted in the Background section of this staff report, OCTA is also procuring a second hydrogen fueling station, which will provide the redundancies necessary to support consistent and reliable FCEB operations.

The battery charging stations located at the Garden Grove Bus Base are fully operational. Overall, the chargers operate reliably, maintaining an average availability of 80 percent. Because each charger can serve multiple buses per night, there have been no incidents in which a bus could not be deployed due to insufficient or unavailable charging infrastructure.

On November 14, 2024, the Board approved the purchase of additional depot battery charging stations to be installed at the Santa Ana Bus Base in support of additional BEBs on order. Installing charging infrastructure at both directly operated bases provides redundancy in the event of a power outage and enhances operational flexibility to deploy BEBs throughout Orange County.

### Key Takeaways

- Higher Upfront Costs: Although the cost gap is narrowing, ZEBs currently cost 50 to 100 percent more than comparable CNG buses.
- Reduced Operating Range: ZEBs have 30 to 55 percent less operating range than CNG buses, requiring more frequent fueling/charging and more complex route planning.
- Performance: Performance has been consistent but remains below established operational standards. Availability remains a challenge, mainly due to supply chain issues.
- Maintenance: ZEBs have required more maintenance than initially anticipated, though overall maintenance costs are generally comparable to CNG buses.
- Hydrogen Challenges: Hydrogen fuel remains expensive, but supporting infrastructure is still developing and evolving.
- Electricity Constraints: Electrical capacity can be limited, and charging infrastructure deployment is often complex and resource intensive.

### **Summary**

After six years of operating FCEBs and more than three years of operating BEBs, OCTA has gained substantial knowledge and experience with ZEB technologies and supporting infrastructure. While ZEB performance has not matched that of CNG buses, OCTA has developed a deeper understanding of the differences between technologies, the components requiring improvement to enhance reliability, and the elements necessary to build a sustainable fueling and charging infrastructure.

Additionally, an improved understanding of the costs associated with operating and maintaining ZEBs has strengthened financial planning efforts and enhanced advocacy for additional funding and cost-reduction strategies. These strategies include the need to reduce hydrogen fuel costs and address the capital and utility expenses associated with expanding electrical infrastructure.

The next steps in OCTA's ZEB Program include taking delivery of 40 additional FCEBs and ten additional BEBs currently on order.

From an infrastructure perspective, planned actions include restoring the Santa Ana hydrogen fueling station to operational status, completing procurement and installation of a second hydrogen fueling station at the Garden Grove Bus Base, and completing the installation of additional battery charging stations at the Santa Ana Bus Base, which is currently underway.

In addition, a planned acquisition for seven 60-foot FCEBs is currently on hold as grant funding awarded under the SB 125 (Chapter 54, Statutes of 2023) Transit Program is at risk of not being appropriated as planned.

Staff will continue to provide the Board with regular updates on the OCTA ZEB Program, including vehicle deployment, infrastructure progress, and regulatory developments.

***Attachment***

None.

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# Zero-Emission Bus Program Update





## Background

December 2018, the California Air Resources Board passed the Innovative Clean Transit (ICT) rule

- Requires transitioning to zero-emission bus (ZEB) fleet by 2040; Purchasing requirements began in 2023

June 2020, the Board approved the OCTA ZEB Rollout Plan

- Includes a mix of zero-emission technologies

February 2020, OCTA initiated the Fuel-Cell Electric Bus (FCEB) Pilot

- Ten 40-foot FCEBs, a hydrogen fueling station, maintenance shop upgrades
- Grant funded \$13.2M - California Air Resources Board and South Coast Air Quality Management District

July 2022, OCTA initiated the Battery-Electric Bus (BEB) Pilot

- Started with two BEBs, eight more arrived in December 2022.
- Grant Funded \$10.3M - California Transportation Commission Solutions for Congested Corridors Program (SCCP), SB 1 (Chapter 5, Statutes of 2017) State of Good Repair (SGR), and the Low Carbon Transit Operations Program (LCTOP)

June 2024, Battery Electric Paratransit Bus Pilot

- Board approved the purchase of ten battery-electric paratransit buses and infrastructure.
- Grant Funded \$2.5M - Federal Transportation Administration's Low and No Emission Vehicle program and Transit and Intercity Rail Capital Program (TIRCP)

November 2024

- Board approved the purchase of 40 additional FCEB and ten additional BEB
- Grant funded through the following sources: TIRCP, LCTOP, Congestion Mitigation and Air Quality (CMAQ), Carbon Reduction Program, and SB 125 Zero Emission Clean Transit Program (Chapter 54, Statutes of 2023)



# ZEB Pilot Buses

Vehicle Information	CNG Bus	FCEB	BEB
Number of Buses	10	10	10
Manufacturer/Model	New Flyer Xcelsior	New Flyer Xcelsior	New Flyer Xcelsior
Model Year	2016	2018	2020
Bus Purchase Price	\$580,000	\$1.3M	\$1.1M
Length	40 foot	40 foot	40 foot
Curb Weight	30,000 pounds	33,560 pounds	33,500 pounds
Propulsion System	CNG Engine 280 hp (209 kW)	Electric Motor 210 kW	Electric Motor 210 kW
	Transmission	Fuel Cell 85 kW	
Energy Storage	Six Composite Fuel Cylinders	Five Composite Fuel Cylinders	
		Lithium-ion Batteries 100 kW	Lithium-ion Batteries 440kW
Total Operating Range	400 miles	300 miles	200 miles
Usable Operating Range	350 miles	250 miles	150 miles



CNG

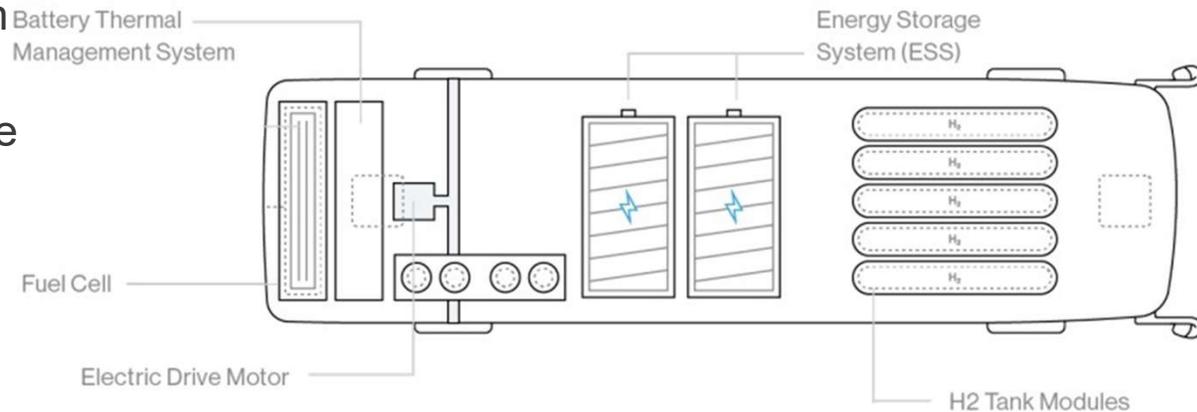
FCEB

BEB



## Fuel-Cell Electric Buses

- Ten pilot buses were deployed in February 2020
- Same standard equipment as the OCTA CNG Bus
- Fuel cell acts as an onboard battery charger
- Life-to-date miles: 1,461,260
- Operates on 80% of OCTA routes
- Refuel in six to ten minutes, similar to CNG
- Usable operating range 250 miles





# Fuel-Cell Electric Buses

## Challenges

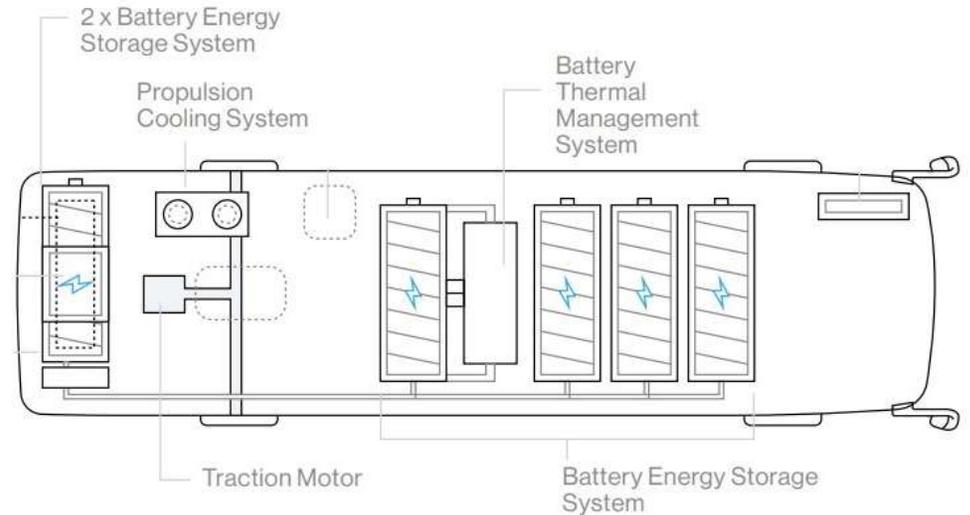
- Battery failures – 49 of 160 batteries replaced in six years
- Long lead times on parts
- Fuel-cell performance degrading sooner than expected
  - Overhauls in progress
  - Six-year warranty ended
- Hydrogen fuel
  - OCTA fueling station temporarily decommissioned
  - Limited fueling resources
  - Buses only operated 14,000 miles in 2025; 270,000 in 2024





## Battery-Electric Buses

- Ten pilot buses were deployed in December 2022
- Same standard equipment as the OCTA CNG Bus
- 100% battery electric
- Life-to-date miles: 441,000
- Operate on 20% of OCTA routes
- Recharge in four hours
- Usable operating range 150 miles





# Battery-Electric Buses

## Challenges

- Battery Performance
  - 15 batteries replaced in three years, ten in 2025 alone
  - Six-year warranty
- Battery Recall
  - Thermal hazard if charged to 100%
  - Mitigated hazard by reducing charging to 75%
  - Monitoring battery temperature remotely
  - Plan to replace all batteries, currently testing





# Key Performance Indicators

## Bus Availability

- Percentage of days the buses are available compared to the total number of days that the buses are planned for revenue service

## Miles Between Road Calls

- A road call is defined as a revenue vehicle mechanical or system failure that causes the bus to be replaced in route or causes a significant delay in the bus schedule

## Fuel Economy

- Fuel economy is a measurement of how efficiently the fuel is being used by the propulsion system

## Cost Per Mile

- OCTA calculates total CPM for each technology by tracking parts and labor cost and fuel cost.
- CPM is the lowest common denominator between the three technologies



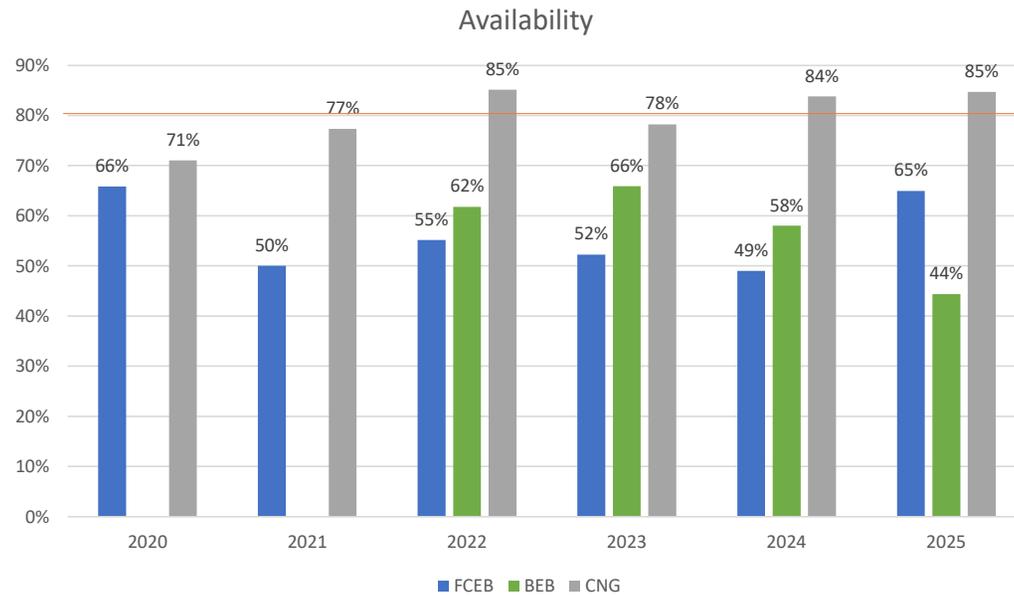
# Bus Availability

## FCEB

- Improving
- Warranty repairs
- Supply chain delays

## BEB

- Declining
- Battery Recall
- Warranty repairs
- Supply chain delays





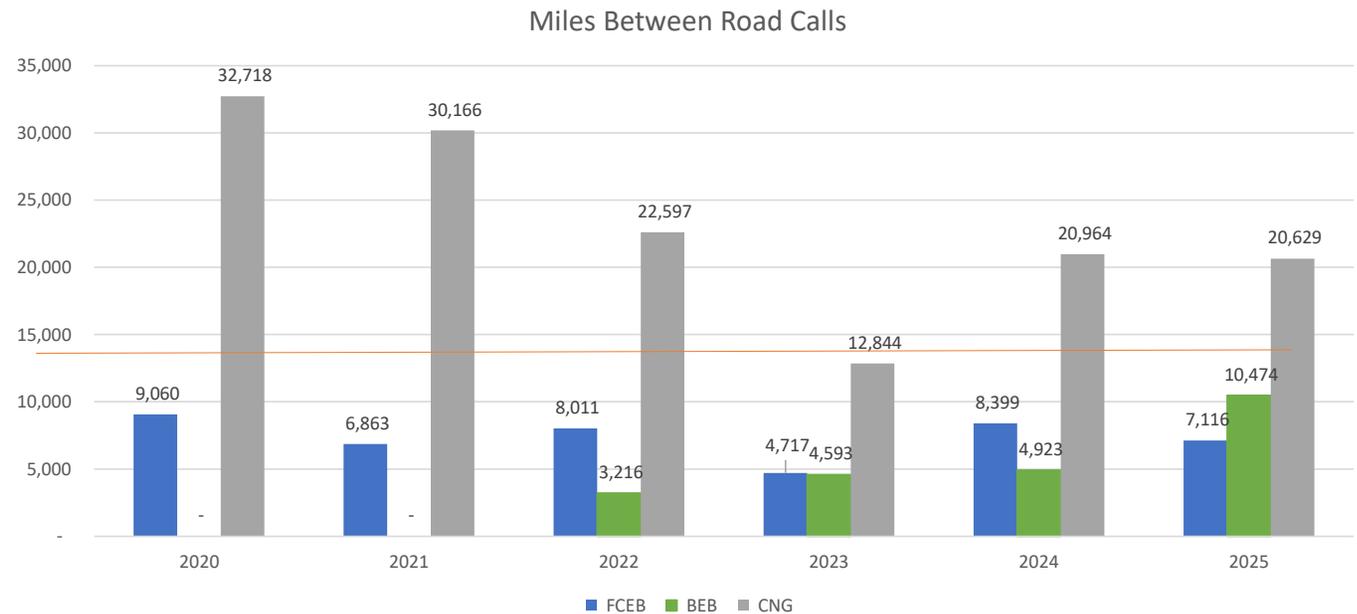
# Miles Between Road Calls

## FCEB

- Declining
- Battery failures
- Fuel cell degradation

## BEB

- Improving
- Battery failures
- Warranty repairs





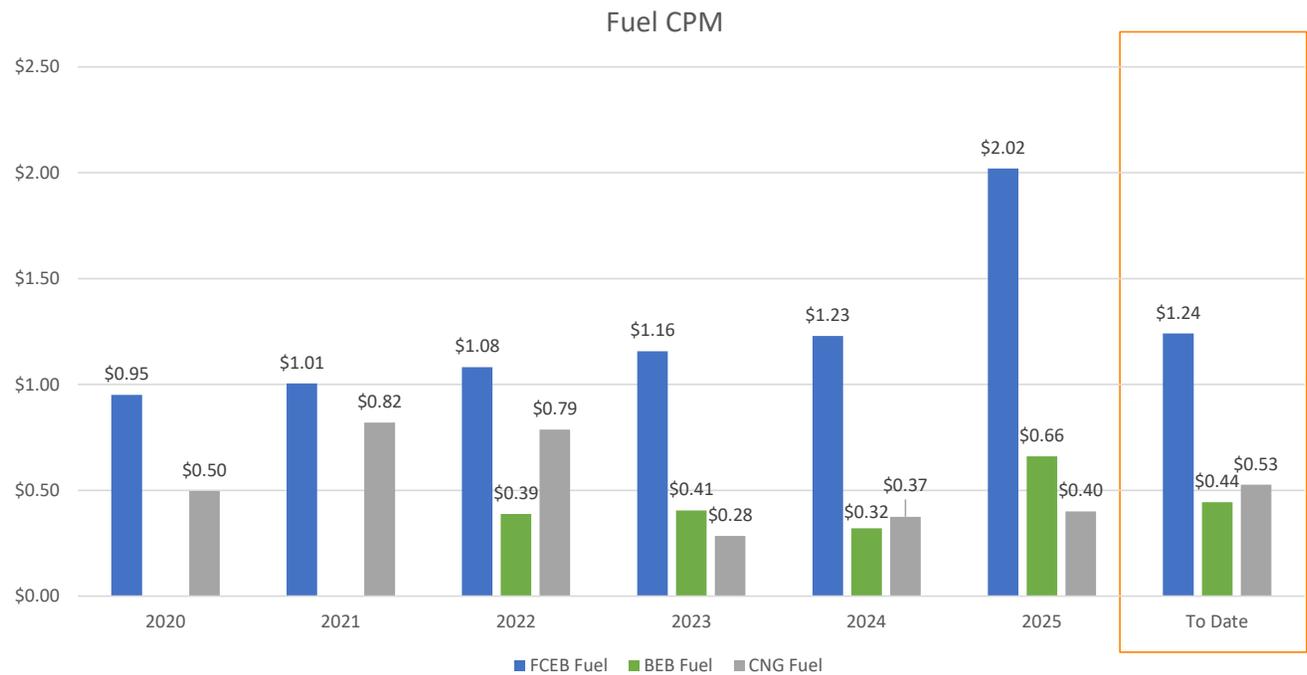
## Fuel Economy

<b>Measurement - Miles per diesel gallon equivalent</b>			
<b>Year</b>	<b>FCEB</b>	<b>BEB</b>	<b>CNG</b>
2020	9.45		4.25
2021	9.93		4.17
2022	9.09	15.06	3.84
2023	8.93	16.62	3.91
2024	7.57	18.14	3.19
2025	6.81	16.87	3.74



# Cost Per Mile - Fuel

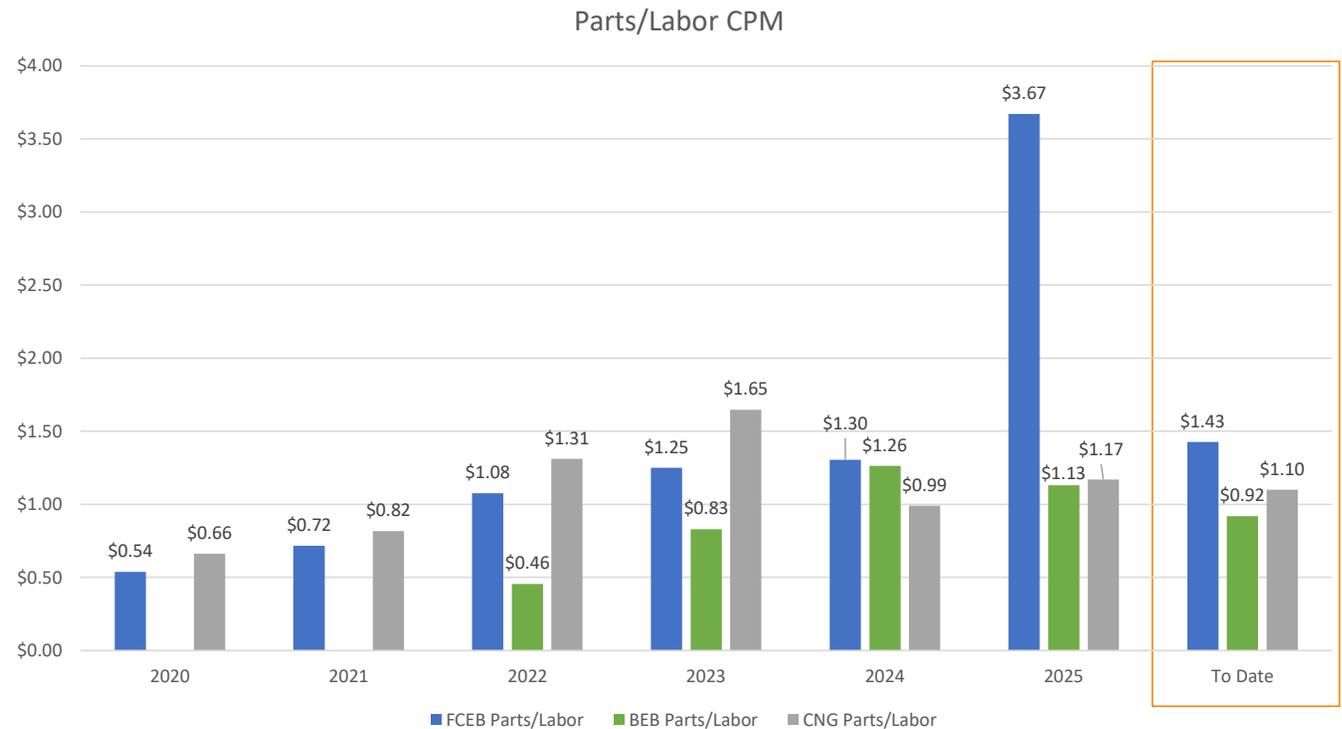
- FCEB fuel cost increased due to retail station fueling
- BEB electricity cost increased due to greater usage
- CNG fuel cost increased slightly due to rising fuel cost





# Cost Per Mile – Parts/Labor

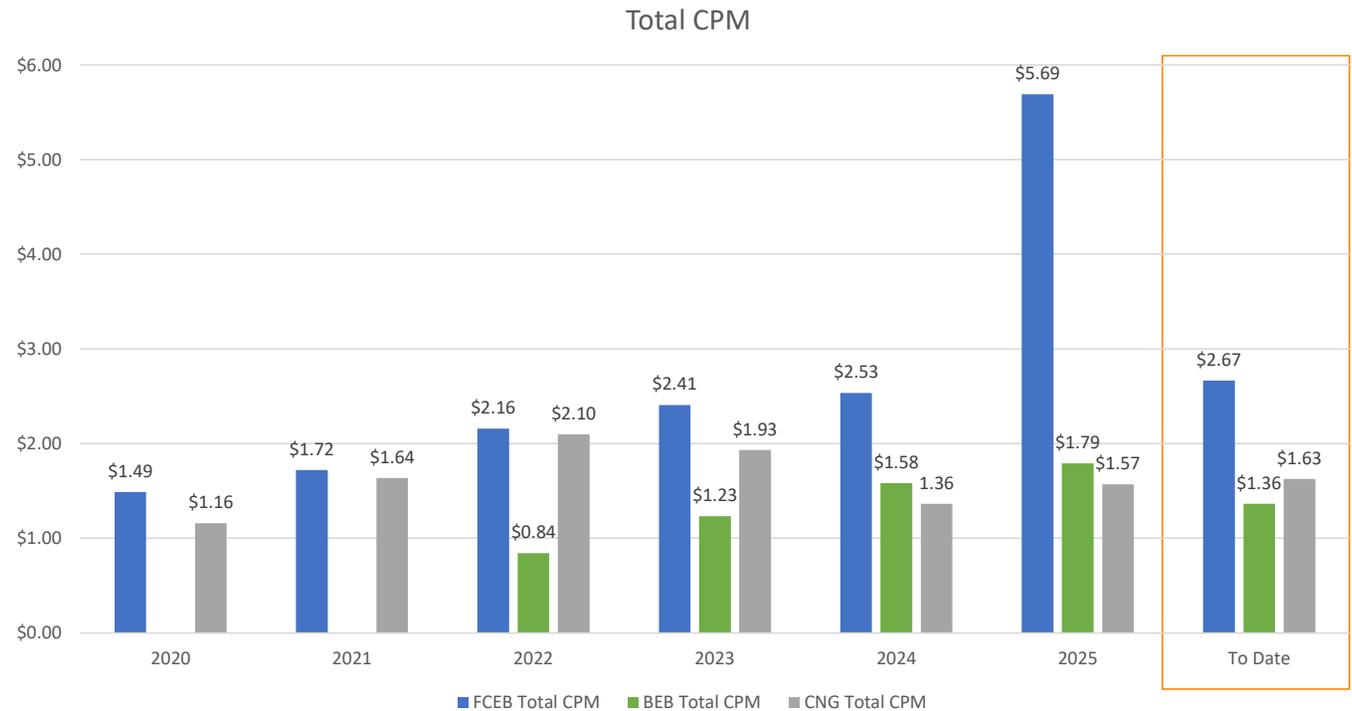
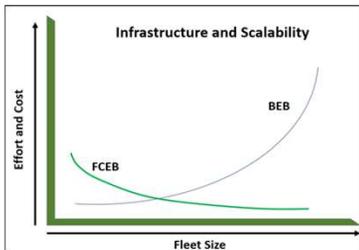
- FCEB increased due to low usage
- BEB decreased due to end of break-in period
- CNG increased due to expanded use of contingency buses





# Cost Per Mile - Total

- Total CPM includes
  - Fuel, parts, and labor
- To Date
  - FCEB six-year average \$2.67, **64% > CNG**
  - BEB three-year average \$1.36, **16% < CNG**





## Infrastructure - FCEB



### Hydrogen Fueling Station Decommissioned by Air Products (AP)

- AP would not sell or continue to lease their equipment
- Feb 2025 - Board approved a sole source agreement with AP
- Oct 2025 – no agreement could be finalized with AP



## Infrastructure - BEB



### Battery Chargers Operational

- 80% availability
- No bus service lost due to unavailable infrastructure



## Key Takeaways

- Higher Upfront Costs:
  - ZEBs currently cost 50–100% more than comparable CNG buses, but cost gap is narrowing.
- Reduced Operating Range:
  - ZEBs have 30–55% less operating range than CNG buses.
- Performance:
  - Performance consistent but remains below established operational standards. Availability remains a challenge, mainly due to supply chain issues.
- Maintenance:
  - ZEBs require more maintenance than anticipated, costs are comparable to CNG buses.
- Hydrogen Challenges:
  - Hydrogen fuel remains expensive, but supporting infrastructure is still evolving.
- Electricity Constraints:
  - Electrical capacity can be limited, and charging infrastructure deployment is often complex.



## Other Zero-Emission Vehicles



50 Electric Operator Relief Vehicles



1 Electric Facilities Maintenance Truck



1 Electric Van for Facilities Maintenance



10 Electric Vans for Paratransit Service



3 Electric Vans for Electronic Technicians





## Next Steps

### Receive

- 40 FCEBs – receive all in 2026
- Nine of ten BEBs – receive all in 2026

### Install

- BEB charging stations at Santa Ana Bus Base - 2026
- Battery-Electric Paratransit Vans Charging Stations – 2026

### Procure

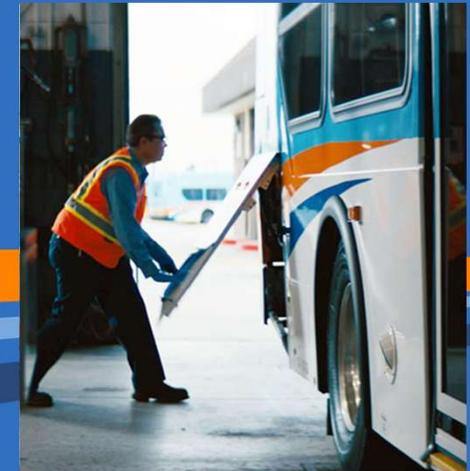
- Equipment and Services for first hydrogen fueling station at Santa Ana Bus Base
- Second hydrogen fueling station at Garden Grove Bus Base – award April 2026
- Seven 60-ft FCEBs (On-Hold)





# Bimonthly Transit Performance Report

March 2026





OCTA



OCBUS



OCACCESS

## What do we measure?



### Service Demand

Measures boarding activity on OC Bus and OC ACCESS.



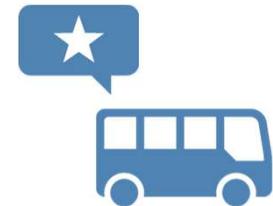
### Reliability

Measures the reliability of the service in terms of schedule adherence on-time performance (OTP) and miles between road calls (MBRC).



### Safety

Measures the safety of the service in terms of preventable collisions normalized by miles traveled.



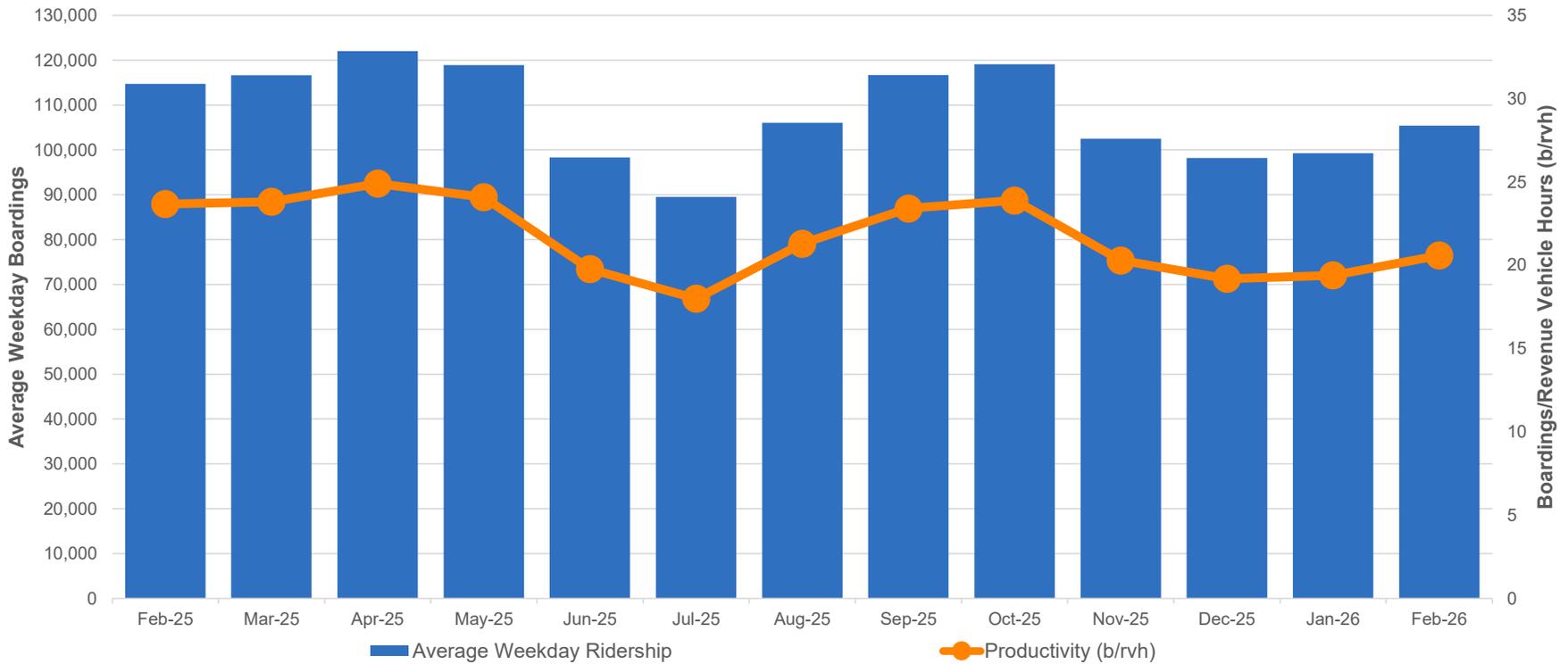
### Courtesy

Measures customer feedback and is typically normalized by boardings.



# OC BUS

## Service Demand - Ridership Snapshot



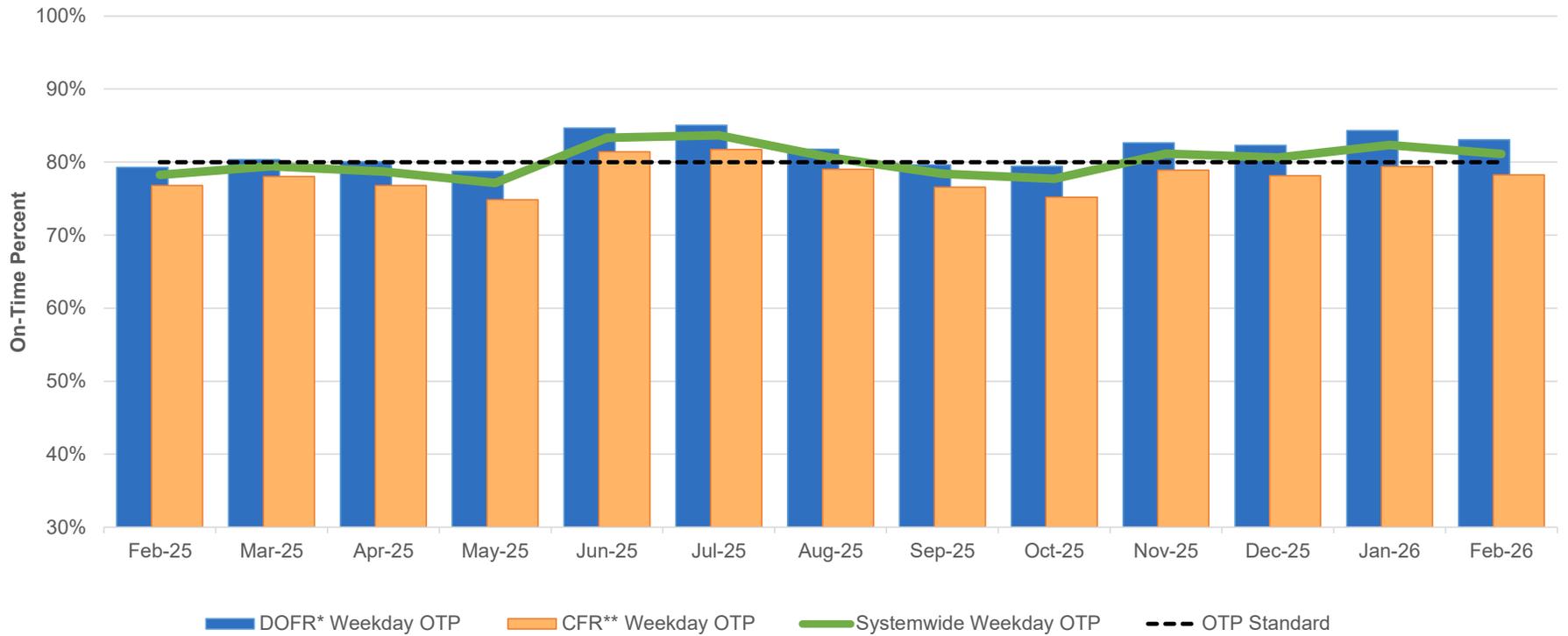
**Service Demand:** Ridership (or boardings) is the number of rides passengers take using public transit. The average weekday boarding activity is used to measure OC Bus service demand. Productivity is an industry measure that counts the average number of boardings for each revenue vehicle hour (RVH) that is operated.

Data reported through February 14<sup>th</sup>, 2026



# OC BUS

## Service Reliability – On-Time Performance



**On-time Performance (OTP):** Measures how well OCTA vehicles adhere to the schedule, and it is calculated by dividing the count of vehicle timepoint departures that are on time (within five minutes late or zero minutes early of the scheduled arrival time) by the number of total departures, reported system-wide. The systemwide OTP standard is 80%.

Data reported through February 14<sup>th</sup>, 2026

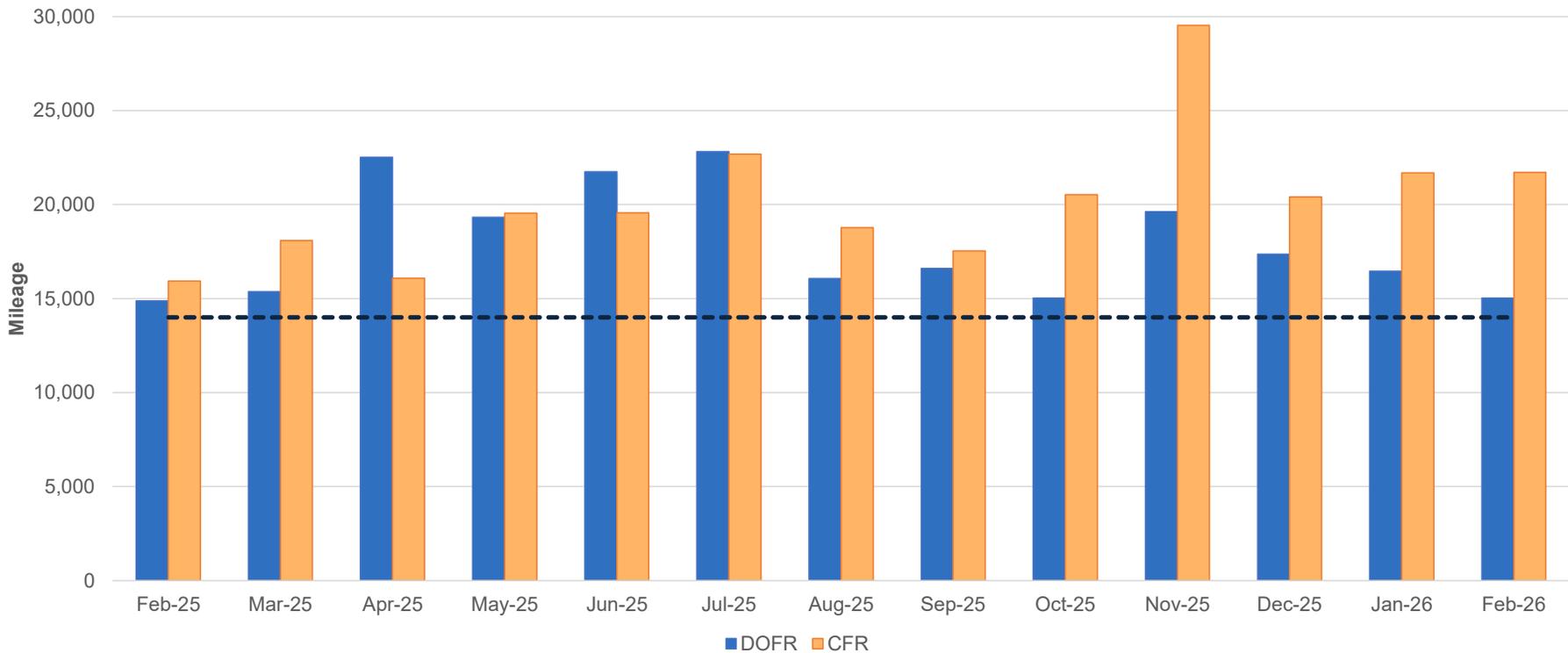
\*DOFR – Directly Operated Fixed Route \*CFR – Contracted Fixed Route



# OC Bus



## Service Reliability – Vehicle Performance



**Miles Between Road Calls:** MBRC is determined by the total vehicle mileage divided by the total road calls or disruptions due to valid mechanical failures in revenue service. The MBRC standard for DOFR and CFR is 14,000 miles.

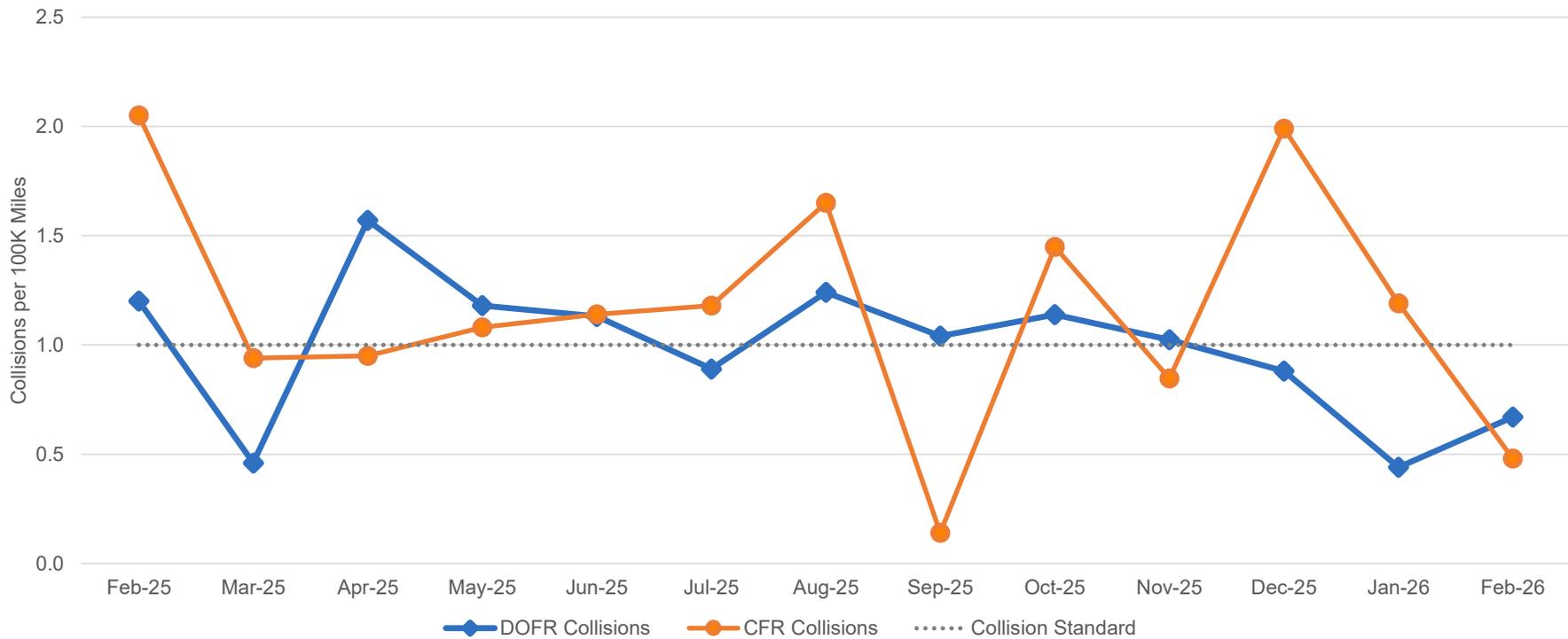
Data reported through February 14<sup>th</sup>, 2026



# OC BUS



## Safety – Preventable Collisions



**Preventable Collisions:** Preventable vehicle accidents are defined as incidents when physical contact occurs between vehicles used for public transit and other vehicles, objects, or pedestrians and where a coach operator failed reasonably to prevent the accident. The performance standard is no more than one vehicle accident per 100,000 miles.

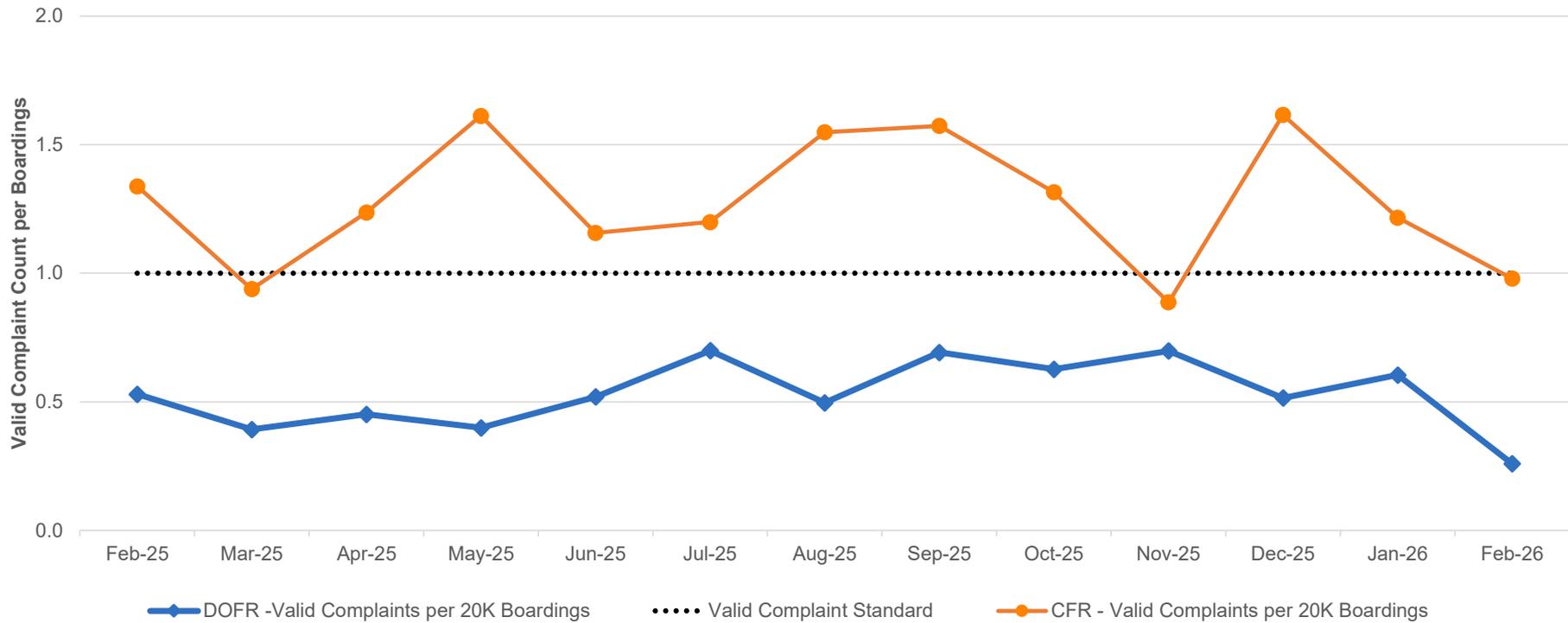
Data reported through February 14<sup>th</sup>, 2026



# OC BUS



## Service Quality – Customer Satisfaction



**Customer Satisfaction:** The performance standard for customer satisfaction is courtesy, measured by the number of valid complaints received. Customer complaints are the count of incidents when a rider reports dissatisfaction with service. The standard adopted by OCTA for OC Bus is no more than one valid customer complaint per 20,000 boardings.

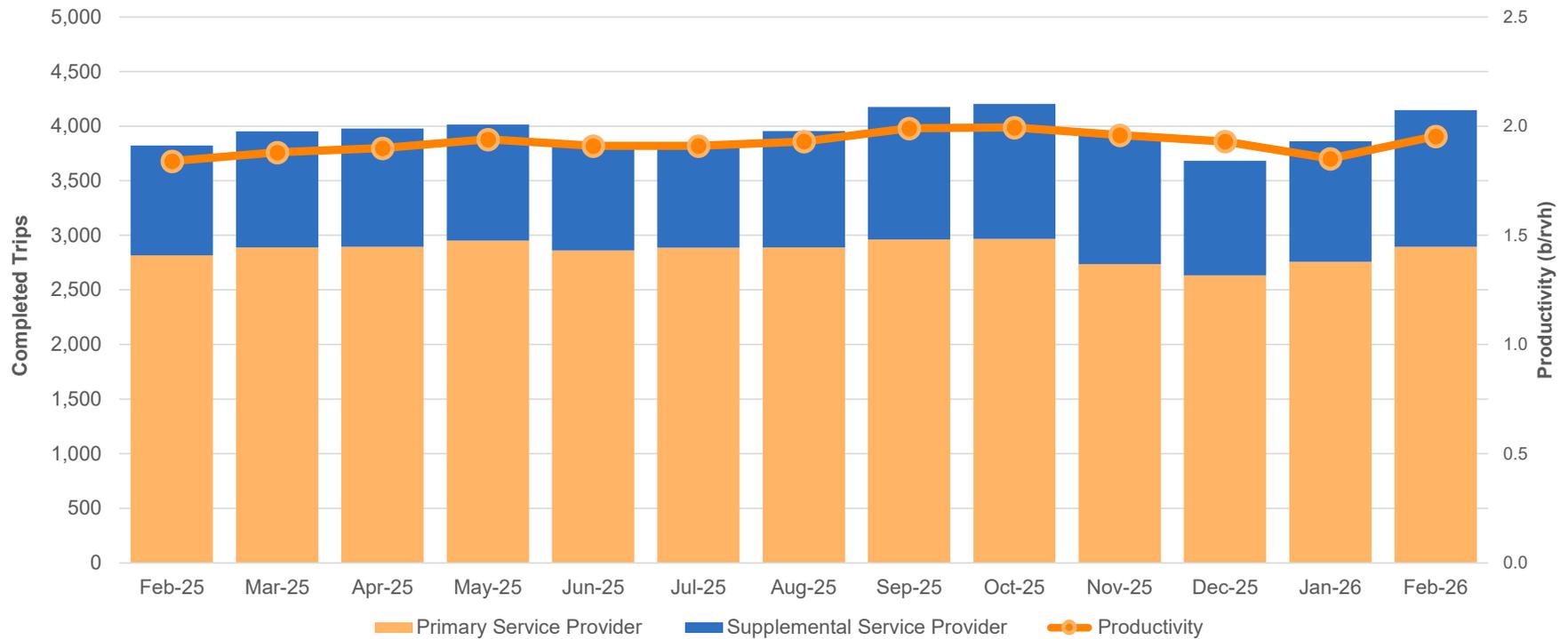
Data reported through February 14<sup>th</sup>, 2026



# OC ACCESS



## Service Demand – Ridership Snapshot

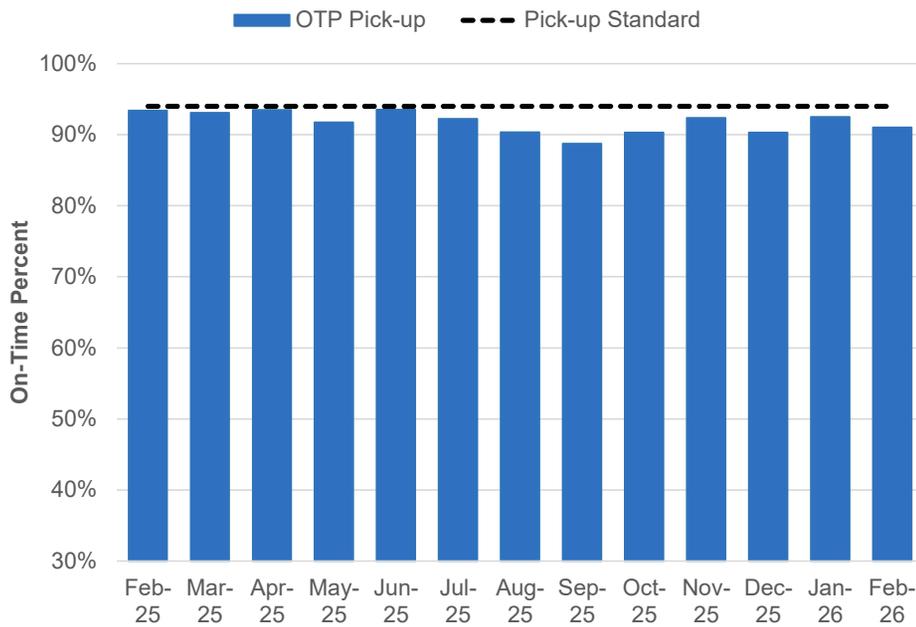


**Service Provider Demand:** OCTA has a primary service provider, First Transit, Inc., and supplemental providers which are contracted to meet demand on the network.

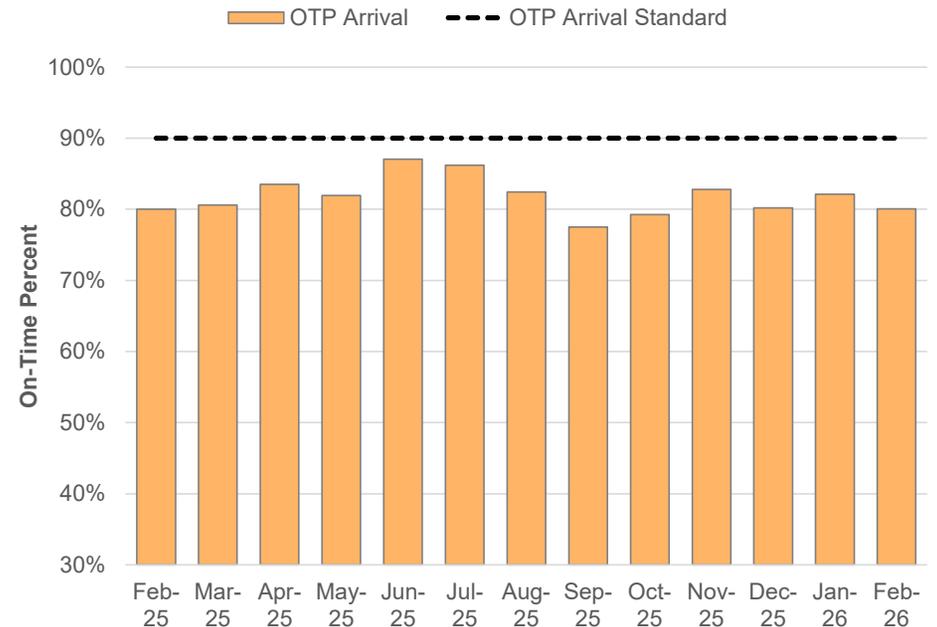
Data reported through February 14<sup>th</sup>, 2026



## Service Reliability – On-Time Performance



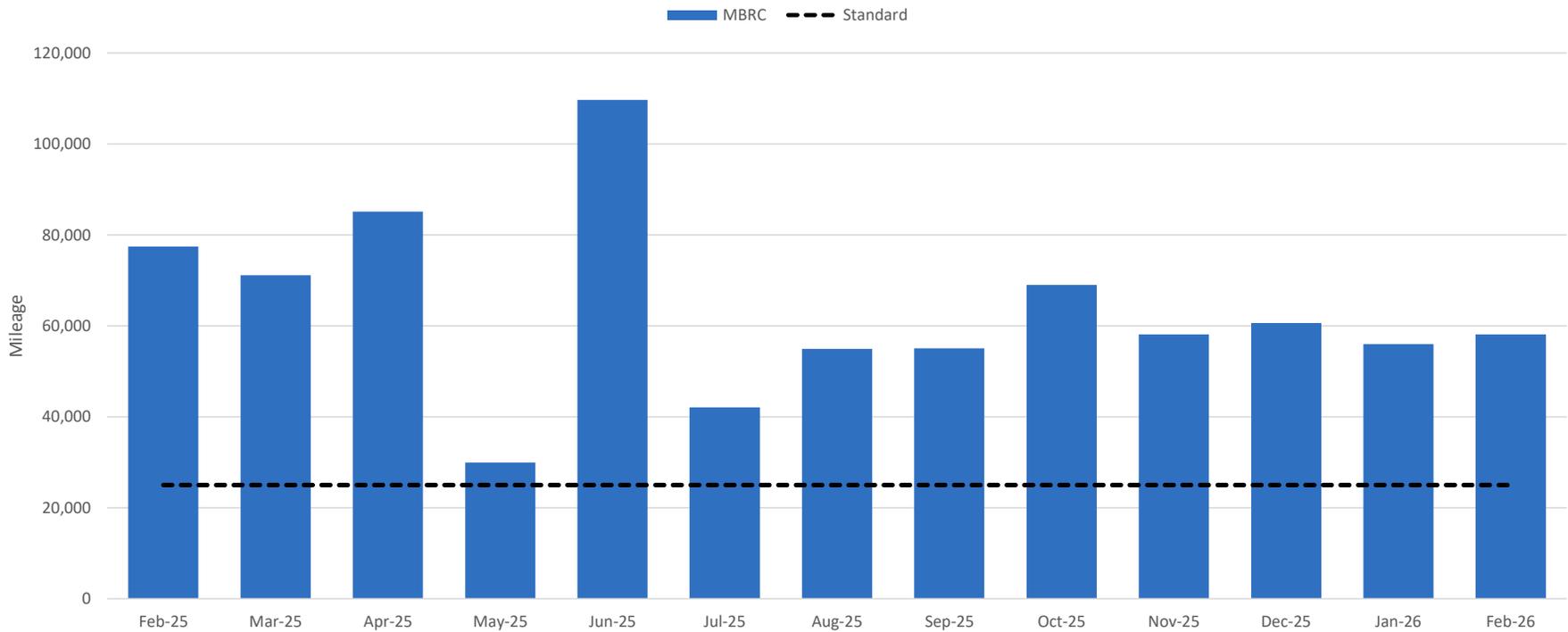
**Pick-up OTP:** The percentage of trips when the driver arrives within the 30-minute on-time window for scheduled pick-up trips.



**Arrival OTP:** The percentage of trips when the passenger arrived at their destination by or before the scheduled arrival time.



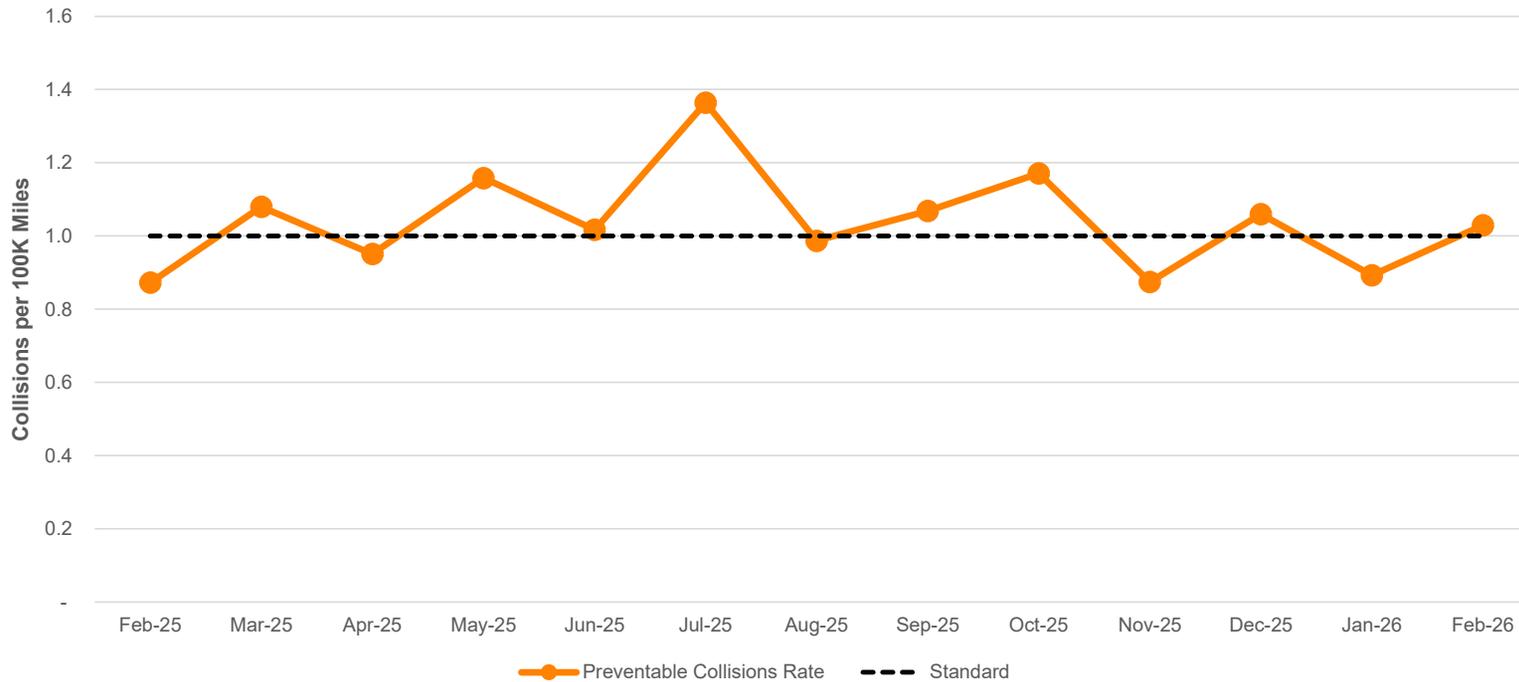
## Service Reliability – Miles Between Road Calls



**Miles Between Road Calls:** MBRC is calculated by dividing the total miles traveled by all OC ACCESS vehicles over the calendar month by the total number of road calls or disruptions due to mechanical failures in revenue service during the same period. The MBRC standard for OC ACCESS is 25,000 miles.



## Safety – Preventable Collisions



**Preventable Collisions:** A preventable collision is defined as an event where a driver providing revenue service could have been reasonably avoided by the driver. The performance standard is no more than one vehicle accident per 100,000 miles.

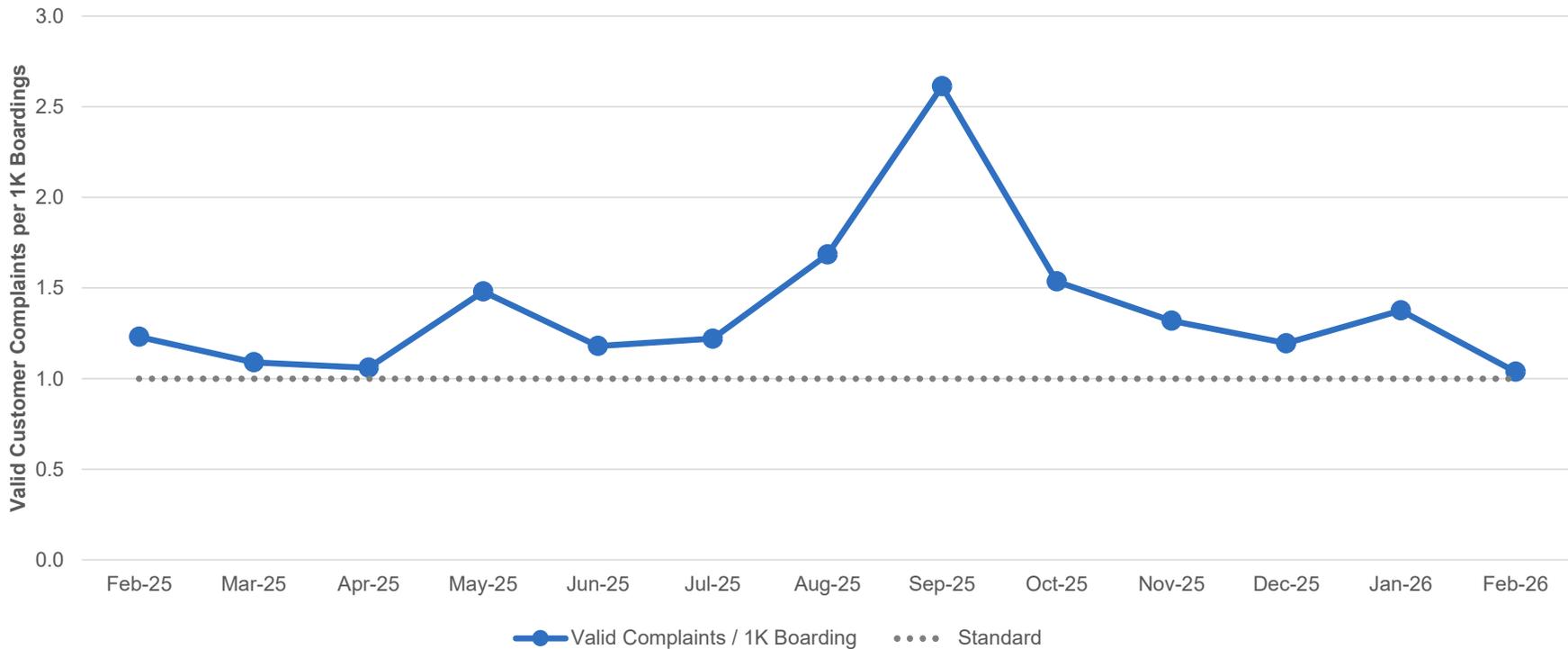
Data reported through February 14<sup>th</sup>, 2026



# OC ACCESS



## Service Quality – Customer Satisfaction



**Customer Satisfaction:** The performance standard for customer satisfaction is courtesy, measured by the number of valid complaints received. The contractual standard for OC ACCESS is no more than one valid complaint per 1,000 boardings.

Data reported through February 14<sup>th</sup>, 2026



## Upcoming Activities



### Service Changes

- OC Bus Service Change Implementation – May 10, 2026

### Future Board Items

- Bimonthly Performance Report – May 14, 2026