



**December 9, 2021**

**To:** Transit Committee  
**From:** Darrell E. Johnson, Chief Executive Officer  
**Subject:** OC Streetcar Cost and Schedule Update

**Overview**

The Orange County Transportation Authority is currently underway with the implementation of the OC Streetcar project. Staff is seeking Board of Directors' approval of a revised OC Streetcar budget and funding plan.

**Recommendations**

- A. Approve the revised OC Streetcar Federal Transit Administration Full Funding Grant Agreement budget of \$509.54 million.
- B. Authorize the use of an additional \$86.10 million for the OC Streetcar Federal Transit Administration Full Funding Grant Agreement, increasing the total funding for the Full Funding Grant Agreement from \$423.44 million to \$509.54 million, as follows:
  - \$45.72 million in additional Congestion Mitigation and Air Quality Improvement Program funds;
  - \$30.98 million in additional Measure M2 Transit Extensions to Metrolink (Project S) program funding; and
  - \$9,407,272 in American Rescue Plan Act Capital Investment Grant funds.
- C. Authorize staff to make all necessary amendments to the Federal Transportation Improvement Program, update any air quality conformity requirements, and execute any required agreements, amendments, or grants with the Federal Transit Administration to facilitate the recommendation above.

***Background***

The Orange County Transportation Authority (OCTA), in cooperation with the City of Santa Ana (City) and the City of Garden Grove, is implementing a modern streetcar running between the Santa Ana Regional Transportation Center in the City and the intersection of Harbor Boulevard and Westminster Avenue in the City of Garden Grove. The OC Streetcar project (Project) will improve transit connectivity and accessibility, increase transit options, relieve congestion, and provide benefits to the community and traveling public. The Project is being implemented as part of Measure M2 (M2) Project S – Transit Extensions to Metrolink, approved by Orange County voters in November 2006.

Construction of the 4.15-mile Project involves complex and specialized work, including the installation of embedded track in existing streets, an overhead contact system (OCS) to supply power to the vehicles, stops with canopies, two bridges, and a maintenance and storage facility (MSF).

On July 9, 2018, the OCTA Board of Directors (Board) approved a Project cost of \$407.75 million. The Project cost was adopted as part of the execution of the Full Funding Grant Agreement (FFGA) with the Federal Transit Administration (FTA) in November 2018 that secured \$148.95 million in federal New Starts Capital Investment Grant (CIG) discretionary funding for the Project. The FFGA is a contract between OCTA and FTA governing the delivery of the Project. The FTA closely monitors implementation of the Project to ensure that the terms of the FFGA are being met.

Following execution of the FFGA in November 2018, a Notice to Proceed was issued to Walsh Construction Company II, LLC, (Walsh) to commence construction activities. Since that time, work has progressed with substantial completion of the bridges over Westminster Avenue and the Santa Ana River, completion of planned utility relocations, installation of embedded track in City streets and ballasted track in the Pacific Electric Right-of-Way (PEROW), and construction and installation of the MSF building floor slabs, station platforms, and the OCS poles.

Despite the progress made in the construction of the Project, there have been many challenges encountered as shared with the Board in several prior Project updates. Some of the major challenges include the following:

- The number and nature of unknown utility conflicts encountered was higher and more complex than anticipated.
- An extensive amount of contaminated and hazardous soil was encountered during excavations on the PEROW, city streets, and at the MSF site.

- Additional unforeseen conditions have been encountered, including thicker sections of pavement and unsuitable subgrade conditions within city streets, as well as an abandoned well, underground storage tank, and cultural resources discovery at the MSF.
- Unanticipated revisions to the MSF design related to structural, safety, operational, and maintenance elements.
- Unanticipated revisions to traction power substations to meet current electrical requirements, which include clearances around electrical equipment, modifications to electrical conduit, and added maintenance access and security gates.
- Contractor non-compliance with construction quality requirements and quality control plans.
- An extensive number of change requests (CR) have been submitted by Walsh to address unforeseen conditions, material substitutions, design modifications, and requests made by third parties. The CRs have resulted in numerous change directives being issued.
- An extensive number of requests for information (RFI) have been submitted by Walsh seeking clarifications of plans and specifications, design modifications, deviations for constructability, and designer intent. Each RFI requires technical and contractual reviews and may include specialized design disciplines, as well as oversight and approval from partner agencies and other third parties.

These challenges have resulted in OCTA issuing a higher than anticipated number of construction contract change orders (CCO) to Walsh, requiring an increased level of professional services for technical and contractual reviews, as well as oversight of the work by OCTA and its consultants to ensure that quality, safety, and environmental compliance requirements are met.

The original Project estimate, including contingency, was established using the methodologies prescribed by FTA. The estimate was reviewed and concurred with by FTA and based on the assessed known costs and risks at the time, the Project construction contract was awarded in 2018. Some of the realized risks have been greater than expected, and there have been additional expenses associated with items not included in the FFGA that resulted in Project contingency being drawn down faster than originally forecasted for this stage of construction. As a result, in March 2021, the Board authorized \$15.61 million in supplemental contingency, increasing the Project cost from \$407.83 million to \$423.44 million. This was done to ensure the Project could continue to progress while staff conducted the FTA-required risk analysis needed to develop a revised cost and schedule to complete the Project.

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***Discussion***

Based on OCTA's review of contractor progress through invoicing and monitoring of activity in the field, it is estimated that construction is 58.6 percent complete. This work includes the installation of track along approximately 1.35 miles of the 4.15-mile alignment, numerous OCS and traffic signal foundations and poles, and foundations for three of the 16 station platforms. In addition, Siemens is in the final stages of vehicle equipping and testing, and it is anticipated that the eight vehicles required for service will be complete in April 2022.

In addition to the challenges previously noted, there are remaining challenges associated with unknown utilities which have, and may continue to, impact the installation of track and the placement of OCS poles. Revisions to the MSF design related to structural, safety, operational, and maintenance elements require time to coordinate and implement. Additionally, there have been revisions to certain specified equipment as manufacturers have updated equipment model availability and specifications due to new technology.

Delays in constructing the MSF impact the timing of delivery of the vehicles from Siemens, as the MSF site is necessary for providing OCTA a secure location to test, accept, and commission the vehicles. OCTA will be subject to monthly costs for the secure storage of the vehicles at the Siemens Sacramento facility after April 2022, and until the MSF is ready for vehicle delivery.

While the delays to the MSF and continuing challenges of unknown utilities in City streets are of concern, there have been encouraging improvements in the contractor's progression of work. For example, in recent months additional progress has been made in placement of ballasted track in Segment 1, as well as excavation for embedded track along Santa Ana Boulevard and placement of rail in Segments 2 and 3 (Attachment A). Progress has been evident at the MSF as well, with concrete placement for the walls and slab for the service and inspection pit and wheel truing pit.

As discussed with the Board as part of prior Project updates, staff has been working in consultation with FTA on updating the Project cost and schedule based on a robust risk-based methodology to determine an updated cost to complete the Project and the projected revenue service date (RSD). OCTA and FTA have collaborated on updating project risks through interactive risk workshops and monitoring the schedule based on actual work in the field. As risks have been realized or retired and the construction progression is documented, the cost and schedule to complete the Project are becoming clearer. The latest FTA-compliant risk assessment was conducted with input

from FTA and FTA's consultant on the many factors influencing the assessment of cost and schedule.

Following this methodology, staff has determined March 2024 to be an achievable RSD with an estimated cost to complete of \$509.54 million. This increase from \$423.44 million as approved by the Board in March 2021, to \$509.54 million, represents an increase in construction cost due to CCOs approved through October 2021, forecast required CCOs, as well as an increase in costs of equipment for the MSF, ticket vending machines, spare parts, and additional utility costs. The increase includes costs for vehicle storage, and for professional services covering an increased level of effort and the extended period of service through March 2024, including associated close-out activities. These professional services include the project management consultant, construction manager, designer of record, public outreach, quality manager, legal services, and those provided by OCTA staff. Additionally, as required by the FTA for a project at this stage of construction, contingency is being supplemented based on project risk. A summary of the cost increases totaling \$86.10 million is provided in Attachment B.

### Funding Plan

The \$86.10 million supplemental budget is proposed to be funded with a combination of American Rescue Plan Act of 2021 (ARP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), and M2 funding. OCTA has a required local match for the project of 46.9 percent, and so the additional funding need of \$86.10 million requires local matching funds of \$40.38 million

ARP funds provide additional CIG funding for FFGA projects across the nation, including the OC Streetcar which received \$9.41 million. The ARP funding helps offset the local match and reduces the amount of M2 needed to fund the cost increase from \$40.38 million to \$30.98 million.

CMAQ funds are committed to air quality improvements and Board policy directs these funds to M2 fixed-guideway and/or M2 high-occupancy or high-occupancy toll operational improvements. OCTA receives approximately \$49 million each year in new CMAQ funding. Staff is recommending the use of \$45.72 million in additional future CMAQ funding.

In summary, the additional Project funding need of \$86.10 million is proposed to be funded using \$9.41 million in ARP, \$45.72 million in additional CMAQ, and \$30.98 million in additional M2 Project S funds. The use of these funds is consistent with the Board-adopted Capital Programming Policies and the M2 Ordinance, which require that every effort be made to maximize state and federal funding for M2 projects. FTA will need to approve the use of additional federal

funds including both the CMAQ and the ARP. Also, the Southern California Association of Governments (SCAG) must move the project into a later year for air quality conformity purposes and program the funding into the Federal Transportation Improvement Program (FTIP) in future years. OCTA will work with SCAG to update the air quality conformity information as required and align the FTIP to be consistent with the current Project schedule and RSD of March 2024.

The original and recommended funding is provided in the table below:

**Project Recommended FFGA Funding Plan**

Funding Programs (in 1,000's)	Funding Approved March 2021	Funding Need	Recommended Funding
FTA New Starts	\$148,955		\$148,955
FTA Section 5307	\$13,599		\$13,599
Federal CMAQ	\$62,412	\$45,720	\$108,132
Federal ARP*		\$9,407	\$9,407
State TIRCP**	\$25,586		\$25,586
Subtotal State and Federal	\$250,552	\$55,127	\$305,679
M2	\$172,886	\$30,975	\$203,861
<b>Total Funding</b>	<b>\$423,438</b>	<b>\$86,102</b>	<b>\$509,540</b>

\*Federal ARP funding is an offset to the M2 amount requested

\*\*Transit and Intercity Rail Capital Program

Not included in the table is \$16.60 million in previously expended funding for activities that are non-federally participating and not eligible to be included in the FFGA Project cost, including early environmental phase work and certain right-of-way acquisition costs.

When OCTA approves a programming change for a project, a Capital Funding Plan is provided to allow the Board to consider this change while looking at the overall funding for projects in the transit program. Once approved, the changes noted above will be finalized into the Capital Funding Program Report for the transit program, which is provided in Attachment C.

**Next Steps**

Staff will work with SCAG to amend the FTIP and with the FTA to update and/or amend the FFGA and execute grants for CMAQ and ARP. Additionally, staff will continue to track Project cost and schedule adherence and continue to report to the Board quarterly.

**Fiscal Impact**

Funds are included in OCTA's Fiscal Year 2021-22 Budget, Capital Programs Division, under several professional service and construction accounts for the Project in Fund 0051. This action will not require a fiscal year budget amendment because the proposed Project budget increase will primarily affect future fiscal year budgets. It will increase the Project FFGA budget by \$86.10 million, using a combination of ARP, CMAQ, and M2 funding.

**Summary**

Staff is seeking Board of Directors' approval of a revised OC Streetcar project budget and funding plan, and approval to process all necessary amendments to the Federal Transportation Improvement Program, update air quality conformity requirements, and execute any agreements, amendments, or grants necessary to facilitate the revised funding plan.

**Attachments**

- A. OC Streetcar Project Map
- B. OC Streetcar Project Budget Comparison
- C. Capital Funding Program Report

**Prepared by:**

Ross Lew, P.E.  
Senior Program Manager  
(714) 560-5775

**Approved by:**

James G. Beil, P.E.  
Executive Director, Capital Programs  
(714) 560-5646