



# **AGENDA**

## ***REVISED SPECIAL Transit Committee Meeting***

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### **Committee Members**

Tim Shaw, Chairman  
Al Murray, Vice Chairman  
Andrew Do  
Steve Jones  
Miguel Pulido  
Tom Tait  
Gregory T. Winterbottom

Orange County Transportation Authority  
Headquarters  
550 South Main Street, Board Room –  
Conf. Room 07  
Orange, California

**Thursday, March 23, 2017 at 10:30 a.m.**

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two (2) business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

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.

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.

### **Pledge of Allegiance**

Director Jones

#### **1. Public Comments**

### **Special Calendar**

There are no Special Calendar matters.

### **Consent Calendar (Item 2)**

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.

#### **2. Approval of Minutes**

Approval of the Minutes of the Transit Committee meeting of March 9, 2017.



## **Regular Calendar**

- 3. Cooperative Agreement with the City of Santa Ana for the Construction Phase of the OC Streetcar Project**  
Mary Shavalier/Jim Beil

### **Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Garden Grove and Santa Ana. A cooperative agreement with the City of Santa Ana is required to identify roles and responsibilities, including financial obligations for the construction phase of the OC Streetcar project.

### **Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-6-1516 between the Orange County Transportation Authority and the City of Santa Ana, in the amount of \$1,500,000, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.

- 4. Cooperative Agreement with the City of Garden Grove for the Construction Phase of the OC Streetcar Project**  
Mary Shavalier/Jim Beil

### **Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Garden Grove and Santa Ana. A cooperative agreement with the City of Garden Grove is required to identify roles and responsibilities, including financial obligations for the construction phase of the OC Streetcar project.

### **Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1556 between the Orange County Transportation Authority and the City of Garden Grove, in the amount of \$87,504, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.



**5. OC Streetcar Operations and Maintenance Organization Plan**  
Mary Shavalier/Jim Beil

**Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Santa Ana and Garden Grove. As part of the request for a full funding grant agreement to the Federal Transit Administration, an organization plan is required to prepare for future operations and maintenance of the service. Based upon Board of Directors' feedback on the key considerations presented in February 2017, staff has prepared a qualitative analysis of four organizational models and is seeking Board of Directors' approval to contract the operations and maintenance of the OC Streetcar system.

**Recommendation**

Approve the use of an operations and maintenance contractor to provide operations and maintenance services for the OC Streetcar project, and direct staff to return to the Board of Directors for approval to release a request for proposals to procure these services.

**Discussion Items**

**6. Update on the Day Pass Promotion**  
Sean Murdock/Andrew Oftelie

**Overview**

The Board of Directors approved a six month promotional reduction in the price of the day pass in order support ongoing efforts to improve ridership. Staff has evaluated the impacts of the promotion on ridership and fare revenue and recommends the promotion be discontinued at the end of the promotional period on April 9, 2017.



# **AGENDA**

## ***REVISED SPECIAL Transit Committee Meeting***

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

**8. Committee Members' Reports**

**9. Closed Session**

There are no Closed Session items scheduled.

**10. Adjournment**

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, April 13, 2017**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.



# **MINUTES**

## ***Transit Committee Meeting***

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### **Committee Members Present**

*Tim Shaw, Chairman  
Al Murray, Vice Chairman  
Andrew Do  
Steve Jones  
Miguel Pulido  
Tom Tait  
Greg Winterbottom*

### **Staff Present**

*Darrell Johnson, Chief Executive Officer  
Ken Phipps, Deputy Chief Executive Officer  
Laurena Weinert, Clerk of the Board  
Mary K. Burton, Deputy Clerk of the Board  
James Donich, General Counsel  
OCTA Staff and members of the General Public*

### **Committee Members Absent**

*None*

## **Call to Order**

The March 9, 2017 regular meeting of the Transit Committee was called to order by Committee Chairman Shaw at 9:05 a.m.

## **Pledge of Allegiance**

Director Do led in the Pledge of Allegiance.

### **1. Public Comments**

No public comments were received.

## **Special Calendar**

### **2. Statewide and Regional Transit Ridership Trends**

Kurt Brotcke, Director of Strategic Planning, made opening comments and reported that Director Tait asked if staff could schedule a research professor from the University of California Los Angeles (UCLA) to speak on this topic. Mr. Brotcke introduced Juan Matute, Associate Director for Research and Administration at UCLA, to make a presentation on the statewide and regional transit ridership trends to the Transit Committee.



### 2. (Continued)

Mr. Matute gave a PowerPoint presentation and answered questions on the following:

- Southern California Association of Governments' (SCAG) Public Transit Patronage Trends,
- Two Major UCLA Institute for Transportation Studies Research Projects,
- Transit boardings eroding in SCAG region from 2013 through 2016,
- Indexed boardings for four largest operators in Southern California from 2000 through 2015,
- Urban Integrated National Transit Database – Florida Transit Information System,
- Orange County Transportation Authority ridership versus peers from 2002 through 2016 (i.e., King County, Broward County, PACE – Suburban Bus Division, Alameda-Contra Costa, Riverside, Westchester County, Suburban Mobility San Mateo County, Omni Trans, and City of Phoenix), and
- OCTA ridership versus peers 2005 baseline from 2005 through 2016.

Mr. Matute presented potential explanations for falling transit ridership that included:

- Declining immigration,
- Economic recovery (less poverty),
- Suburbanization of poverty,
- Gentrification/displacement,
- Falling gas prices,
- Investments in auto travel,
- Structural changes in used car finance,
- Transit service disruptions, increasing transit fares,
- Transit services, and
- New high-cost transit investments.

Director Tait requested staff to provide additional information on research related to transit fare increases or decreases, and impacts to transit ridership.



## **Consent Calendar (Items 3 through 8)**

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.

### **3. Approval of Minutes**

A motion was made by Committee Vice Chairman Murray, seconded by Director Winterbottom, and declared passed by those present, to approve minutes of the February 9, 2017 meeting.

### **4. Grant Award for the 2017 and 2018 Angels Express Service**

Director Winterbottom pulled this item to thank staff for their efforts in writing and obtaining the Mobile Source Air Pollution Reduction grant award.

A motion was made by Director Winterbottom, seconded by Committee Vice Chairman Murray, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer or designee to accept the grant award and execute grant-related agreements with the Mobile Source Air Pollution Reduction Review Committee to support the Angels Express service.
- B. Authorize the Chief Executive Officer or designee to execute agreements with the Southern California Regional Rail Authority to provide special rail service for the Angels Express.

### **5. Sole Source Agreement for Warranty and Non-Warranty Cummins Engine Services**

A motion was made by Committee Vice Chairman Murray, seconded by Director Winterbottom, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-6-1605 between the Orange County Transportation Authority and Cummins Pacific, LLC, in the amount of \$750,000, for warranty and non-warranty engine services, effective May 1, 2017 through April 30, 2022.



# **MINUTES**

## ***Transit Committee Meeting***

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### **6. Sole Source Agreement for the Construction of a Liquid Hydrogen Fuel Station at the Santa Ana Bus Base**

A motion was made by Committee Vice Chairman Murray, seconded by Director Winterbottom, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-7-1577 between the Orange County Transportation Authority and Linde LLC, in the amount of \$4,777,732, for the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.
- B. Amend the Orange County Transportation Authority's Fiscal Year 2016-17 Adopted Budget, in the amount of \$4,777,732, to accommodate the construction of a liquid hydrogen fuel station at the Santa Ana Bus Base.

### **7. Agreement for Pacific Electric Right-of-Way Weed Abatement and Debris Removal Services**

A motion was made by Committee Vice Chairman Murray, seconded by Director Winterbottom, and declared passed by those present, to:

- A. Find RPW Services, Inc., the apparent low bidder, as non-responsive for failure to execute the bid form.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1504 between the Orange County Transportation Authority and Pest Options, Inc., the lowest responsive, responsible bidder, in the amount of \$215,830.80, for a five-year term, for the Pacific Electric right-of-way weed abatement and debris removal services.





# **MINUTES**

## ***Transit Committee Meeting***

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### **8. Consultant Selection for Quality Assurance Management Support for the OC Streetcar Project**

A motion was made by Committee Vice Chairman Murray, seconded by Director Winterbottom, and declared passed by those present, to:

- A. Approve the selection of Kal Krishnan Consulting Services, Inc., as the firm to provide quality assurance management services for the OC Streetcar project.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-6-1537 between the Orange County Transportation Authority and Kal Krishnan Consulting Services, Inc., in the amount of \$429,403, to provide quality assurance management support for the OC Streetcar project, from contract execution through December 31, 2020.

Director Tait voted in opposition for this item.

## **Regular Calendar**

### **9. Transit Master Plan - State of OC Transit**

Gary Hewitt, Project Manager of Transit Planning, made opening comments and introduced Steve Boland, Senior Associate for Nelson Nygaard.

Mr. Boland gave a PowerPoint presentation and answered questions on the State of the OC Transit Summary Report including the following:

- The need for the OC Transit Vision,
- Summarizing OCTA's current service,
- The history of transit in Orange County,
- Local and national trends in transit ridership,
- Introduction of transit modes important for the transit vision,
- Boardings and opportunities for growth, and
- Key themes and goals.

A motion was made by Director Do, seconded by Director Pulido, and declared passed by those present, to direct staff to return to the Board of Directors in May 2017, with the draft Transit Master Plan Investment Framework.



### **Discussion Items**

#### **10. Orange County Transportation Authority Paratransit Services Overview**

Darrell Johnson, Chief Executive Officer (CEO), provided opening comments and reported that OCTA will conduct a Board workshop on Monday, April 10th to address OCTA's paratransit services. Mr. Johnson introduced Beth McCormick, General Manager of Transit, who provided an overview of the topics that will be covered at the workshop that included the following:

- Background,
- OCTA Paratransit,
- Americans with Disabilities Act (ADA),
- ACCESS: ADA Service Characteristics, ACCESS Plus, Service Delivery Model, Rider Profile, and Fleet Mix,
- Same Day Taxi,
- Special Agency Service,
- Comparison of Services, and
- Challenges.

#### **11. Chief Executive Officer's Report**

CEO, Mr. Johnson, reported on the following:

- Introduced Johnny Dunning and announced that Mr. Dunning is OCTA's new Manager of Service Planning and Customer Advocacy.
- Andy Oftelie, Executive Director of Finance and Administration; Kirk Avila, Treasurer and General Manager of Treasury and Toll Roads; and he met with the rating agencies in New York and presented information about the Interstate 405 Improvement Project Investment Grade Transportation Infrastructure Finance and Innovation Act loan status.
- The Riverside County Transportation Commission is hosting a grand opening event for the 91 Express Lanes in Riverside County on Friday, March 31st at 11:00 a.m. at the North Main Corona Metrolink Station.
- The Taxpayer Oversight Committee will conduct their 26th Annual Measure M Public Hearing on Tuesday, April 11th at 6:00 p.m. at the OCTA Headquarters. The purpose of the public hearing is to consider whether OCTA is proceeding in accordance with the Transportation Investment Plan in Measure M2.



# **MINUTES**

## ***Transit Committee Meeting***

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### **12. Committee Members' Reports**

Committee Chairman Shaw reported that he and Director Do went “under cover” and boarded buses throughout Central Orange County to get feedback from passengers. Several passengers were students who reported that the buses were clean and on time; however, at one location there were 16 passengers boarding at the same time and using the farebox slowed down the process.

Director Do reported that he had boarded buses in the San Francisco Bay area and noted that the OCTA buses are much cleaner, more prompt, and the coach operators are more courteous. Both Committee Members agreed that having mobile readers on the buses would speed up the process.

Committee Chairman Shaw reported that he read Senator Moorlach’s email regarding the Cap-and-Trade auction where they expected \$600 million in proceeds and yielded \$10 million. CEO, Mr. Johnson, responded that staff has been monitoring this, as well as funding from the low carbon transit program and will provide updates through the state legislative monthly reports.

### **13. Closed Session**

There were no Closed Session items scheduled.

### **14. Adjournment**

The meeting adjourned at 10:30 a.m.

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, April 13, 2017**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.

Note: There is a Special Transit Committee meeting scheduled on **Thursday, March 23, 2017 at 10:30 a.m.**

ATTEST

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Mary K. Burton  
Deputy Clerk of the Board

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Tim Shaw  
Committee Chairman



**March 23, 2017**

**To:** Transit Committee

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

**Subject:** Cooperative Agreement with the City of Santa Ana for the Construction Phase of the OC Streetcar Project

### **Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Garden Grove and Santa Ana. A cooperative agreement with the City of Santa Ana is required to identify roles and responsibilities, including financial obligations for the construction phase of the OC Streetcar project.

### **Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-6-1516 between the Orange County Transportation Authority and the City of Santa Ana, in the amount of \$1,500,000, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.

### **Discussion**

On July 13, 2015, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved Memorandum of Understanding (MOU) No. C-5-3295 with the City of Santa Ana (City) for roles and responsibilities for the implementation of the OC Streetcar project (Project). The Board directed staff to proceed with the development of agreements as listed in the MOU, including a construction agreement.

Consistent with the MOU approved by the Board, staff has been negotiating the specific terms and conditions for the construction phase of the Project with the City. Consensus has been reached with the City on the specific terms and conditions of the draft cooperative agreement, and a summary of the key provisions of the draft cooperative agreement is as follows:

- The term of the cooperative agreement is from the beginning of construction until one year past the beginning of revenue service.
- OCTA shall lead the construction of the Project.
- The Project shall be constructed consistent with the plans and specifications developed during the design phase.
- The cooperative agreement outlines key construction coordination activities, including:
  - Project Management
  - Schedule
  - Reporting
  - Records Management
  - Construction Coordination
  - Business Access
  - Street Closures/Traffic Control
  - Water Service Shutdowns
  - Public Notification
  - Construction Access
  - Construction Inspection
  - Project Submittals
  - Construction Acceptance
  - Permits
  - Safety
  - Testing and Startup
  - Coordination with Other City Projects
  - Public Involvement
- The City will provide construction inspection support services and project submittal reviews on City-owned facilities, such as sidewalks, roadways, and traffic signals, as well as project coordination with OCTA staff.
- The City's participation ensures City inspection of City infrastructure, input on Project elements through meetings, design reviews, and collaboration overall.
- Consistent with OCTA's practice on major capital projects, OCTA agrees to compensate the City for its participation on the Project.
- A detailed work plan has been developed and serves as the budget estimate for City support reimbursement.
- The cost of the City's participation in the Project will be covered as a Project cost following federal guidelines.
- The amount is a maximum obligation; the specific amount reimbursed to the City will be based upon the level of City participation.
- The City shall only use indirect cost recovery rates that are compliant with federal regulations and approved by a cognizant agency, that is able to audit overhead rates to meet federal guidelines.
- The City is required to submit monthly invoices to OCTA for review which shall include signed timesheets and a summary of work performed during the month.
- The City is responsible for all betterment costs requested by the City. A betterment is an element added to the Project by the City that is not needed for the Project.
- Staff will return to the Board for approval of additional agreements with the City, including an amended and restated Santa Ana Regional Transportation Center Station Agreement and an operations and maintenance agreement.

**Next Steps**

Pending Board approval, the draft agreement will be advanced to the City Council for review and approval.

The Project continues to advance through design with the 90 percent design milestone completion anticipated in April 2017, and the construction invitation for bid is to be released in October 2017.

**Fiscal Impact**

The proposed OCTA Fiscal Year 2017-18 Budget, Capital Programs Division, includes funding for the cooperative agreement in Account 0051-7831-TS010-Z84. The cooperative agreement is funded with federal and local funds.

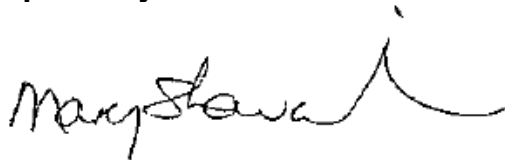
**Summary**

Staff requests Board of Directors' approval for the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-6-1516 between the Orange County Transportation Authority and the City of Santa Ana, in the amount of \$1,500,000, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.

**Attachment**

None.

**Prepared by:**



Mary Shavali  
Program Manager  
(714) 560-5856

**Approved by:**



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



Virginia Abadessa  
Director, Contracts Administration  
and Materials Management  
(714) 560-5623



**March 23, 2017**

**To:** Transit Committee

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

**Subject:** Cooperative Agreement with the City of Garden Grove for the Construction Phase of the OC Streetcar Project

### **Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Garden Grove and Santa Ana. A cooperative agreement with the City of Garden Grove is required to identify roles and responsibilities, including financial obligations for the construction phase of the OC Streetcar project.

### **Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1556 between the Orange County Transportation Authority and the City of Garden Grove, in the amount of \$87,504, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.

### **Discussion**

On September 15, 2015, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved Memorandum of Understanding (MOU) No. C-5-3418 with the City of Garden Grove (City) for roles and responsibilities for the implementation of the OC Streetcar project (Project). The Board directed staff to proceed with the development of agreements as listed in the MOU, including a construction agreement.

Consistent with the MOU approved by the Board, staff has been negotiating the specific terms and conditions for the construction phase of the Project with the City. Consensus has been reached with the City on the specific terms and conditions of the draft cooperative agreement, and a summary of the key provisions of the draft cooperative agreement is as follows:

- The term of the cooperative agreement is from the beginning of construction until one year past the beginning of revenue service.
- OCTA shall lead the construction of the Project.
- The Project shall be constructed consistent with the plans and specifications developed during the design phase.
- The cooperative agreement outlines key construction coordination activities including:
  - Project Management
  - Schedule
  - Reporting
  - Records Management
  - Construction Coordination
  - Business Access
  - Street Closures/Traffic Control
  - Water Service Shutdowns
  - Public Notification
  - Construction Access
  - Construction Inspection
  - Project Submittals
  - Construction Acceptance
  - Permits
  - Safety
  - Testing and Startup
  - Coordination with Other City Projects
  - Public Involvement
- The City will provide construction inspection support services and project submittal reviews on City-owned facilities, such as sidewalks, roadways, and traffic signals, as well as project coordination with OCTA staff.
- The City's participation ensures City inspection of City infrastructure, input on Project elements through meetings, design reviews, and collaboration overall.
- Consistent with OCTA's practice on major capital projects, OCTA agrees to compensate the City for its participation on the Project.
- A detailed work plan has been developed and serves as the budget estimate for City support reimbursement.
- The cost of the City's participation in the Project will be covered as a Project cost following federal guidelines.
- The amount is a maximum obligation; the specific amount reimbursed to the City will be based upon the level of City participation.
- The City shall only use indirect cost recovery rates that are compliant with federal regulations and approved by a cognizant agency that is able to audit overhead rates to meet federal guidelines.
- The City is required to submit monthly invoices to OCTA for review, which shall include signed timesheets and a summary of work performed during the month.
- The City is responsible for all betterment costs requested by the City. A betterment is an element added to the Project by the City that is not needed for the Project.
- Staff will return to the Board for approval of an operations and maintenance agreement with the City.



**Next Steps**

Pending Board approval, the draft cooperative agreement will be advanced to the City Council for review and approval.

The Project continues to advance through design with the 90 percent design milestone completion anticipated in April 2017, and the construction invitation for bid to be released in October 2017.

**Fiscal Impact**

The proposed OCTA Fiscal Year 2017-18 Budget, Capital Programs Division, includes funding for the cooperative agreement in Account 0051-7831-TS010-Z84. The cooperative agreement is funded with federal and local funds.

**Summary**

Staff requests Board of Directors' approval for the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-7-1556 between the Orange County Transportation Authority and the City of Garden Grove, in the amount of \$87,504, for construction inspection support, design change reviews, and project coordination for the OC Streetcar project.

**Attachment**

None.

**Prepared by:**



Mary Shavalier  
Program Manager  
(714) 560-5856

**Approved by:**



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



Virginia Abadessa  
Director, Contracts Administration  
and Materials Management  
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**March 23, 2017**

**To:** Transit Committee

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

**Subject:** OC Streetcar Operations and Maintenance Organization Plan

### **Overview**

The Orange County Transportation Authority is the lead agency for the design, construction, operations, and maintenance of the OC Streetcar in the cities of Santa Ana and Garden Grove. As part of the request for a full funding grant agreement to the Federal Transit Administration, an organization plan is required to prepare for future operations and maintenance of the service. Based upon Board of Directors' feedback on the key considerations presented in February 2017, staff has prepared a qualitative analysis of four organizational models and is seeking Board of Directors' approval to contract the operations and maintenance of the OC Streetcar system.

### **Recommendation**

Approve the use of an operations and maintenance contractor to provide operations and maintenance services for the OC Streetcar project, and direct staff to return to the Board of Directors for approval to release a request for proposals to procure these services.

### **Background**

On February 13, 2017, staff presented a set of key considerations to the Orange County Transportation Authority (OCTA) Board of Directors (Board) to evaluate four approaches to the OC Streetcar project (Project) Operations and Maintenance (O&M) Organization Plan: In-House, O&M Contractor, Management by Private Contractor (MPC), and In-House Operations/Maintenance Contractor (IHO/MC). Based upon Board feedback, the key considerations approved to evaluate these models include cost, operational flexibility, quality of service, organizational impacts, qualifications of personnel, and proven success/performance.

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***Discussion***

OCTA is a well-established organization that provides transit service through both In-House operations and privately contracted operations. While OCTA has demonstrated effective management of various operating approaches and is well equipped to implement any of the options under consideration, OCTA has limited experience with electric rail systems. The electric rail systems require specialized training and knowledge as the electrical system is very much a part of the day-to-day operations. The specialized requirements include the ability to support and maintain the electrical system, as well as experience with vehicles that depend upon the electrical system for propulsion.

To determine which of the models best fits OCTA's needs both operationally and financially, the following is an assessment of the options based upon the key considerations approved by the Board in February 2017.

**Cost**

Conservative cost estimates were prepared for each of the organization options, with the costs presented in 2020 dollars, the first year of revenue operations. The O&M Contractor option has the lowest projected operating cost with an estimate of \$7.7 million per year for 31,280 annual revenue hours. The In-House, MPC, and IHO/MC options are all projected to cost approximately \$8-\$8.3 million per year. The operating costs per hour range from \$246 to \$265 per hour, depending upon the option.

Detailed projections for annual operating costs for all four options in 2020 dollars are shown in Attachment A. Overhead costs for the O&M Contractor option were calculated based upon the industry standard of ten percent of the applicable operating costs. The overhead for In-House, MPC, and an IHO/MC were assumed to be equivalent to the O&M Contractor. The added costs for the MPC include profit and the cost of contract administration. The total cost to OCTA is projected, including costs outside of the base service cost and administration. Security and marketing costs are also included and will be retained by OCTA regardless of the option utilized.

**Operations Flexibility**

The small nature of the operation, combined with requirements for specialized capability with vehicles and electrical systems, present a challenge. The O&M employees need to have multiple skills and knowledge to be able to respond to circumstances that arise during operations. The employees need the flexibility to be able to address a variety of tasks. Often, work rules established for an operation limit employees that may be able to conduct certain tasks, particularly as it relates to maintenance issues. The work rules will be developed to ensure flexibility for the employees.

The O&M Contractor and MPC options require experienced operations firms in order for the firms to submit a proposal. The private contractors will bring extensive experience in preparing work rules that ensure flexibility in the O&M. For this reason, the O&M Contractor and MPC options have an advantage for operations flexibility over In-House and IHO/MC.

#### Quality of Service

OCTA has been able to ensure quality of service utilizing both the In-House model for operations as well as the contracted approach for bus O&M. The key to service quality for the In-House operation is to have well defined expectations regarding on-time performance and reliability, along with effective monitoring of the outcomes. The O&M Contractor and MPC options typically have contractual requirements or financial incentives to meet the on-time performance. The O&M Contractor and MPC options have an advantage over the In-House and IHO/MC options because of the immediate access to existing experience and personnel to assure quality of service.

The In-House and IHO/MC ability to ensure quality of service increases each year with experience and may, in the long term, have an advantage over the O&M Contractor and MPC because of the ability to retain long-term trained In-House employees.

#### Organization Impact

OCTA has experience with In-House and O&M Contractor models for delivering transit service, and OCTA has a proven ability to easily incorporate either model into the existing organization. The largest impact is likely to be the requirement for recruitment and training of the new team. The O&M Contractor and MPC options bring experienced private firms already involved in the recruitment and training of similar personnel. There is an advantage in the startup to have prior experience and engagement in streetcar operations. In the short term, the O&M Contractor and MPC options would have the advantage on organization impact as OCTA could rely upon experienced rail operations personnel to train and establish an operating team for the new service.

#### Qualified Personnel

The OC Streetcar is estimated to have 44 employees for the initial service in 2020. The majority of the employees will be hired and trained for the position prior to commencing service. The key personnel, supervisors, and foremen for the operation will most likely need prior experience with similar systems to be effective members of the new team being established for the Project. It is a distinct disadvantage for OCTA to have limited local experience with rail, electrical systems, and streetcars. An extensive level of training and recruitment will be required to build an effective team to manage the initial operation in 2020.

The O&M Contractor and MPC options have advantages in that the private operators have been actively recruiting qualified individuals for the key management positions. In addition, the private contractor should have existing operations in other cities from which it can draw key personnel and provide effective off-site training to prepare qualified individuals. The In-House option can ensure adequate training and orientation for key personnel by establishing cooperative partnerships with other streetcar systems before the operation begins.

The best way to ensure qualified personnel over the longterm is by retaining trained employees for the service. Most of the qualifications are established through on-the-job training as part of the service start up and testing operation. Retention of employees for a long period of time is the most effective strategy to assure quality operations.

For the immediate need of a qualified team for initial operations, the O&M Contractor and MPC options have an advantage. For long-term employee retention and training, the In-House and IHO/MC options have an advantage.

#### Proven Success/Performance

In 2001, Portland introduced the first U.S. modern streetcar operation in mixed traffic. Since that time, 13 other cities have either established modern streetcar systems or have selected an organizational approach for operations.

The In-House, O&M Contractor, and MPC models have direct experience with streetcar operations and have all been implemented with success. The IHO/MC model has not been employed for modern streetcar operations. The In-House options for Dallas, Charlotte, Salt Lake City, Tacoma, and Seattle were determined to be successful because each relied upon prior experience and success in related rail operations implemented by the agencies. Cities with no prior rail experience as owners selected the O&M Contractor option (Cincinnati, Detroit, Kansas City, Milwaukee, Oklahoma City, and Washington, D.C.) or the MPC option (Tucson). Atlanta selected the In-House option but was not successful and is now implementing the O&M Contractor option. For properties with no prior rail experience, the O&M Contractor and MPC have proven to have the most successful track record.

In summary, the O&M Contractor and MPC have similar positive attributes and demonstrated experience with rail operations. Either option is expected to be more effective in establishing a new organization charged with operating the Project. The key personnel in both of these options are the responsibility of the contractor. The leadership of the key personnel is a critical ingredient to enabling an effective startup operation. The In-House and IHO/MC options are similar in that the primary leadership of the organization has to be assembled

by OCTA. In the long term, the IHO/MC options would be able to secure and train experienced personnel to operate the system.

#### Recommendation of O&M Contractor

A summary of the evaluation of the four options based upon the key considerations is provided in Attachment B. Based upon this analysis, staff is recommending that OCTA adopt the O&M Contractor option for providing O&M for the Project.

- OCTA can rely on experienced operating firms to organize its initial rail operations more effectively.
- The initial operation service quality is best supported by experienced private contractors.
- The O&M Contractor option is projected to have the least cost.
- The O&M Contractor option will provide a stronger base of experience in developing and training the employees for the service.

With the initial operation of the Project estimated to begin in December 2020, there is a challenge of building a new organization capable of effective operation the first day it opens. Utilizing an O&M Contractor has proven a successful model for several other transit properties with similar characteristics to OCTA. The experience offered by a private contractor in prior operations, as well as recruiting and training personnel for similar operations, provides a distinct advantage to OCTA in developing this new operation. OCTA organizationally has the ability to effectively manage privately contracted transit operations.

#### Next Steps

Pending Board approval, it is anticipated that a request for proposals for an O&M Contractor would be brought to the Board for release in September 2017. It is anticipated that 12 to 18 months will be required to complete the procurement, and a notice to proceed will be issued by September 2018, which would enable the contractor to mobilize and secure key personnel to support the operation.

It is recommended to have key personnel retained and on board within 24 months of starting operations (December 2018). The key personnel will refine the operations, prepare training and operations manuals, develop the safety procedures, assist with review of capital elements, and participate in testing and certification of the system.

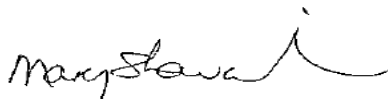
At least six months in advance (June 2020), the core group of supervisors and foremen for the O&M need to be on board and prepared to train the operators and mechanics.

**Summary**

Staff has completed an evaluation of operations and maintenance organization models for the OC Streetcar project based upon key considerations approved by the Board of Directors in February 2017. Staff is recommending an operations and maintenance contractor be procured and is seeking Board of Directors' approval to release a request for proposals for contracted operations and maintenance services for the OC Streetcar project.

**Attachments**

- A. OC Streetcar Operations and Maintenance Cost Comparison
- B. Comparative Evaluation of Operations and Maintenance (O&M) Options

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**OC Streetcar Operations and Maintenance Cost Comparison\***

	<b>IH Cost</b>	<b>OMC Cost</b>	<b>MPC Cost</b>	<b>IHO/MC Cost</b>
<b>General Administrative</b>				
Total Administrative	267,258	214,761	214,761	267,258
<b>Vehicle Operations</b>				
Total Vehicle Operations	3,383,117	2,731,880	3,320,917	3,383,117
<b>Vehicle Maintenance</b>				
Total Vehicle Maintenance	1,333,935	1,102,866	1,317,084	1,102,866
<b>Non-Vehicle Maintenance</b>				
Total Non-Vehicle Maintenance	556,100	447,931	539,785	448,093
Materials and Services	350,000	350,000	350,000	350,000
Subtotal Expenses	5,890,410	4,847,437	5,742,547	5,551,334
Overhead (10%)	484,744	484,744	484,744	484,744
Profit (5% OMC, 10% MPC+Maint.)	0	242,372	60,271	122,690
<b>PROJECTED OPERATING COST</b>	6,375,154	5,574,552	6,287,562	6,158,768
Cost per Revenue Hour	203.81	178.21	201.01	196.89
<b>Cost not in Operations Contract</b>				
Security	897,197	897,197	897,197	897,197
Electricity	250,240	250,240	250,240	250,240
Parts Replacement	200,000	200,000	200,000	200,000
Insurance	150,000	150,000	150,000	150,000
Total	1,497,437	1,497,437	1,497,437	1,497,437
<b>OCTA ADMINISTRATIVE COST</b>				
Administration	0	166,134	83,067	0
Admin Support		86,678	43,339	
Marketing/Customer Relations	200,000	200,000	200,000	200,000
Contingency	200,000	200,000	200,000	200,000
TOTAL OCTA COST	400,000	652,811	526,406	400,000
<b>Total Cost</b>	8,272,591	7,724,801	8,311,404	8,056,205
Cost per Revenue Hour	\$264.47	246.96	265.71	257.55

Annual Revenue Hours	31,280	31,280	31,280	31,280
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\*All costs shown in Year 2020 dollars

IH – In-House

OMC – Operations and Maintenance Contractor

MPC – Management by Private Contractor

IHO/MC – In-House Operations/Maintenance Contractor



**Comparative Evaluation of Operations and Maintenance (O&M) Options**

The following table summarizes the evaluation of the four O&M options based upon the key considerations indicating which options have advantages for the specific consideration.

<b>QUALITATIVE ANALYSIS OF OPERATIONS OPTIONS</b>	<b>IN-HOUSE</b>	<b>O&amp;M CONTRACTOR</b>	<b>MAINTENANCE BY PRIVATE CONTRACTOR</b>	<b>IN-HOUSE OPERATIONS/ MAINTENANCE CONTRACTOR</b>
<b>Cost</b>		✓		
<b>Operations Flexibility</b>		✓	✓	
<b>Quality of Service- Short Term</b>		✓	✓	
<b>Quality of Service- Long Term</b>	✓			✓
<b>Organization Impact</b>		✓	✓	
<b>Qualified Personnel - Short Term</b>		✓	✓	
<b>Qualified Personnel - Long Term</b>	✓			✓
<b>Proven Success/ Performance</b> (For agencies with no prior rail operations experience)		✓	✓	

# OC Streetcar Operations and Maintenance Organization Plan

# Organization Options

- In-House Operations
- Operations and Maintenance Contractor (O&M)
- Management by Private Contractor
- In-House Operations/Maintenance Contractor

# Key Considerations

Consideration	Description
Cost	Annual operating cost.
Operational Flexibility	Flexibility in job responsibilities and work assignments. Inflexible work rules will lead to higher costs to operate.
Quality of Service	Safe, reliable, and courteous service. Good on-time performance and minimum of missed trips/service interruptions.
Organizational Impacts	Ability to incorporate operation into the Orange County Transportation Authority (OCTA).
Qualifications of Personnel	Ability to attract and retain experienced personnel.
Proven Success/Performance	Demonstrated successful experience in streetcar and similar rail operations for start-up and continuing operations.

# Comparative Evaluation of O&M Options

QUALITATIVE ANALYSIS OF OPERATIONS OPTIONS	IN-HOUSE	O&M CONTRACTOR	MAINTENANCE BY PRIVATE CONTRACTOR	IN-HOUSE OPERATIONS/ MAINTENANCE CONTRACTOR
Cost		✓		
Operations Flexibility		✓	✓	
Quality of Service- Short Term		✓	✓	
Quality of Service- Long Term	✓			✓
Organization Impact		✓	✓	
Qualified Personnel - Short Term		✓	✓	
Qualified Personnel - Long Term	✓			✓
Proven Success/ Performance (For agencies with no prior rail operations experience)		✓	✓	

# Recommendation: O&M Contractor

- OCTA can rely on experienced operating firms to organize its initial rail operations more effectively.
- The initial operation service quality is best supported by experienced private contractors.
- The O&M Contractor option is projected to have the least cost.
- The O&M Contractor option will provide a stronger base of experience in developing and training the employees for the service.

# Next Steps

- Pending Board of Directors' approval, a request for proposal will be released fall 2017 with an anticipated notice-to-proceed by September 2018.
- Key personnel retained and on board within 24 months of starting operations (December 2018).
- At least six months in advance of operations (June 2020), the core group of supervisors and foremen for the O&M on board and prepared to train the operators and mechanics.