



**May 14, 2020**

**To:** Transit Committee

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

**Subject:** Agreement for Technical Consulting Services for a Next Generation Fare Collection System and OC Streetcar Ticket Vending Machines

### **Overview**

The Orange County Transportation Authority is seeking a consultant to provide technical consulting services to support the development and implementation of a next generation fare collection system and ticket vending machines for the OC Streetcar. Proposals were received in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services. Board of Directors' approval is requested to execute an agreement for these services.

### **Recommendations**

- A. Approve the selection of Jacobs Engineering Group, Inc., as the firm to provide technical consulting services for the next generation fare collection system.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-0-2047 between the Orange County Transportation Authority and Jacobs Engineering Group, Inc., in the amount of \$870,000, for a three-year initial term with two, one-year option terms, to provide technical consulting services for the next generation fare collection system.

### **Background**

The Orange County Transportation Authority (OCTA) collects approximately \$46 million in fare revenue on an annual basis. Approximately \$28 million of fare revenue is collected in cash, which represents 60 percent of total fare revenue. The remaining fare revenue is accounted for based on the mobile ticketing application, pre-purchased fare media such as daily and monthly passes, college pass programs, and discounted passes.

OCTA's current fare collection system uses GFI Genfare fareboxes on its fixed-route fleet. The GFI farebox is a validating unit that accepts cash payments, detects and authenticates bills and coins with varying degrees of accuracy. The current farebox can also print magnetic-stripe (magstripe) paper media and is capable of validating magstripe media upon initial purchase or subsequent rides, depending on pass type. OCTA's GFI Genfare fareboxes were implemented 18 years ago and have reached the end of their useful life.

Fare collection technology has evolved dramatically in recent years. The latest batch of next generation fare collection systems offer numerous benefits including more convenient and equitable payment options for customers. In addition, new technologies also provide increased flexibility for transit agencies to manage fare policy and revenue collection.

In 2018, OCTA retained the services of CH2M Hill Engineers, Inc., which was subsequently acquired by Jacobs Engineering Group, Inc. (Jacobs), to conduct a study on fare collection system alternatives. Jacobs was tasked with evaluating OCTA's current fare collection system in addition to providing industry best practices, peer reviews, fare collection innovations, and determining ways to modernize OCTA's fare collection system for the future. This initial study was instrumental to the development of a Concept of Operations (Con Ops) that served as the first official documentation of broad project goals. This step in the process narrowed down the preferred next generation fare collection system to an account-based system.

An account-based fare collection system uses servers and software to manage fares, media, and reporting. Transactions in an account-based system occur and are managed within customer accounts in real-time, which provides customers greater flexibility purchasing and managing fares. An account-based system also allows greater flexibility in fare policy, fare media, and fare integration, and leverages OCTA's investment in mobile technology and validators.

### ***Discussion***

Technical consulting services are needed to support the next phase of the development process for an account-based/next generation fare collection system, as well as to support the development of specifications and the procurement and implementation of ticket vending machines (TVMs) for the OC Streetcar system. The technical consulting services for a next generation fare collection system will further refine the requirements provided by the Con Ops document.

The technical consultant will develop a comprehensive document that specifies each element of a next generation fare collection system, prepare final cost estimates associated with each component, define functional requirements of each component, provide technical oversight, develop business rules and operational processes including administrative responsibilities, data reporting, and regional reconciliation, and help prepare specifications for procurement of each component.

After the technical specifications and final cost estimates for a next generation fare collection system are completed, staff will return to the Board of Directors (Board) and provide system and cost information and seek Board feedback and direction. It is anticipated that this phase will take 12 to 18 months. If the Board is supportive of moving forward with a next generation fare collection system, this procurement also includes funds necessary for the consultant to assist with the procurement and implementation of the system.

In addition, the technical consultant will assist OCTA in developing design specifications for the TVMs for the OC Streetcar system. The TVM-related work will be focused on the design and type of TVMs suitable for the OC Streetcar system given the space requirements and existing number of platforms. Staff will return to the Board to request authorization for the release of the request for proposals (RFP) to procure and install TVMs for the OC Streetcar system. This procurement also includes funds necessary for the consultant to assist staff with the procurement, implementation, and testing of the TVMs.

### ***Procurement Approach***

The procurement was handled in accordance with OCTA's Directors Board-approved procedures for professional and technical services. Various factors are considered in the award for professional and technical services. Award is recommended to the firm offering the most comprehensive overall proposal considering such factors as prior experience with similar projects, staffing and project organization, work plan, as well as cost and price.

On February 4, 2020, RFP 0-2047 was issued electronically on CAMM NET. The project was advertised in a newspaper of general circulation on February 4 and 11, 2020. A pre-proposal conference was held on February 11, 2020, with 11 attendees representing nine firms. Two addenda were issued to make available the pre-proposal conference registration sheet and presentation, as well as to respond to written questions related to the RFP.

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On March 9, 2020, six proposals were received. An evaluation committee consisting of OCTA staff from Contracts Administration and Materials Management, Revenue and Grants Administration, Financial Planning and Analysis, Scheduling and Bus Operations Support, Information Systems, and Transit Service Planning departments met to review all proposals received.

The proposals were evaluated based on the following evaluation criteria and weightings:

- Qualifications of the Firm 20 percent
- Staffing and Project Organization 30 percent
- Work Plan 30 percent
- Cost and Price 20 percent

Several factors were considered in developing the evaluation criteria weightings. Qualifications of the firm was weighted at 20 percent as the firm had to demonstrate experience providing similar technical expertise and oversight related to fare collection systems. Staffing and project organization was weighted at 30 percent as the firm had to present a project team with the expertise and skills, as well as the availability, to provide technical guidance and oversight for the development and implementation of OCTA's new fare collection system and TVM equipment. Work plan was weighted at 30 percent as the firm had to demonstrate its understanding of the scope of work, as well as the ability to meet the requirements specified. Cost was weighted at 20 percent to ensure OCTA receives value for the services provided.

On March 25, 2020, the evaluation committee reviewed the proposals based on the evaluation criteria and short-listed the three most qualified firms listed below in alphabetical order:

Firm and Location

Clevor Consulting Group (Clevor)  
Portland, Oregon

Four Nines Technologies (Four Nines)  
Corte Madera, California

Jacobs Engineering Group, Inc. (Jacobs)  
Los Angeles, California

On April 2, 2020, the evaluation committee conducted interviews with the three short-listed firms. The interview consisted of a presentation to demonstrate the firms' understanding of OCTA's requirements. The firm's project managers and key team members had an opportunity to present each team's qualifications and respond to the evaluation committee's questions. Questions were related to any potential issues or problems that may be encountered, future fare collection trends, and interoperability with other agencies. In addition, each team was asked specific clarification questions related to its proposal.

After considering the responses to the questions asked during the interviews, the evaluation committee reviewed the preliminary ranking and made adjustments to individual scores. However, Jacobs remained the highest-ranked firm with the highest-overall score.

Based on the evaluation of the written technical proposals and the information obtained from the interviews, the evaluation committee recommends Jacobs for consideration of the award. The following is a brief summary of the proposal evaluation results.

#### Qualifications of the Firm

Jacobs was founded in 1947 and is headquartered in Dallas, Texas. The firm has 230 offices worldwide, including offices in the cities of Irvine and Los Angeles. Jacobs demonstrated relevant experience in implementing next generation fare collection systems, as well as developing specifications for the procurement of an account-fare based collection system, including TVMs and validation devices. The firm has worked on fare collection projects for San Diego Metropolitan Transit Authority, Southern California Regional Rail Authority (Metrolink), New York City Transit, Honolulu Authority for Rapid Transportation, and Valley Metro in Phoenix Arizona. Prior to the acquisition of CH2M by Jacobs, CH2M worked with OCTA on the fare collection system design and Con Ops, fare structure study, and mobile ticketing project. The firm did not propose to utilize any subcontractors.

Located in the City of Portland, Clever was founded in 2017. The firm provides technology consulting related to electronic payment systems and has worked with Tri-County Metropolitan Transportation District of Oregon (Tri-Met), Washington Metropolitan Area Transit Authority, Honolulu Authority for Rapid Transportation, and Hillsborough Area Regional Transit. The firm proposed three subcontractors, Schaich Consulting (Schaich), Knapick, LLC (Knapick), and WSP, to provide additional expertise and support. Clever has worked with Schaich and Knapick on various fare collection projects since 2017. Currently,

Clevor is supporting WSP as a subcontractor on the Maryland Transit Authority project for a new account-based fare collection system. For that project, Clevor is tasked with developing a Con Ops, procurement strategy, technical and functional specifications, and solicitation package for Maryland Transit Authority.

Four Nines was established in 2012 and is headquartered in Corte Madera, California. The firm has provided fare collection strategy, procurement, and implementation support to many public agencies, such as Sound Transit, Capital Metropolitan Transportation Authority, North County Transit District, and Denver Regional Transportation District. Four Nines proposed Virginkar and Associates, Inc. (Virginkar) as a subcontractor to lead the development of the specifications for the TVMs. Virginkar has provided fare collection consulting support on Los Angeles County Metropolitan Transportation Authority's Transit Access Pass project and is currently supporting the procurement of TVMs for Golden Gate Transit.

#### Staffing and Project Organization

Jacobs proposed a knowledgeable project team with experience working together on other projects including developing OCTA's Con Ops document. The proposed project manager has 12 years of experience managing fare collection system projects. The proposed assistant project manager has 21 years of experience. The firm proposed that the project manager and assistant project manager will work in tandem to ensure ample availability for support and oversight. The project team's experience includes transportation and fare systems networking and cybersecurity, transportation planning, hardware and software design and integration, and transportation infrastructure design and planning. In addition, Jacobs proposed staff with varying levels of technical expertise to ensure the required level of support is met while completing the project within budget. During the interview, the project team members discussed their roles and approach to providing technical consulting services for the next generation fare collection system. The project team responded to the evaluation committee questions, which demonstrated an understanding of OCTA, as well as surrounding public agencies. When asked about the major obstacles to achieving interoperability with other systems and agencies, the team discussed the systems used by other agencies and the challenges associated with integrating with OCTA's system.

Clevor proposed a project team with extensive experience. The proposed project manager is a co-founder of Clevor and has 18 years of experience in program management and fare collection systems. The individual was previously the Director of Revenue Operations at Tri-Met and worked on various projects for

Tri-Met, such as the Hop Fastpass fare collection system, on-board bus ticketing printing solution, and mobile ticketing application. The proposed assistant project manager has over 30 years of fare collection experience. The project team's fare collection experience includes fare policy, design and delivery of electronic payment systems, development and implementation of technology solutions, and asset management. Clever indicated that it recently completed two projects and have the availability to commit to OCTA's project. During the interview, the project team discussed their roles and approach to providing the technical consulting services specified in the scope of work, as well as responded to the evaluation committee's questions. Although the project team members have relevant experience, their experience did not demonstrate familiarity with public agencies in Southern California.

Four Nines proposed a project team with relevant experience. The proposed project manager has 30 years of technical project management experience and has deployed several enterprise-level systems for transit agencies. The proposed assistant project manager has six years of experience in fare collection and regional transportation planning. The project team has experience in fare collection and regional transportation planning, fare policy and fare collection technology, TVMs, and systems integration. While the project team has fare collection-related experience, the team does not have as much experience directly related to the requirements of the scope of work as the other two-proposing firms. During the interview, the project team members discussed their roles and approach to providing technical consulting services for the next generation fare collection system. The team responded to the evaluation committee's questions.

#### Work Plan

Jacobs presented a work plan that addressed all of the elements of the scope of work. The firm discussed its approach in assisting OCTA in procuring and implementing an account-based fare collection system, as well as TVMs. Jacobs indicated that it will leverage its knowledge of OCTA and past fare collection projects to refine the Con Ops document, which will include the needs of the OC Streetcar and eventual integration with OC Bus, the new mobile ticketing provider, regional partners like Metrolink, and a new account-based fare collection system. The firm discussed the technical specifications for the procurement of the account-based fare collection system, as well as the TVMs. Jacobs also indicated that the timely launch of the OC Streetcar will drive the project schedule and the importance of prioritizing the procurement of the TVMs.

Clevor demonstrated a clear understanding of the scope of work in its work plan. The firm discussed its approach for providing technical consulting services by detailing the steps involved for each phase of the project to complete each deliverable. Clevor identified areas in the process that can be streamlined by completing certain deliverables concurrently to ensure that the project schedule is met, such as developing the regional operating rules in parallel with the implementation of the new account-based fare collection system. Additionally, the firm included references to past projects to emphasize and support its proposed approach. Clevor discussed reviewing the current Con Ops document and leading technical meetings to update the Con Ops, developing and refining the specifications for the new fare collection system and TVMs, and supporting the procurement process, as well as implementation of the new systems. Clevor indicated that while the project schedule is aggressive, the firm has the availability and resources to meet the required timeline.

Four Nines addressed all the elements of the scope of work in its work plan. The firm discussed its approach to assisting OCTA in the procurement of a new account-based fare collection system and TVMs. The firm indicated leveraging its experience integrating multiple generation fare collection systems for this project. Four Nines discussed how it will complete various deliverables, such as refining and adding details to the Con Ops document, conducting workshops with stakeholders, supporting procurement activities, and developing the deployment plan. The firm also proposed utilizing its Requirements Tool, which is a database of standard and transportation-specific requirements, to develop the technical and functional specifications for the new fare collection system and TVMs. Additionally, Four Nines indicated that it has experience completing projects with tight timelines.

#### Cost and Price

Pricing scores were based on a formula which assigned the highest score to the firm with the lowest weighted average hourly rate, and scored the other proposals' weighted average hourly rate on their relation to the lowest weighted average hourly rate. Jacobs proposed the lowest weighted average hourly rate.

#### Procurement Summary

Based on the evaluation of written proposals, the firm's qualifications, and the information obtained from the interviews, the evaluation committee recommends the selection of Jacobs as the top-ranked firm to provide technical consulting services for the next generation fare collection system. Jacobs delivered a thorough and comprehensive proposal and an interview that was responsive to all the requirements of the RFP.



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**Fiscal Impact**

The project was included in OCTA's Fiscal Year 20-21 budget, Finance and Administration Division, accounts 1261-7519-A5105-F30 and 0035-7519-OC100-NAZ.

**Summary**

Staff is recommending the Board authorize the Chief Executive Officer to negotiate and execute Agreement No. C-0-2047 between the Orange County Transportation Authority and Jacobs Engineering Group, Inc., in the amount of \$870,000, for a three-year initial term with two, one-year option terms, to provide technical consulting services for the next generation fare collection system.

**Attachments**

- A. Review of Proposals, RFP 0-2047 Technical Consulting Services for a Next Generation Fare Collection System and OC Streetcar Ticket Vending Machines
- B. Proposal Evaluation Criteria Matrix (Short-Listed Firms), RFP 0-2047 Technical Consulting Services for a Next Generation Fare Collection System and OC Streetcar Ticket Vending Machines
- C. Contract History for the Past Two Years, RFP 0-2047 Technical Consulting Services for a Next Generation Fare Collection System and OC Streetcar Ticket Vending Machines

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