



April 1, 2019

To: Regional Planning and Highways Committee

From: Darrell E. Johnson, Chief Executive Officer 

Subject: Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Projects

Overview

On November 12, 2018, the Orange County Transportation Authority Board of Directors approved the release of a request for proposals for a consultant to provide intelligent transportation systems and traffic engineering services for Katella Avenue and Main Street regional traffic signal synchronization projects. Board of Directors approval is requested for the selection of the firm to perform the required work.

Recommendations

- A. Approve the selection of Iteris, Inc., as the firm to provide intelligent transportation systems and traffic engineering services for the Katella Avenue Regional Traffic Signal Synchronization Project.
- B. Approve the selection of Iteris, Inc., as the firm to provide intelligent transportation systems and traffic engineering services for the Main Street Regional Traffic Signal Synchronization Project.
- C. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-8-2038 between the Orange County Transportation Authority and Iteris, Inc., to provide intelligent transportation systems and traffic engineering services for the Katella Avenue Regional Traffic Signal Synchronization Project.
- D. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1066 between the Orange County Transportation Authority and Iteris, Inc., to provide intelligent transportation systems and traffic engineering services for the Main Street Regional Traffic Signal Synchronization Project.

Discussion

The Orange County Transportation Authority (OCTA) provides funding and assistance to implement multi-agency signal synchronization as part of the Measure M Regional Traffic Signal Synchronization Program (RTSSP or Project P). OCTA provides competitive capital grants and operations funding for the coordination of traffic signals across jurisdictional boundaries.

During the competitive grant application process, applicant agencies may request that OCTA lead and administer these multi-agency traffic signal synchronization projects. OCTA contracts with highly-specialized traffic engineering and intelligent transportation systems (ITS) firms to accomplish these projects. The scope of these services allows OCTA to implement Project P.

The 2018 call for projects for Project P, as approved by the Board of Directors (Board), is comprised of a set of six projects that will synchronize 310 signalized intersections along six regional corridors. These six projects span over 78.3 miles throughout Orange County. The applicant agencies requested OCTA to lead four of these projects. Two of the four OCTA-led projects, Garden Grove Boulevard and Los Alisos Boulevard, have been awarded. This procurement includes the remaining corridors that will synchronize 140 plus signalized intersections over approximately 31.6 miles. The respective project goals are to improve travel times, reduce emissions, and provide savings to motorists in reduced fuel consumption through new optimized coordinated synchronized traffic signal timing at all intersections along the project limits. This program is consistent with the countywide multi-jurisdictional goals set by Project P.

For this procurement, the table below summarizes the two corridors where OCTA will act as lead agency.

Arterials	Project Intersections	Project Miles	Applicant Agency	Participating Agencies
Katella Avenue	73	19.6	Anaheim	9
Main Street	67	12.0	Irvine	3

Procurement Approach

This procurement was handled in accordance with OCTA's Board-approved procedures for architectural and engineering (A&E) services that conform to both state and federal laws. Proposals are evaluated and ranked in accordance with the qualifications of the firm, staffing and project organization, and work plan.

As this is an A&E procurement, price is not an evaluation criterion pursuant to state and federal laws. Evaluation of the proposals was conducted on the basis of overall qualifications to develop a competitive range of offerors. The highest-ranked firm is requested to submit a cost proposal, and the final agreement is negotiated. Should negotiations fail with the highest-ranked firm, a cost proposal will be solicited from the second-ranked firm in accordance with Board-approved procurement policies.

This request for proposals (RFP) 8-2038 was issued as a single procurement utilizing a single scope of work and two sets of project specifications. RFP 8-2038 stated its intent to award two contracts, one each for the Katella Avenue Project and Main Street Project. Offerors were instructed to specify the project on which they preferred to work. Offerors interested in proposing both projects were instructed to submit with their proposals a separate work plan for each project.

Proposals were ranked with respect to the qualifications of the firm, staffing and project organization, and work plan. Evaluation of the proposals was conducted on a per project basis to develop a competitive range for each project. The award for each contract is based on the offeror with the highest ranking for each project.

The Board authorized the release of RFP 8-2038 on November 12, 2018, which was electronically issued on CAMM NET. The project was advertised on November 12, and 19, 2018, in a newspaper of general circulation. A pre-proposal conference was held on November 20, 2018, and was attended by six firms. Two addenda were issued to provide pre-proposal conference information, responses to questions received, and handle administrative issues related to the RFP.

On December 12, 2018, four proposals were received for the Katella Avenue Project, and three proposals were received for the Main Street Project.

An evaluation committee consisting of members from Contracts Administration and Materials Management and Strategic Planning departments, as well as external representatives from the cities of Anaheim, Irvine, and Santa Ana met to review all submitted proposals.

The proposals were evaluated based on the following Board-approved evaluation criteria and weights:

- Staffing and Project Organization 40 percent
- Work plan 35 percent
- Qualifications of the Firm 25 percent

The evaluation criteria are consistent with the weightings developed for similar A&E procurements for traffic engineering services. In developing these weights, several factors were considered, giving the greatest importance to staffing and project organization of the firm, as the qualifications of the project manager and other key personnel are very important to the successful and timely delivery of the project. Similarly, high importance was given to the work plan criterion to emphasize the importance of the team's understanding of the project, its challenges, and its approach to implementing the various elements of the scope of work. The technical approach to the project is critical to the successful performance of the project. The final criterion, qualifications of the firm, evaluated the firm's experience in performing work of similar scope and size.

The evaluation committee reviewed all proposals based on the evaluation criteria and found the following firms most qualified to perform the required services. The most qualified firms are listed below in alphabetical order:

Firm and Location – Katella Avenue Project

Albert Grover & Associates, Inc. (AGA)
Fullerton, California

DKS Associates (DKS)
Anaheim, California

Iteris, Inc. (Iteris)
Santa Ana, California

Firm and Location – Main Street Project

Albert Grover & Associates, Inc. (AGA)
Fullerton, California

DKS Associates (DKS)
Anaheim, California

Iteris, Inc. (Iteris)
Santa Ana, California

On January 22 and 23, 2019, the evaluation committee interviewed the short-listed firms. The interviews consisted of a presentation allowing each team to present its qualifications, highlight its proposal, and respond to evaluation committee questions. Firms also highlighted their staffing plan, work plan, and perceived project issues. Each firm was then asked general questions related to its qualifications, relevant experience, project organization, and approach to the work plan. Each team was also asked general questions regarding the team's approach to the requirements of the scope of work, management of the projects, coordination with various agencies, experience with similar projects, and the team's solutions in achieving the project's goals. After considering the responses to the questions asked during the interviews, the evaluation committee adjusted the preliminary score for all firms; however, Iteris remained as the top-ranked firm with the highest cumulative score for both projects.

Based on the evaluation of written proposals and information obtained during the interviews, staff recommends Iteris as the firm to provide consultant services for traffic engineering and ITS for the Katella Avenue and Main Street projects. This firm ranked highest amongst the proposing firms based on the team's relevant experience in traffic engineering and ITS. Iteris' proposed teams are comprised of highly-qualified key personnel with relevant and recent experience in traffic signal synchronization and ITS projects. The firm demonstrated an excellent understanding of the project requirements and presented a comprehensive work plan addressing key issues that are critical to the success of the project. The following is a summary of the results of the proposal evaluations results.

Qualifications of Firm

All three short-listed firms are highly qualified and have relevant experience in the type of services required by the scope of work. Each firm has identified experience providing signal timing and traffic coordination along with related ITS experience.

Iteris specializes in transportation planning, engineering, and technology services since 1987. The firm has 433 employees and 13 offices, including an office in the City of Santa Ana (Santa Ana). Iteris has demonstrated expertise in traffic engineering, ITS, transportation planning, initial impact studies, transportation modeling, planning systems engineering, and other transportation technologies both nationally and internationally. The firm is experienced in performing projects of similar scope and magnitude. Recent multi-agency signal synchronization projects Iteris has successfully completed in Orange County include Harbor Boulevard, Westminster Avenue/17th Street, State College Boulevard/Bristol Street, Beach Boulevard, Edinger Avenue/Irvine Center Drive/Moulton Parkway/Golden Lantern, Katella Avenue, Bristol Street,

Newport Boulevard (South), Pacific Park Drive/Oso Parkway, Trabuco Road, and Warner Avenue. Iteris is currently engaged in signal synchronization projects on Pacific Coast Highway and Brookhurst Street.

DKS has provided transportation planning and engineering services to public agencies across the country since 1979. The firm has 131 professionals in seven offices nationally and ten staff locally in the City of Anaheim (Anaheim). DKS has experience in traffic operational analysis, traffic signal synchronization, traffic signal design, systems engineering, and integration services in ITS and transportation communications networks. The majority of DKS' signal synchronization projects involve multiple jurisdictions and consensus building amongst multiple agencies. Some of DKS' recently completed multi-agency signal synchronization projects in Orange County include Goldenwest Street, Westminster Avenue/17th Street, Anaheim Boulevard, Olympiad Road/Felipe Road, State College Boulevard, and Los Alisos Boulevard. DKS is currently engaged in signal synchronization work on Magnolia Street.

AGA was founded in 1993 and has relevant experience with traffic engineering, traffic signal synchronization, transportation planning, and ITS-related services. The firm has an office in Orange County with 21 employees. AGA has experience providing services to local agencies in Southern California for traffic engineering and ITS projects. The firm has completed initial work for OCTA's Orange County Traffic Signal Coordination Program. AGA has successfully completed traffic coordination projects in Orange County. Recent and relevant projects include Euclid Street Demonstration Project, Chapman Avenue, Tustin Avenue/Rose Drive, Adams Avenue, La Paz Road, Orangethorpe Avenue, and Antonio Parkway. For the Antonio Parkway Project, AGA was instrumental in the design and consensus building between the City of Rancho Santa Margarita, County of Orange, and California Department of Transportation (Caltrans) providing new and future ITS communications infrastructure. AGA is currently working on a signal synchronization project on Alicia Parkway.

Staffing and Project Organization

The short-listed firms proposed qualified project managers, key personnel, and subconsultants with relevant traffic engineering, signal coordination, and ITS services experience.

Iteris proposed a separate staffing and project organization for each of the projects. Iteris proposed experienced project teams with demonstrated expertise and relevance in transportation planning, traffic signal synchronization, ITS, traffic engineering and design, traffic operations and analysis, traffic management center, traffic signal systems, multimodal, pedestrian and bicycle access, and safety analysis. The project teams consist of experts in

transportation planning, civil and traffic engineering, signal synchronization and advanced transportation management systems integrators. The proposed teams and sub-consultants have demonstrated experience working on numerous projects of similar size and scope. Iteris' proposed principal-in-charge (PIC) and project coordinator has 22 years of experience in transportation systems and traffic engineering, and extensive experience managing and designing traffic engineering and ITS projects for numerous agencies. The PIC is known internationally for work on numerous mobility projects focusing on technologies to improve efficiencies and safety through applications in surface transportation. Relevant project manager experience includes Harbor Boulevard, Westminster Avenue/17th Street, State College Boulevard/Bristol Street, Ball Road, and Edinger Avenue/Irvine Center Drive/Moulton Parkway/Golden Lantern.

Iteris' project manager for the Katella Avenue Project has 27 years of experience in the field of ITS, including transportation and ITS planning and design, traffic systems engineering and design, transportation planning, transportation systems and analysis, and development and integration of real-time traffic systems. Relevant project experience includes Interstate 405 (I-405) design-build oversight and signal synchronization projects on Harbor Boulevard, La Palma Avenue, Lincoln Avenue, Orangewood Avenue, Pacific Coast Highway, and Trabuco Road.

Iteris' proposed project manager for the Main Street Project has 30 years of experience as project manager for design and implementation of traffic engineering services, and operations task leader in ITS. The project manager has expertise in traffic operations, planning, design, and conducting and managing traffic signal synchronization and ITS projects. Projects include Katella Avenue traffic signal synchronization project, I-405 design-build quality assurance/quality control (QA/QC) and signal synchronization projects on 17th Street, Bristol Street, Irvine Avenue, Jamboree Road, Newport Boulevard, Newport Boulevard (South), Victoria Street, and Warner Avenue.

Iteris' other key personnel include task leaders highly experienced in ITS, traffic engineering, operations maintenance and monitoring, systems communications, traffic collection, transportation management centers, and signal improvements. For both projects, each project manager led the team in the interviews with complete team participation with in-depth presentations and comprehensive responses on questions related to critical tasks and issues for both projects. Iteris' proposed project teams demonstrated proven expertise in the areas deemed critical to the success of the projects and have worked as a cohesive team for many years on numerous traffic engineering and ITS projects.

DKS proposed the same project team for the Katella Avenue and Main Street projects. DKS' proposed team has implemented numerous signal timing and synchronization projects, and is experienced in transportation planning and signal synchronization projects. The PIC for DKS has 24 years of experience and has been involved with several hundred traffic signal design and coordination projects, 150 of which involved light rail, street car, or bus transit signal priority. The proposed team has successfully worked on recent and relevant projects. DKS' proposed project manager has over 30 years of experience managing corridor studies, arterial signal systems projects, ITS planning, and development projects. Relevant signal synchronization projects include Edinger Avenue/Irvine Center Drive/Moulton Parkway/Golden Lantern, Goldenwest Street, Los Alisos Boulevard, and Westminster Avenue/17th Street.

DKS' key personnel and support staff have experience in traffic operations, and transportation engineering including traffic signal timing, operational analysis, traffic signal and communication design, and systems engineering for ITS. Relevant projects include: OCTA Regional Communication Network Study, Ontario Fiber Optic Communication Design, Clark County Signal Timing Evaluation, El Toro Road signal synchronization project, and Chapman Avenue signal synchronization project. The proposed personnel responded well to the interview questions and in comparison, the team's overall experience and intimate knowledge of either respective corridor was not as extensive as the top-ranked firm.

AGA proposed the same project team for the Katella Avenue and Main Street projects. AGA's proposed team has implemented numerous signal timing and synchronization projects and is experienced in transportation planning and signal synchronization projects. AGA has traffic engineering operational contracts for traffic signal timing and coordination utilizing their

in-house traffic management systems. AGA proposed two highly qualified individuals as project advisor and QA/QC manager. These two individuals founded AGA in 1993 and collectively have vast experience in the traffic engineering and ITS profession. AGA's project manager has managed over 11 different traffic engineering, traffic signal synchronization and ITS projects for OCTA since 1998. The project manager has over 25 years of experience in traffic and transportation and key projects include: Euclid Street Demonstration Project, Orange County Traffic Signal Coordination Program, San Bernardino Valley Coordinated Traffic Signal System Plan Tier 1 and 2, and Orange County I-405 Freeway Major Investment Study and Project Study Report Project.

AGA's key personnel and support staff have experience in traffic operations and transportation engineering including traffic signal timing, operational analysis, traffic signal and communication design, and systems engineering for ITS. Relevant signal coordination projects include Irvine Center Drive/Edinger Avenue, Bear Street, and Malvern Avenue/Chapman Avenue. AGA's presentations and responses to interview questions about each of the respective corridors demonstrated their knowledge related to each of the projects.

Work Plan

All three short-listed firms met the scope requirements of the RFP, and each firm effectively discussed its approach to the projects.

Iteris' project approach conveyed a clear and distinct project understanding, project management approach, quality assurance and quality control methods, adherence to schedule and budget, and provides traffic signal equipment and communication upgrades to enhance operations. The firm demonstrated a thorough understanding of both project corridors by identifying the traffic conditions, pedestrian and school activity, signal synchronization timing and delays, and equipment upgrades. The firm proposed several enhancements, such as reviewing existing transportation infrastructure along the corridor, utilizing data sources to determine origin/destination patterns and seasonality, and conducting case studies at certain locations along the corridors to assess the effects of proposed improvements on actual operations of the streets. In addition, the firm detailed how it would reach out to different stakeholders and build consensus to ensure that recommendations are locally-adopted and implemented. Value added components to the Katella Avenue and Main Street projects include a three-year hosted automated traffic signal performance measure (SPM) system.

Iteris' work plan for the Katella Avenue corridor discussed improvement to the signal cabinets and controllers, pedestrian signals, conduit, and cables. It detailed routes with regards to morning and evening traffic flow, school traffic impacts, and corridor synchronization. High traffic volume generators such as Anaheim Stadium, Disneyland Resort, and Honda Center were discussed, and preliminary mitigation strategies were proposed. Iteris detailed solutions to key project issues to include pedestrian and community safety, school traffic, and business outreach communications with schools, community, and residents. In the interview, the project team addressed issues regarding Katella Avenue continuity of communications for Anaheim and provided proposed solutions.

Iteris' work plan for the Main Street corridor thoroughly discussed infrastructure improvements, the different and diverse land uses and special traffic generators, downtown Santa Ana grid system for the central business district, and the

OC Streetcar. Key operational elements presented for both corridors were critical travel times, cross-coordination, pedestrian signals, community safety, railroad crossings, Caltrans coordination, and outreach to the business community, schools, and residents. Both work plans detailed equipment upgrades to enhance corridor operations with the latest technologies.

The work plans for DKS demonstrated a clear understanding of each project's key requirements, project challenges, and practical recommendations and solutions. Work plans addressed traffic volumes and synchronization performance, pedestrian challenges, and proposed recommendations and potential solutions. DKS addressed their approach to timing and how this would be performed, as well as presenting traffic enhancement solutions. Main goals presented for each project were operation and timing analysis to develop and implement timing plans at signalized intersections, and determination and recommendations of traffic equipment to improve synchronization. DKS demonstrated a good understanding of issues and proposed solutions in the interview. Specific questions regarding maintaining interconnection along Katella Avenue in Anaheim and the OC Streetcar in Santa Ana were not responded to in depth nor recognized as a concern. DKS mentioned SPM but did not elaborate on usage or ownership. DKS mentioned big data solutions and utilizing analytics; however, noted it would not be providing the programs to OCTA or the partnering agencies as a project component. Responses to questions were general on specific critical issues to ensure the success of the Main Street Project.

The work plans for AGA for each corridor demonstrated a thorough understanding of each project's requirements and issues. AGA discussed their project approach on how they would perform operations and timing analysis to develop a good coordination of signal timing. AGA made recommendations for new or modified traffic signal equipment to improve synchronization and traffic enhancement solutions. AGA's work plans addressed high traffic volumes at certain intersections, split phase operations, and heavy traffic volumes, pedestrian traffic, and challenges during events at Angel Stadium, Anaheim Convention Center, Anaheim Regional Transportation Center, and Disneyland. AGA discussed their working relationship with Caltrans and how they would leverage their experience for projects and scheduling. AGA provided some solutions for traffic signal optimization and SPM were discussed for the use of the consultant in the performance of their work. Although some solutions for traffic signal optimization were referred to in the interview, the mitigation and solutions answers were limited.

Procurement Summary

Based on the evaluation of the written proposals, team qualifications, and information obtained during the interviews, the evaluation committee recommends the selection of Iteris as the top-ranked firm to provide ITS and traffic engineering services for Katella Avenue and Main Street regional traffic signal synchronization projects. Iteris demonstrated relevant experience, submitted a comprehensive and responsive proposal, proposed highly skilled staff for both projects and presented a thorough interview highlighting the firm's relevant experience and understanding of the overall projects.

Fiscal Impact

The project is included in OCTA's Fiscal Year 2018-19 Budget, Strategic Planning Division, Account 0017-7519-SPF24-P57 and 0017-7519-SPF26- P57. The local agencies will provide 20 percent of the total project cost in matching funds. The remaining funding will come from SB 1 (Chapter 5, Statutes of 2017) Local Partnership Program and Measure M.

Summary

Staff requests Board approval for the Chief Executive Officer to negotiate and execute Agreement No. C-8-2038 and Agreement No. C-9-1066 with Iteris, to provide ITS and traffic engineering services for the Katella Avenue and Main Street regional traffic signal synchronization projects.

Attachments

- A. Review of Proposals, RFP 8-2038 Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Project (Katella Avenue)
- B. Review of Proposals, RFP 8-2038 Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Project (Main Street)
- C. Proposal Evaluation Criteria Matrix - Short-Listed Firms, RFP 8-2038 Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services, Katella Avenue Regional Traffic Signal Synchronization Project
- D. Proposal Evaluation Criteria Matrix - Short-Listed Firms, RFP 8-2038 Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services, Main Street Regional Traffic Signal Synchronization Project
- E. Contract History for the Past Two Years, RFP 8-2038 Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services for Katella Avenue and Main Street Regional Traffic Signal Synchronization Projects

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