RFQ F14-21 Service Category Descriptions

Service Categories – Department of Public Works

Services are required for a variety of public works and other construction projects at various stages of development under the categories of Engineering Design Coordination and Administration; Construction Management; Quality Assurance, Material Sampling and Testing Services; and Land Development Projects and Map Improvement Plan Review.

- A. <u>Engineering Design Coordination and Administration</u> Consultants shall assign a lead engineer for this category. Support services will be performed independently and with minimal direction. Other consultant staff supervised by the lead engineer may be utilized to complete assigned work in an efficient and expeditious manner. Typical services to be provided include:
 - 1. Perform initial design assessments, alternatives analysis, utility conflict analysis, and preliminary design services. Investigate existing conditions, review records and engineering data.
 - 2. Manage municipal public works projects from the preliminary design stages through the completion of construction. Attend meetings, prepare minutes and other forms of correspondence, perform plan checking, prepare and review specifications and contract documents, coordinate with project stakeholders and outside agencies, perform constructability reviews, manage the bidding and project award process, provide design support during construction in the form of responses to Requests for Information (RFIs), evaluation of submittals, and review of progress payments.
 - 3. Process plans and specifications through other agencies for review and approvals corresponding to special funding programs and/or permits.
 - 4. Participate in the technical review and updating of engineering standard plans, details, specifications best practices and/or standard policies.
 - 5. Review and comment on infrastructure projects associated with development activity.
 - 6. Draft grant applications.
 - 7. Provide outreach support through the production of staff reports, exhibits, drawings, power point presentations, etc.
 - 8. Perform other engineering design-related duties as required.
- B. <u>Construction Management</u> The consultant shall assign qualified engineering staff to serve as the Project Manager/Resident Engineer (PM/RE) during the construction of Capital Improvement Projects and be responsible for ensuring the completion of construction by overseeing the contractor's activities. The PM/RE shall be responsible for ensuring that all work is built to the standards defined by the contract documents. Typical services include:
 - 1. Provide engineering staff to administer CIP projects.
 - 2. Communicate and coordinate with project participants including the City, the contractor, testing forces and regulatory or permitting agencies.
 - 3. Monitor and assess the project budgets and cost controls.
 - 4. Track project progress against schedules and contract duration.

- 5. Resolve through involvement of the City, as necessary, project issues that may cause the scope, cost or duration to vary.
- 6. Complete contract administration paperwork including, but not limited to processing and reviewing RFIs, submittals, potential change orders, progress payments, and potential claims.
- 7. Provide and/or coordinate construction inspection services.
- 8. Coordinate and participate in weekly progress meetings to discuss and resolve project issues.
- 9. Review and ensure the accuracy of the contractor's red-lined record drawings.
- 10. Prepare the final punch list and oversee punch list item resolution.
- 11. Perform other CM-related duties as required.
- C. <u>Quality Assurance, Materials Sampling and Testing Services</u> Furnish qualified and certified staff to provide the following services during the design and construction of the City's Capital Improvement Projects.
 - 1. Sampling and testing of soils, asphalt concrete, concrete, steel and other construction material.
 - 2. Evaluation of results and furnishing of reports.
 - 3. Inspection and special inspections of construction activities.
- D. Land Development Project/Map Improvement Plan Review The consultant shall assign qualified engineering staff to assist with the responsibilities of this task. Services include but may not be limited to:
 - 1. Provide a licensed civil engineer/land surveyor to review and sign parcel/final maps for technical correctness.
 - 2. Review improvement plans.
 - 3. Review easement deeds and/or legal plats.
 - 4. Respond to inquiries and attend review meetings.

Service Categories – Department of Environmental Services

The Sunnyvale Water Pollution Control Plant is a 56 year old facility that provides treatment of wastewater from Sunnyvale residents and businesses. The average plant flow is 14 MGD with an oxidation pond/trickling filter process and filtration and disinfection systems. The facility is unique in that it lacks a headworks facility and wastewater flows directly into primary tanks, following processing in the influent wet channels through chopper pumps. The City has undertaken a master planning effort that defines the basis of designs for the replacement of the Plant. This replacement is anticipated to be phased over the next 12-15 years. In the interim, the existing infrastructure needs rehabilitation, ongoing maintenance and optimization to continue to operate reliability and meet the stringent permit requirements.

The City is looking for consultant services to support the technical and engineering needs that help resolve operational and rehabilitation challenges of the Plant. A few example projects included in the current capital projects budget are:

- Pond Sediment Removal 5-year project aimed at the removing the biosolids from the oxidation ponds to restore pond capacity and thereby improve process performance
- Emergency Flow Management Infrastructure Addresses several vulnerabilities related to reliability and compliance with the primary effluent by-pass line and the influent pump station

- As needed repairs to the Primary, Secondary, Tertiary and power generation systems at the Plant. Projects could vary from simple technical troubleshooting, preliminary engineering/studies for developing rehabilitation options and studies to optimize performance.
- A. <u>Wastewater Engineering and Technical Support Services at the Water Pollution Control</u> <u>Plant</u> – To assist Plant staff with current/future projects and ongoing operational support, typical services will include:
 - 1. Wastewater treatment process design and optimization.
 - 2. Control systems (hardware, software and databases) troubleshooting and programming services.
 - 3. High voltage power generation/distribution systems troubleshooting and engineering design for related fixes.
 - 4. Process instrumentation specification development, data analysis and associated design as needed.
 - 5. Assistance with wastewater, air and biosolids regulations as they relate to POTWs and negotiations with regulatory agencies.
 - 6. Assistance with electrical and utility pricing related to industrial users and POTWs.
 - 7. Assistance with technical support related to laboratory methods and testing and laboratory database systems.
 - 8. Troubleshooting and process optimization related to digester and landfill gas use in combined heat and power systems.
 - 9. Design of heavy mechanical equipment related to wastewater treatment.
 - 10. Troubleshooting of biological treatment systems.
 - 11. Assistance with regulatory compliance and design related to chemical use and hazardous material handling.