071-19 Appendix C - Job Specifications

1. REQUIRED POSITIONS

The successful Respondent (s) will work closely with designated JEA personnel to staff the positions listed below.

It's expected the following allotment of positions should be available for placement at JEA within one month of issuance of the contract purchase order:

- Two (2) Project Managers
- Two (2) Project Schedulers
- Two (2) Project Estimators
- Two (2) Project Controls Cost Specialists
- One (1) Safety and Health Specialist

The successful Respondent (s) should anticipate increasing Project Manager staffing at a rate of one (1) per month, for three months, after contract start for a total of five (5) Project Managers.

Fluctuations in project workload may require the increase, or decrease, of positions during the life of the contract.

a. Project Manager:
    i. Position Summary:
        1. Under administrative direction, provides overall project management for large, complex capital projects as defined by the appropriate area Manager or Director. Requires extensive knowledge of the principles, standards and techniques of project management used in the design and construction of water/sewer plants, piping industries and associated support facilities. Typical projects include, but are not limited to, new/refurbishment of water/sewer/reclaim pipelines, water treatment plants, water reclamation facilities, pump stations and associated facilities and supporting assets. Participation may be required in all or specified aspects of an assigned project including concept development, design, planning, engineering, procurement, construction, commissioning, quality assurance and control, environmental impact and safety of employees, contractors and the general public.
    ii. Examples of work could include:
        1. Plans, assigns, schedules, monitors, reviews and leads the work of teams comprised of engineers, consultants, contractors, vendors, schedulers and other associated with assigned projects or project functions.
        2. Reviews short and long term planning studies, gathers and researches user needs and maintenance and safety concerns and requirements and makes recommendations for operational and planning solutions.
        3. Generates detailed project scope documents, establishes priorities and work sequences required to achieve project objectives and determines the impact of resequencing work.
        4. Evaluates and determines appropriate contracting and/or construction methods.
        5. Reviews and/or prepares Project Request Forms, Request for Quotes and Requests for Proposal and reviews, analyzes and evaluates responses.
        6. Provides input into the development of contract specifications, makes recommendations regarding construction design standards and contract language and participates in the analysis and awarding of contracts.
        7. Identifies potential events that could significantly affect project schedule or cost and proposes alternatives to minimize impacts.
        8. Reviews plans, specifications, special conditions and agreements and provides detailed interpretations of plan specifications, conditions and agreements to others.
        9. Conducts project scope and kick-off meetings for assigned projects.

10. Verifies that all necessary permits and licenses are in place prior to start of construction.
11. Performs contract administration for assigned projects or project functions to ensure all work is completed in compliance with contract terms, projects plans and specifications, JEA standards and approved schedules and budgets.
12. Creates and/or maintains project schedules, budgets and field reports to enforce budget and schedule controls, track and control cash flow and construction costs and avoid overruns.
13. Attends monthly cost and schedule update meetings with Project Controls staff to update the status of assigned projects to include the schedule, project cash flow, identification of issues, etc.

iii. Knowledge, Skills and Abilities:

1. Knowledge of:
    a. Engineering and industrial construction concepts, principles, practices, sequential methods and standards associated with utility projects including concept development, design, planning, procurement, commissioning, quality assurance/control and safety.
    b. Industrial construction project management including project scheduling.
    c. Craft and/or trade disciplines, practices, procedures and methods of various contractors involved in a project.
    d. Contract administration in a complex industrial environment.
    e. Environmental issues related to construction projects, including mitigation, compensation and enhancement opportunities programs.
    f. Principles and techniques of safe work practices and safety team concepts.
2. Skills in:
    a. Managing major industrial construction projects, including defining scope, planning, structuring, organizing, scheduling, budgeting, tracking cash flow and costs and monitoring project progress.
    b. Analyzing project documents, developing a thorough understanding of the end performance requirements and writing scope documents.
    c. Prioritizing and managing multiple projects, project functions and/or tasks simultaneously in a fast-pace environment while completing projects on time and within budget.
    d. Preparation and/or reviewing Requests for Quotes and Requests for Proposals.
    e. Selection of appropriate construction methods and correlating material procurement, manpower needs and cost control at each project phase.
3. Ability to:
    a. Form project teams and plan, assign, schedule, monitor and review the work of others.
    b. Lead and train others in performing engineering and construction tasks and activities.
    c. Coordinate the work of others, including contractors and others not in the employ of JEA.
    d. Conduct effective meetings.
    e. Analyze issues and make effective, sound business decisions.
    f. Read, comprehend and analyze technical information and translate it to both technical and non-technical colleagues.
    g. Respond to inquiries from customers and stakeholders.
    h. Enforce safety rules, encourage safe work practices and correct unsafe working conditions and/or behaviors.
    i. Communicate effectively, both orally and in writing.

iv. Experience Requirements:

1. Bachelor’s Degree in engineering, Construction Technology, Construction Management, Building Construction, or other related field from an accredited university and a minimum of five (5) years of progressively responsible industrial construction project engineering, project management or related work

experience in a major electric or water/wastewater utility or an engineering consulting firm specializing in utility water and wastewater, reclaim water, building operation, project management or construction management; or

2. Fifteen (15) year combination of education, training and experience as specified above.

b. Project Scheduler:
    i. Position Summary:
        1. Under limited supervision, performs professional and technical project scheduling work in the development and documentation of utility construction projects. Works requires the exercise of considerable independent judgment and initiative in developing and maintaining control of all scheduling functions. Solves complex problems within established parameters and identifies and recommends responses to new and unusual circumstances. Regular contact with project stakeholders, management and various department representatives at all organizational levels is required to obtain, clarify or provide facts and information.
    ii. Examples of work could include:
        1. Develops and implements schedule procedures for utility capital projects.
        2. Leads teams assigned to utility capital projects.
        3. Provides integrated planning, scheduling and cost control information so managers can plan and implement activities relating to utility capital projects.
        4. Prepares complex technical projects schedules and cash flows.
        5. Develops project networks with planned activities, relationships and durations.
        6. Determines the impacts of re-sequencing work.
        7. Prepares complex reports, defines contractor's contract requirements for scheduling and identifies potential events which could significantly impact the project schedule.
        8. Works with others to make decisions about the details of complex work activities and how the details affect the overall project schedule.
        9. Develops and utilizes Critical Path Method schedules.
        10. Determines required resources, materials and equipment needed for future scheduling activities are include in the project schedule.
        11. Leads monthly cost and schedule meetings with Project Managers to collect updates to project schedules, costs and cash flow.
    iii. Knowledge, Skills and Abilities:
        1. Knowledge of:
            a. Principles, standards, techniques and best practices of project scheduling.
            b. Critical Path Method scheduling using Primavera P6.
            c. Construction practices, operational principles and activities.
        2. Skills in:
            a. Preparation of reports, spreadsheets and graphs.
            b. Preparation and analysis of cash flows.
            c. Review and analysis of schedules prepared by others for conformance with project scheduling specifications.
            d. Preparing and presenting project scheduling information.
        3. Ability to:
            a. Correlate material procurement, manpower needs and cost control with project phases.
            b. Define alternatives and evaluate proposed solutions and present results to management.
            c. Establish and maintain effective working relationships with external and internal customers at all levels of the organization.
            d. Communicate effectively, both orally and in writing.
    iv. Experience Requirements:
        1. Bachelor's Degree in Engineering, Finance, Accounting, Construction Technology, Business Administration or a related field and four (4) years of responsible experience in project scheduling; or

2. Eight (8) year combination of education, training and experience, which must include at least four (4) years of project scheduling experience.

c. Project Estimator
    i. Position Summary:
        1. Under limited supervision, performs professional and technical project estimating in utility capital projects. Work requires working knowledge of methods, procedures, processes and techniques of project cost development and analysis sufficient to perform a broad range of complex professional activities. Judgement is required to interpret, analyze and adapt methods, techniques and procedures to specific cases or problems. Regular contact with project stakeholders, management and various department representatives at all organizational levels is required to obtain, clarify or provide facts and information.
    ii. Examples of work could include:
        1. Establishes and implements procedures for estimating utility capital projects at various stages of development including planning, conceptual design, final design and construction.
        2. Preparation of highly advanced and complex technical project estimates.
        3. Identification of potential events which could significantly affect project cost, determine the cost impact and recommend cost effective alternative solutions to project delays.
        4. Review of estimates performed by others.
        5. Validation of potential change order costs.
        6. Collaborates with Project Managers or engineers in various disciplines to make judgements related to the cost of work activities and identification of cost-saving opportunities.
        7. Reviews and evaluates project proposal documents and specific work orders and determines the scope of the technical and construction work requirements.
    iii. Knowledge, Skills and Abilities:
        1. Knowledge of:
            a. The principles, standards, best practices and techniques of cost development and estimating used in the utility industry.
            b. Water/Wastewater plant process and/or pipeline estimating.
            c. Construction practices, operational principles and activities.
            d. Software applications utilized in construction estimating.
            e. Defining contingency and relating to project risk factors.
            f. Construction market including pricing conventions and trends.
        2. Skill in:
            a. Preparation of capital project estimates.
            b. Reading, comprehending and applying information found in technical documents or design drawings.
            c. Microsoft Excel.
            d. Collecting, analyzing and reporting historical data to be used in planning new projects.
        3. Ability to:
            a. Conceptualize construction activities to develop an accurate estimate of all anticipated projects.
            b. Establish and maintain effective working relationships with internal and external customers at all levels of the organization.
    iv. Experience Requirements:
        1. Bachelor’s degree in Engineering, Finance, Accounting, Construction Technology, Business Administration or a related field and four (4) years of project estimating experience; or
        2. Eight (8) year combination of education, training and experience, which must include at least four (4) years of project estimating experience.

d. Project Controls Cost Specialist
    i. Position Summary:
        1. Under general supervision, forecasts project costs, prepares budgets and maintains documentation for utility capital projects to ensure funding is

allocated and tracked properly. Work requires working knowledge of the methods, best practices, procedures, processes and techniques of project cost development, analysis and tracking. Regular contact with project stakeholders, management and various department representatives at all organizational levels is required to obtain, clarify or provide facts and information.

ii. Examples of work could include:
    1. Processing, tracking and reporting on capital work orders, project costs and capital budget items.
    2. Performance of cost development, project budgeting and cash flow forecasting for financial management and reporting.
    3. Provide cost information for planning and control purposes.
    4. Analyzes, plans and coordinates schedules with cost data and man-hour estimates for projects.
    5. Tracks project quantities and man-hours, compares actual to estimated, informs management of potential problems and suggest solutions.
    6. Develops and maintains spreadsheets, databases and other computerized related to project costs.
    7. Supports, interprets and assist in applying cost and project budget programs.
    8. Assist in performance of reimbursable billing from partner agencies.
    9. Preparation of asset cost data at project closeout.

iii. Knowledge, skills and Abilities:
    1. Knowledge of:
        a. The principles, standards, best practices and techniques of cost development and estimating used in the utility industry.
        b. Project cost activities to ensure proper coding.
        c. Activity-based cost accounting methods.
    2. Skills in:
        a. Forecasting, tracking and reporting project costs for budget control purposes.
        b. Collecting, analyzing and reporting historical data to be used in planning new projects.
        c. Analyzing costs and budget variances.
        d. Managing multiple work tasks.
        e. Microsoft Excel.
    3. Ability to:
        a. Read, comprehend and apply technical information.
        b. Communicate effectively, both orally and in writing.
        c. Establish and maintain effective working relationships with internal and external customers at all levels of the organization.

iv. Experience Requirements:
    1. Bachelor's degree in Engineering, Finance, Accounting, Construction Technology, Business Administration or a related field and four (4) years of project financial cost experience; or
    2. Eight (8) year combination of education, training and experience, which must include at least four (4) years of project financial cost experience.

e. Safety and Health Specialist:
    i. Position Summary:
        1. Under general supervision, administers a comprehensive organizational safety and health program to ensure safety rules are enforced, safe work practices are encouraged and unsafe conditions and behaviors are corrected. Job requires general knowledge of the principles, standards, methods, acceptable work practices and applicable codes and regulations for safety and health activities in the utility industry, sufficient to perform a range of varied, non-routine activities. Solves routine or recurring problems and identifies and suggests solutions to more complex problems. Completed work is evaluated for technical soundness, appropriateness and conformity with policies and requirements. Regular contact with people in other work groups and frequently with individuals in internal leadership roles requires skill in influencing or motivating

individuals and groups to address health and safety issues and concerns and to solve problems.

ii. Examples of work could include:
    1. Conducts and/or facilitates safety related training and procedures.
    2. Observes and consults with employees to promote preventive measures, including safe work practices, habits, behaviors and actions.
    3. Participates in various safety meeting work groups and facilitates discussion on safety issues.
    4. Assists employees and contractors in complying with all federal, state and local laws, ordinances and industry or consensus standards associated with safety and health.
    5. Assists management in inspecting facilities, vehicles, tools, work areas, job sites, safety equipment and crews.
    6. Assists management in conducting follow-up investigations of industrial accidents and recommends corrective or preventive measures.
    7. Prepares and maintains adequate documentation and records of all safety-related matters.
    8. Coordination with JEA Safety to communicate processes, procedures and reporting related to safety.

iii. Knowledge, Skills and Abilities:
    1. Knowledge of:
        a. Occupational hazards associated with water and wastewater industry.
        b. Safety policies, procedures, methods and safety equipment associated with the water or wastewater utility industry.
        c. Occupational Safety and Health Administration (OSHA), (Environmental Protection Agency (EPA), Department of Transportation (DOT), (National Institute of Occupational Safety and Health (NIOSH), American National Standards Institute (ANSI), National Fire Protection Association (NFPA), National Electric Council (NEC), American Water Works Association (AWWA) and American Public Power Association (APPA) recommendations, codes or standards.
    2. Skill in:
        a. Observing and analyzing work practices and environments to identify unsafe conditions and behaviors and to assist employees in taking remedial action.
        b. Developing accident and occupational illness prevention programs.
        c. Inspecting, designing and modifying work place environments and systems to improve safety and health conditions.
        d. Investigating accidents and recommending preventive measures.
        e. Preparing reports and maintaining records.
        f. Using personal protection equipment.
        g. Conducting training in the classroom and in the field.
        h. Operating various industrial hygiene and laboratory instruments.
    3. Ability to:
        a. Read, comprehend and apply technical information.
        b. Communicate effectively, both orally and in writing.
        c. Establish and maintain effective working relationships with others.

iv. Experience Requirements:
    1. Bachelor's degree in safety or related field and a minimum of four (4) years of professional safety field experience in the utility or similar industry; or
    2. Eight (8) year combination of education, training and experience, which must include at least four (4) years of safety field experience.

f. Water Resources Engineer:
    i. Position Summary:
        1. Under general supervision collects and analyzes field data for flow metering studies. Builds and runs hydraulic models in support of ongoing capital projects and for planning of future water, wastewater or reclaimed water capital projects.
    ii. Examples of work could include:

1. Lead or support system modeling, planning, design, cost estimating and scope development under the direction and review of a manager or designee.
2. Provide operational support to the water and wastewater operating staff including monitoring system performance, providing technical advice or training and investigating system failures.
3. Provide technical or process analysis related reports.
4. Prepare written and verbal status reports.
5. Use complex computer simulation software and interpret results.
6. Work with Project Managers and contracted design engineers to provide system modeling services as required.

iii. Knowledge, Skills and abilities:

1. Knowledge of:
    a. Engineering concepts, principles, practices, methods and standards associated with utility projects.
    b. Common sources of engineering information.
    c. Federal, state, local and industry laws, regulations and permitting requirements.
    d. Water resource management.
    e. Principles and application of safe work practices.
    f. Process improvement methodologies.
2. Skill in:
    a. Conduct engineering assessments including identifying, analyzing and recommending engineering alternatives if required.
    b. Performing hydraulic and hydrologic calculations, analyses and modeling.
    c. Preparing reports and technical memorandum.
    d. Reading and interpreting construction drawings.
    e. EPAnet style hydraulic modeling with pumps: SWMM, watergems, sewercard, ICM, EPAnet, InfoWater/Sewer, ICM/WS
    f. Databases and SQL
    g. Extended Period Simulation or Dynamic Simulations
    h. Models with more than 100 elements
    i. Field testing, data analysis and model calibration.
3. Ability to:
    a. Read, comprehend and apply technical information.
    b. Communicate effectively, both orally and in writing.
    c. Establish and maintain effective working relationships with others.

iv. Experience Requirements:

1. Bachelor degree in Civil Environmental Engineering, or equivalent, and a minimum of 4 years of experience collecting and analyzing data to support hydrologic modeling for water and wastewater utilities.