

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
LUHDORFF & SCALMANINI CONSULTING ENGINEERS, INC.**

PREAMBLE

This Agreement is entered into between the City of Santa Clara, California, a chartered California municipal corporation (City) and **Luhdorff & Scalmanini Consulting Engineers, Inc., a California corporation**, (Contractor) or LSCE. City and Contractor may be referred to individually as a “Party” or collectively as the “Parties” or the “Parties to this Agreement.”

RECITALS

- A. City desires to secure the design professional services more fully described in this Agreement, at Exhibit A, entitled “Scope of Services”;
- B. “Design professional” includes licensed architects, licensed landscape architects, registered professional engineers and licensed professional land surveyors;
- C. Contractor represents that it, and its subcontractors, if any, have the professional qualifications, expertise, necessary licenses and desire to provide certain goods and/or required services of the quality and type which meet objectives and requirements of City; and,
- D. The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

AGREEMENT TERMS AND CONDITIONS

1. AGREEMENT DOCUMENTS

The documents forming the entire Agreement between City and Contractor shall consist of these Terms and Conditions and the following Exhibits, which are hereby incorporated into this Agreement by this reference:

Exhibit A – Scope of Services

Exhibit B – Schedule of Fees

Exhibit C – Insurance Requirements

Exhibit D – Labor Compliance Addendum (if applicable)

This Agreement, including the Exhibits set forth above, contains all the agreements, representations and understandings of the Parties, and supersedes and replaces any previous agreements, representations and understandings, whether oral or written. In the event of any inconsistency between the provisions of any of the Exhibits and the Terms and Conditions, the Terms and Conditions shall govern and control.

2. TERM OF AGREEMENT

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement shall begin on October 23, 2018 and terminate on December 31, 2021.

3. SCOPE OF SERVICES & PERFORMANCE SCHEDULE

Contractor shall perform those Services specified in Exhibit A within the time stated in Exhibit A. Time is of the essence.

- A. All reports, costs estimates, plans and other documentation which may be submitted or furnished by Contractor shall be approved and signed by an appropriate qualified licensed professional in the State of California.
- B. The title sheet for specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of certificate and signature of the design professional responsible for their preparation.

4. WARRANTY

Contractor expressly warrants that all materials and services covered by this Agreement shall be fit for the purpose intended, shall be free from defect and shall conform to the specifications, requirements and instructions upon which this Agreement is based. Contractor agrees to promptly replace or correct any incomplete, inaccurate or defective Services at no further cost to City when defects are due to the negligence, errors or omissions of Contractor. If Contractor fails to promptly correct or replace materials or services, City may make corrections or replace materials or services and charge Contractor for the cost incurred by City.

5. QUALIFICATIONS OF CONTRACTOR - STANDARD OF CARE

Contractor represents and maintains that it has the expertise in the professional calling necessary to perform the Services, and its duties and obligations, expressed and implied, contained herein, and City expressly relies upon Contractor's representations regarding its skills and knowledge. Contractor shall perform such Services and duties in conformance to and consistent with the

professional standards of a specialist in the same discipline in the State of California.

6. COMPENSATION AND PAYMENT

In consideration for Contractor's complete performance of Services, City shall pay Contractor for all materials provided and Services rendered by Contractor in accordance with Exhibit B, entitled "SCHEDULE OF FEES." The maximum compensation of this Agreement is one million, one hundred and sixty-seven thousand, nine hundred and twenty dollars (\$1,167,920), subject to budget appropriations, which includes all payments that may be authorized for Services and for expenses, supplies, materials and equipment required to perform the Services. All work performed or materials provided in excess of the maximum compensation shall be at Contractor's expense. Contractor shall not be entitled to any payment above the maximum compensation under any circumstance.

7. TERMINATION

- A. Termination for Convenience. City shall have the right to terminate this Agreement, without cause or penalty, by giving not less than Thirty (30) days' prior written notice to Contractor.
- B. Termination for Default. If Contractor fails to perform any of its material obligations under this Agreement, in addition to all other remedies provided by law, City may terminate this Agreement immediately upon written notice to Contractor.
- C. Upon termination, each Party shall assist the other in arranging an orderly transfer and close-out of services. As soon as possible following the notice of termination, but no later than ten (10) days after the notice of termination, Contractor will deliver to City all City information or material that Contractor has in its possession.

8. ASSIGNMENT AND SUBCONTRACTING

City and Contractor bind themselves, their successors and assigns to all covenants of this Agreement. This Agreement shall not be assigned or transferred without the prior written approval of City. Contractor shall not hire subcontractors without express written permission from City. City grants such permission for all subcontractors listed in Exhibit A, Scope of Services.

Contractor shall be as fully responsible to City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons directly employed by it.

9. NO THIRD PARTY BENEFICIARY

This Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

10. INDEPENDENT CONTRACTOR

Contractor and all person(s) employed by or contracted with Contractor to furnish labor and/or materials under this Agreement are independent contractors and do not act as agent(s) or employee(s) of City. Contractor has full rights to manage its employees in their performance of Services under this Agreement.

11. CONFIDENTIALITY OF MATERIAL

All ideas, memoranda, specifications, plans, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for Contractor and all other written information submitted to Contractor in connection with the performance of this Agreement shall be held confidential by Contractor and shall not, without the prior written consent of City, be used for any purposes other than the performance of the Services nor be disclosed to an entity not connected with performance of the Services. Nothing furnished to Contractor which is otherwise known to Contractor or becomes generally known to the related industry shall be deemed confidential.

12. OWNERSHIP OF MATERIAL

All material, which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports, designs, technology, programming, works of authorship and other material developed, collected, prepared or caused to be prepared under this Agreement shall be the property of City but Contractor may retain and use copies thereof. City shall not be limited in any way or at any time in its use of said material. However, Contractor shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to, the release of this material to third parties.

13. RIGHT OF CITY TO INSPECT RECORDS OF CONTRACTOR

City, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for four (4) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Contractor for the purpose of verifying any and all charges made by Contractor in connection with Contractor compensation under this Agreement, including termination of Contractor. Contractor agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to City. Any expenses not so recorded shall be disallowed by City. Contractor shall bear the

cost of the audit if the audit determines that there has been a substantial billing deviation in excess of five (5) percent adverse to the City.

Contractor shall submit to City any and all reports concerning its performance under this Agreement that may be requested by City in writing. Contractor agrees to assist City in meeting City's reporting requirements to the State and other agencies with respect to Contractor's Services hereunder.

14. HOLD HARMLESS/INDEMNIFICATION

- A. To the extent permitted by law, Contractor agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and attorney's fees in providing a defense to any such claim or other action, and whether sounding in law, contract, tort, or equity, to the extent arising out of, pertaining to, or related to the negligence, recklessness, or willful misconduct of the Contractor, its employees, subcontractors, or agents in the performance, or non-performance, of Services under this Agreement.
- B. To the extent permitted by law, Contractor agrees to protect, defend, indemnify, and hold harmless City, its City Council, commissions, officers, employees, volunteers and agents from and against any employment-related claim, injury, liability, loss, cost, and/or expense or damage, including all costs and attorney's fees in providing a defense to any such employment-related claim or other action, and whether sounding in law, contract, tort, or equity, brought by employees, contractors, subcontractors or other agents of Contractor, against City (either alone, or jointly with Contractor), regardless of venue/jurisdiction in which the claim is brought and the manner of relief sought, and shall expressly include passive or active negligence by City. However, the obligation to indemnify set forth in this paragraph shall not apply if such liability is ultimately adjudicated to have arisen through the sole active negligence or sole willful misconduct of City; the obligation to defend is not similarly limited.
- C. To the extent Contractor is obligated to provide health insurance coverage to its employees pursuant to the Affordable Care Act ("Act") and/or any other similar federal or state law, Contractor warrants that it is meeting its obligations under the Act and will fully indemnify and hold harmless City for any penalties, fines, adverse rulings, or tax payments associated with Contractor's responsibilities under the Act.

15. INSURANCE REQUIREMENTS

During the term of this Agreement, and for any time period set forth in Exhibit C, Contractor shall provide and maintain in full force and effect, at no cost to City, insurance policies as set forth in Exhibit C.

16. WAIVER

Contractor agrees that waiver by City of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement. Neither City's review, acceptance nor payments for any of the Services required under this Agreement shall be constructed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

17. NOTICES

All notices to the Parties shall, unless otherwise requested in writing, be sent to City addressed as follows:

City of Santa Clara
Attention: Water and Sewer Utilities
1500 Warburton Avenue
Santa Clara, CA 95050
and by email at nlui@santaclaraca.gov, and
smehta@santaclaraca.gov

And to Contractor addressed as follows:

Scott Lewis
500 First Street
Woodland, CA 95695
and by email at slewis@lsce.com

The workday the e-mail was sent shall control the date notice was deemed given. An e-mail transmitted after 1:00 p.m. on a Friday shall be deemed to have been transmitted on the following business day.

18. COMPLIANCE WITH LAWS

Contractor shall comply with all applicable laws and regulations of the federal, state and local government, including but not limited to "The Code of the City of Santa Clara, California" ("SCCC"). In particular, Contractor's attention is called to the regulations regarding Campaign Contributions (SCCC Chapter 2.130), Lobbying (SCCC Chapter 2.155), Minimum Wage (SCCC Chapter 3.20), Business Tax Certificate (SCCC section 3.40.060), and Food and Beverage Service Worker Retention (SCCC Chapter 9.60), as such Chapters or Sections may be amended from time to time or renumbered. Additionally Contractor has read and agrees to comply with City's Ethical Standards (<http://santaclaraca.gov/home/showdocument?id=58299>).

19. CONFLICTS OF INTEREST

Contractor certifies that to the best of its knowledge, no City officer, employee or authorized representative has any financial interest in the business of Contractor and that no person associated with Contractor has any interest, direct or indirect, which could conflict with the faithful performance of this Agreement. Contractor is familiar with the provisions of California Government Code section 87100 and following, and certifies that it does not know of any facts which would violate these code provisions. Contractor will advise City if a conflict arises.

20. FAIR EMPLOYMENT

Contractor shall not discriminate against any employee or applicant for employment because of race, sex, color, religion, religious creed, national origin, ancestry, age, gender, marital status, physical disability, mental disability, medical condition, genetic information, sexual orientation, gender expression, gender identity, military and veteran status, or ethnic background, in violation of federal, state or local law.

21. NO USE OF CITY NAME OR EMBLEM

Contractor shall not use City's name, insignia, or emblem, or distribute any information related to services under this Agreement in any magazine, trade paper, newspaper or other medium without express written consent of City.

22. GOVERNING LAW AND VENUE

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California. The venue of any suit filed by either Party shall be vested in the state courts of the County of Santa Clara, or if appropriate, in the United States District Court, Northern District of California, San Jose, California.

23. SEVERABILITY CLAUSE

In case any one or more of the provisions in this Agreement shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions, which shall remain in full force and effect.

24. AMENDMENTS

This Agreement may only be modified by a written amendment duly authorized and executed by the Parties to this Agreement.

25. COUNTERPARTS

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

Approved as to Form:

Dated: _____

BRIAN DOYLE
City Attorney

DEANNA J. SANTANA
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

“CITY”

LUHDORFF & SCALMANINI CONSULTING ENGINEERS, INC.
a California corporation

Dated: _____

By (Signature): _____

Name: Scott Lewis, P.G.

Title: Director

Principal Place of
Business Address: 500 First Street, Woodland, CA 95695

Email Address: slewis@lsce.com

Telephone: (530) 661-0109

Fax: (530) 661-6806

“CONTRACTOR”

EXHIBIT A

SCOPE OF SERVICES

The Services to be performed for the City by Luhdorff & Scalmanini Consulting Engineers, Inc. (LSCE) under this Agreement are set forth below.

LSCE will provide engineering design services for the design of two (2) new wells and feasibility study of five (5) existing well sites described in the document entitled, "Request for Proposal for Professional Services: Feasibility Study and Design for New Wells," Number 214, issued on May 12, 2018 (the "RFP"). The scope of services includes but not limited to collecting and reviewing existing hydrogeological data, environmental data, and site constraints at each identified site, conducting hydrogeological, geotechnical, and water quality field investigations at each identified site, performing a site feasibility analysis at each identified site, preparing a water quality analysis, drilling a test boring well to further explore well conditions, develop preliminary well characteristics, and perform aquifer testing, developing well design documents (plans and specifications) and provide construction support, as described in more detail below.

The work to be completed for each of the seven (7) sites will include but not limited to:

- Collection, review, and analysis of all available information, data, and records to characterize the hydrogeological conditions in the vicinity of each potential well site and the Santa Clara area
- Collection, review, and analysis of all available information, data, records to identify known and potential environmental hazards at and in the vicinity of each potential well site
- Assess the California Environmental Quality Act (CEQA) needs and requirements related to new well(s)/pump stations installation and use for each potential well site
- Assess each site in terms of well and pump station constructability, station operation and maintenance, proximity of utilities, and connection to existing distribution system and utilities
- Preparation of site evaluation and well siting report

The work to be completed at the Serra Tanks and Fire Station No. 5 sites includes but not limited to:

- Comprehensive field investigations including test hole drilling, installation of monitoring wells, collection of water samples for Title 22 Analysis, and estimation of yield from a new well
- Preparation of an investigation and well design recommendations report
- Preparation of plans and specifications for new wells
- Preparation of plans and specifications for new pump stations

- Assistance with project bidding
- Well and pump station construction management and oversight
- Preparation of project reports and as-builts.

The Scope of Work outlined below includes but not limited to the tasks required to investigate the seven subject sites and design, bid-build, and commission two new municipal water supply wells and pump stations for the City. The proposed work plan detailed below was developed based on the City's needs and experience with projects of similar size and scope.

Work Plan

The Scope of Work is outlined in the following tasks:

Task 1 – Project Coordination and Administration

Task 2 – Hydrogeological Investigation, Environmental Review, Well Site Evaluation (All Sites)

Task 3 – Comprehensive Field Investigation of Serra Tanks and Fire Station No. 5 Sites

Task 4 – Production Well Design (60%, 90%, 99%, and 100%) and Construction Support

Task 5 – Pump Station Design (60%, 90%, 99%, and 100%) and Construction Support

Task 1 – Project Coordination and Administration

Task 1.1 – Kickoff and Information Request

LSCE's work on the project will begin with a kickoff meeting with City staff and key LSCE team members to discuss the various aspects of the project. Items such as contact information, chain of command, the City's project expectations, respective roles and responsibilities, schedule, design preferences and parameters, and site constraints shall be discussed at the kick off meeting. Following the meeting, LSCE will provide the City with a list of requested information.

Task 1.2 - Meetings and Project Coordination

Key LSCE team members will attend regular design meetings with the City to discuss various aspects of the project. For each meeting, LSCE will prepare and distribute meeting agendas, minutes, and action item summaries. Each month, for the duration of the project, LSCE will prepare a project progress summary to accompany invoicing. The summary report will include but not limited to a summary of work completed, an updated schedule including deliverables and project milestones, items to be completed by the City and LSCE, discussion of items impacting the project and measures to address them, and a current budget summary. LSCE will also provide frequent updates via email or telephone throughout the project as needed.

Task 1.3 - Project Administration

This task provides for project management and administrative activities including, but not limited to:

- Contractual Arrangements
- Ongoing Examination Regarding Adherence to the Scope, Budget, and Schedule
- Coordination of Staff Resources
- Internal Review of Work Products
- Management of Subcontractors
- Billing Review
- Scoping and Budgeting

Task 2 - Hydrogeological Investigation and Well Siting Evaluation (All Sites)

The goals of Task 2 are:

- Develop a conceptual hydrogeological model of the project area which will be used to characterize the hydrogeological conditions at each potential well site
- Conduct an environmental review of each site to identify any real or potential sources of contamination that may impact siting future water supply wells
- Evaluate each site for new well and facilities constructability, operations, and maintenance
- Prepare a Technical Memorandum presenting findings of the investigation
- Conduct an analysis of CEQA requirements
- Prepare Preliminary Drinking Water Source Assessment Protections (DWSAP's) (assume 7)

Task 2.1 Hydrogeological Investigation

LSCE will collect, review, and utilize available data and information to refine conceptual hydrogeological model of the Santa Clara Valley and to preliminarily characterize site specific conditions (well depth, water quality, yield) at each of the seven-potential well sites. LSCE will utilize the following sources of data and information to refine understanding of the project area including, but not limited to:

- Well Construction Details, Water Quality, Water Levels, and Well Performance of City Wells and other wells in the Vicinity of the Project Area
- State of California Water Well Drillers Completion Reports
- Santa Clara Valley Water District (SCVWD)

- Reports Prepared for the City by Others
- Hydrogeological Reports Prepared by California Department of Water Resources (DWR), United States Geological Survey (USGS), California Department of Oil and Gas, and Others
- California State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW)
- Previous Work Completed by LSCE
- Local Drilling and Pump Contractors

As part of the hydrogeological investigation, LSCE will prepare a generalized geologic cross section through the study area. The cross section(s) will be used to estimate depth of water bearing strata, the probable water quality at different depths, and to determine test hole drilling depths for site specific investigation to be conducted as part of Task 3.

LSCE will investigate potential sources of groundwater contamination at and in the vicinity of each proposed well site. LSCE will evaluate available information on possible sources of contamination and use this information and other references to address source water protection as required by the DWSAP program. LSCE will prepare preliminary DWSAP documents for each suitable well site.

Information on contaminate sources (real or potential), if identified, will be used to exclude possible sites from consideration for new wells, to design wells features to mitigate the potential for contamination, or explore treatment options. In addition to the information sources listed under Task 2.1, LSCE will review information from the following sources including, but limited to:

- Santa Clara County Environmental Health Department
- Geo Tracker
- California Department of Toxic Substance Control (DTSC)
- Environmental Data Resources, Inc. (EDR)
- Sanborn Maps

Task 2.2 Well Siting Evaluation

LSCE will evaluate each site for new well and facilities constructability, operations, and maintenance. Specific items to be assessed will include, but not limited to:

- Site Size
- Site Access
- Minimum setback distances from sanitary features per DDW regulations
- Land Use – Site and Vicinity

- Seasonal Ground Conditions
- Location Relative to Distribution System
- Location Relative to Utilities
- Equipment Layout
- Water Supply for Drilling
- Fluids Disposal
- Cuttings Storage and Disposal
- Neighbors
- Need for Sound Attenuation
- Safety/Security
- Real or Potential Surface Contamination

LSCE will also evaluate which permits and notifications will be required for the site exploratory work and well and pump station construction to be conducted at the Serra Tanks and Fire Station sites as part of Tasks 3, 4, and 5. Permit requirements and fees will be summarized in the Technical Memorandum prepared as part of Task 2.3. Typical permits required include, but not limited to:

- Drilling (SCVWD)
- Well Location (DDW and Santa Clara County Environmental Health Department)
- Encroachment (City and/or County of Santa Clara)
- Construction (City of Santa Clara Public Works)
- Sanitary Sewer Discharge (City of Santa Clara)
- Storm Sewer Discharge (City of Santa Clara)

LSCE will assist the City with submission of documents for Categorical Exemptions under CEQA for the site-specific investigations of the Priority Sites. LSCE will also conduct an evaluation of CEQA requirements for the construction and operations of the new well stations at each site.

Task 2.3 Preparation of Technical Memorandum

After completing Tasks 2.1 and 2.2, LSCE will prepare and submit a summary report of investigation to the City discussing the potential yield and water quality of wells constructed at candidate sites based on initial hydrogeological investigation. The memo will also discuss findings regarding the constructability of each site and the ability to construct a fully permitted municipal water supply well. Recommendations regarding

further investigation of potential well sites will be presented. LSCE will schedule a meeting with City personnel to discuss the findings and recommendations contained in the memo. The Technical Memorandum will include, but not limited to:

- Summary of data and information collected and reviewed as part of hydrogeological investigation and preliminary site investigation
- Geologic cross section through study area
- Summary of identified environmental factors of each site that may have bearing on well siting and possible mitigations of those factors
- Summary of potential water quality issues at each site and strategies to address poor quality water
- Analysis of constructability and operation/maintenance of new well at each site
- Summary of CEQA requirements for new well stations
- Conceptual site plan depicting:
 - Proposed test hole/monitoring and production well locations
 - Setback distances from sanitary features per DDW regulations
 - Conceptual Station Layout
 - Materials and Cuttings Storage Locations
 - Fluid containment and/or disposal locations
 - Sound wall layout
 - Site Best Management Practice's (BMP's)
 - Water supply for drilling
 - Site ingress and egress

Task 3 – Comprehensive Field Investigation, Serra Tanks and Fire Station No. 5 Sites

The City has designated the Serra Tanks and Fire Station No. 5 sites as locations for additional comprehensive field investigation that will include but not limited to exploratory drilling to characterize subsurface materials, identify potential aquifer units, collection of water samples for analysis, collection of lithologic and geophysical data to be used to design a production well, and to estimate potential well yield.

LSCE will provide subcontracted drilling services to drill a test hole at each of the Priority Sites. If the results of the test hole are favorable in terms of potential yield based on analysis of drill cutting and geophysical surveys, LSCE will recommend the test hole be converted to a multiple completion monitoring well for collection of water samples for Title 22 analysis from potential target zones. Based on nearly 40 years of successful hydrogeological characterization and well design experience, LSCE has indicated that a properly drilled, designed, and constructed monitoring well is the best way to obtain zone specific water quality and water level data essential to designing a well that will meet drinking water quality standards.

LSCE will perform the test hole/monitoring well approach to sites and zone-specific investigations due to following advantages over the zone sampling method:

- Ability to Re-Sample to Verify Questionable Water Quality Results
- Provide a Non-Pumping Point to Measure Water Levels and Obtain Aquifer Parameters During Pump Testing
- Serve as a Tool to Evaluate Long-Term Changes in Groundwater Conditions
- Superior Zone Isolation
- Lower Overall Cost
- Faster
- Smaller Work Area Footprint

Task 3.1 Test Hole and Monitoring Well Evaluation

Task 3.1 will include test hole drilling and monitoring well installation at the Priority sites. At each site, a test hole will be drilled to collect lithologic samples for analysis and to conduct down hole geophysical surveys that will be used to design the new production well. Based on the results of test hole drilling, LSCE may recommend converting the test hole to a multiple completion monitoring well that will allow for the collection of zone specific water levels and water quality samples. The preliminary test hole depth will be based on the information developed as part of Task 2.

LSCE will provide subcontracted test hole drilling services from a licensed drilling contractor and will oversee the work to ensure that it is performed in accordance with stringent specifications and high expectations. LSCE will require that the drilling contractor contain all fluids and cuttings generated by drilling operations and properly dispose of those materials at an appropriate facility.

LSCE will provide documentation and sampling services during the drilling process including a drilling log, geological samples at a minimum of 10-foot intervals, geophysical (electric) logs, and sieve (grain size) analysis. If the nature, depth, and thickness of aquifer materials from the test hole are favorable, LSCE will recommend

converting the test hole to a multiple-completion monitoring well. A typical monitoring well may include up to four, 2-inch diameter polyvinyl chloride (PVC) piezometers, completed in different zones. The screen section(s) of each piezometer will be isolated from one another using intermediate bentonite seals allowing for discrete water level measurements and water quality sampling. LSCE will oversee the construction and development of the monitoring wells. After development of the monitoring wells, LSCE will mobilize a sampling rig and collect water samples from each piezometer and submit to a state certified laboratory for Title 22 Drinking Water analysis and other constituents of concern in the area. If the results of the test hole investigation are not favorable for the construction of a municipal supply well, and after discussions with the City, the test hole will be abandoned in compliance with all Federal, State and local standards.

LSCE will compare the lithology encountered during drilling, geophysical logs, and zonal water quality to that of existing City Wells and other wells designed by LSCE in the Santa Clara Valley. The performance of existing City wells and other wells completed by LSCE will be used to estimate the yield of wells constructed at the Priority Sites.

Based on favorable results from the test hole and monitoring well phases, a production well design will be recommended to the City.

Task 3.2 Investigation Summary and Well Designs

LSCE will prepare and deliver to the City an Investigation Summary and Well Designs report that will summarize the findings of the site assessment and site characterization work performed as part of Tasks 3.1. The report will include, but not limited to:

- A summary of all field activities associated with test hole drilling, monitoring well construction and development, and water quality testing
- A lithologic log based upon interpretation of collected lithologic samples and geophysical logs
- Geophysical logs
- Grain size distribution charts of selected formation samples
- Monitoring well as-built diagram
- Daily inspection sheets
- A summary of water quality results and analytical reports
- Copies of all project permits
- Copy of Well Completion Report

LSCE will prepare 60% production well designs and specifications based on data gathered during test hole and monitoring well evaluation. The principal design elements to achieve a hydraulically efficient and sand-free well include, but not limited to:

- Borehole and casing depths and diameters
- Casing material type(s)

- Screen placements
- Screen type and material
- Casing and screen wall thickness
- Gravel pack gradation
- Screen slot size
- Seal depths
- Accessory pipe depth, material, and diameter

The report will include a drafted 60% well design profile and conceptual site layout. The design elements of the well design and yield estimation will be discussed in the report. An engineer's estimate for the construction and testing of each well will be included in the report.

LSCE will meet with the City to discuss the results and findings of the test hole/monitoring well investigation and new well design recommendations. LSCE will incorporate the City's 60% design comments into the well design.

Task 3.3 Siting Concurrence

LSCE will start early communications with DDW to address any concerns that the agency may have regarding well siting and design before final preparation of plans and specifications. LSCE will prepare an initial DDW submittal document requesting siting and design concurrence for the new wells based on compliance with DDW regulations. The initial submittal will include but not limited to a preliminary well design, site layout, location map, map indicating location and distances of sanitary features from the proposed well location, delineation of wellhead control zone, monitoring well as built, monitoring well water quality analysis results, and preliminary DWSAP.

LSCE will prepare DDW submittals for the preliminary and final amended water supply permit under Task 4. The preliminary water supply permit includes but not limited to well design information, site plan, preliminary DWSAP, and CEQA documentation. The Final water supply permit submittal will include but not limited to updates to the information from the preliminary submittal in addition to the Operations Plan, well and chlorination data sheets, an engineering report, and final As-Built diagrams.

Task 4 – Production Well Design and Construction

Task 4.1 – Final Well Construction Designs and Specifications

LSCE will prepare project plans and specifications (90%, 99% and 100%) that include but not limited to detailed construction requirements that must be followed by the well drilling contractor during every phase of the project, including the minimum acceptable methods for drilling fluid control, conditioning of the borehole for casing and gravel envelope installation, well development and testing, and performance standards. Other

site-specific items will include but limited to requirements for containment and disposal of drill cuttings and handling of discharge water during development and test pumping in accordance with applicable local, state and federal regulations.

Task 4.1 also includes but not limited to interaction with regulatory agencies such as Department of Drinking Water (DDW), the City and County of Santa Clara, Santa Clara County Department of Environmental Health, and the SCVWD, related to permitting for drilling, construction, and testing of the new well. Permits and plans that are required for a well installation project include but not limited to drilling, discharge, water supply, encroachment permits, storm water pollution and prevention plan (SWPPP), and traffic control plans. The contractor selected to drill the production well will be responsible for procurement and administration of the drilling permit. LSCE will submit plans and applications, and administer other permits as needed.

LSCE will prepare a complete set of plans and specifications (including Special Provisions and Technical Specifications), drawings in AutoCAD V10, and a bid sheet suitable for the solicitation of competitive bids. LSCE will provide a 99% design copy of the specifications and plans to the City for review. Upon acceptance by the City, LSCE will provide the City with the final 100% plans and specifications for incorporation with the City's front-end contract documents and forms for solicitation of bids. The City will contract directly with the selected contractor for the construction and testing of the wells.

The design will be completed at 60%, 90%, 99% and 100% stages. LSCE will also develop an Engineer's Estimate at each stage of the design. In the 60% stage, the design submittal will include but not limited to design plans from all disciplines (civil, electrical, mechanical, structural), proposed technical specifications and provide sufficient detail to outline the fundamental components and scope of the project for the City's review. Digital copies of the 60% plans and specifications will be submitted to the City for review.

After review of the 60% by the City, LSCE will prepare the complete set of plans and specifications at the 90% stage, incorporating any comments received from the City in the previous design review. The City will review and provide one redlined set of 60% plans and specifications. The 90% design plans and specifications will build upon the 60% set, incorporating landscaping drawings as well as additional civil, electrical, mechanical, structural plan details and technical specifications as needed. LSCE will conduct field reconnaissance to resolve any site conflicts with the project design. Digital copies of the 90% plans and specifications will be submitted to the City for review.

After review of the 90% by the City, LSCE will prepare the complete set of plans and specifications at the 99% stage, incorporating any comments received from the City in the previous design review. The City will review and provide one redlined set of 90% plans and specifications. The 99% design plans and specifications will build upon the 90% set, incorporating landscaping drawings as well as additional civil, electrical, mechanical, structural plan details and technical specifications as needed. LSCE will conduct field reconnaissance to resolve any site conflicts with the project design. Digital

copies of the 99% plans and specifications will be submitted to the City and SWRCB/DDW for review.

After receipt of the City and SWRCB/DDW 99% review comments, the final 100% plans and specifications will be prepared for the City's approval prior to bidding. The City will review and provide one redlined set of plans and specifications. 99% design submittal review comments will have been incorporated unless otherwise discussed with and agreed to by the City. If any comments are not incorporated, an explanation will be provided (it is anticipated that verbal explanations will be provided; written explanations only if requested). Digital copies of the 100% plans and specifications will be submitted to the City and the SWRCB/DDW for review and approval.

After completion of the City and all permitting agencies review of the 100% Submittal, LSCE will incorporate final comments and provide a final checkprint of the bid documents. The City will provide a final checkprint review of the complete package of bid documents before the bid sets are produced. It is assumed that only very minor changes will be needed prior to bidding. LSCE will incorporate final comments on the checkprint set for the final bid documents. LSCE, including subcontractors, will stamp the final bid documents for the construction drawings and technical specifications. Four full size and four half size drawing sets will be needed as well as 8 copies of the technical specifications.

Task 4.2– Well Construction Bidding Assistance

LSCE will provide the City with a list of at least four (4) qualified drilling contractors to solicit bids from for the well installation project.

LSCE will conduct a mandatory pre-bid conference for prospective contractors with the City and LSCE project managers in attendance. Based upon questions from contractors, LSCE will assist the City with preparation of any required written clarifications and/or addendums to clarify the technical scope throughout the bidding process. Upon publicly opening the bids, LSCE will assist the City with review and tabulation of all formal bids to ensure responsiveness with the contract requirements. LSCE will assist the City with conduction of a thorough background check on three lowest bidders for their qualifications and references, and the findings of that review will be discussed with the City. LSCE will assist the City with preparation of a formal bid summary and make a recommendation for award to the lowest responsible bidder.

Task 4.3 – Well Construction and Testing Oversight Services

As part of inspection and oversight duties, LSCE will verify that all aspects of the project are carried out as set forth in the project specifications and according to accepted well drilling practices. LSCE will notify the contractor regarding lack of compliance with the project specifications or accepted water well drilling practices and, as the City's agent, will identify corrective measures to be implemented. LSCE will immediately stop work on the project if there are any safety, property damage, or permit violation concerns. LSCE will document all aspects of the project, including inspection items, calculations,

and communications with the contractor and other involved parties. LSCE will provide frequent updates to the City via email, phone, and in person, if requested in addition to regular weekly updates.

LSCE has developed a systematic approach for well installation technical support and will assist the City with the following key elements to ensure that the well meets the performance requirements of the construction contract and that work is performed in the timeliest, most cost effective, and safe manner.

Pre-construction Conference – Prior to mobilization, LSCE will conduct a pre-construction conference with the successful bidder to ensure that they are familiar with the project specifications and answer any technical or logistical questions concerning the project.

Well Location – LSCE will verify the location of the planned well before drilling commences.

Mobilization/Site Preparation – LSCE will verify that all required site protection measures, sound walls, and other site preparation items required in the specifications are in place and that all equipment necessary to complete the project as specified is on site before work commences. LSCE will also verify that all project materials are on site or in the possession of the Contractor before work commences.

Conductor/Surface Casing – LSCE will witness conductor/surface casing installation and grouting operations including the following items, but not limited to:

- Verify borehole diameter
- Verify Final Borehole Depth
- Verify Casing is terminated in Appropriate Material
- Monitor Sample Collection
- Describe Collected Samples
- Verify Casing Dimensions
- Witness Casing Guide Placement
- Inspect Welds
- Witness Casing Installation
- Verify Proper Cement Mix
- Witness Seal Placement

Borehole Construction – LSCE will monitor drilling operations and drilling fluid control to insure minimal formation damage. Specific tasks include, but not limited to:

- Verify Drilling Fluid Properties (Weight, Viscosity, Sand Content)
- Approval of Drilling Fluid Additives
- Witness Caliper and Gyroscopic Surveys

Materials Inspection – LSCE will inspect and verify that all materials are as specified and in good condition. Specific items of inspection include, but not limited to:

- Type of Casing Material(s)
- Casing Dimensions (wall thickness, diameter, length)
- Screen Slot Size
- Casing Condition (roundness, welds, end machining)
- Correct Amount of Casing and Screen
- Gradation of Gravel
- Condition of Gravel (i.e. debris in gravel)
- Sufficient Quantity of Gravel Based on Caliper Log
- Accessory Pipe Material, Diameter, Wall Thickness, Condition, and Amount
- Inspection of Sounding Port Structure (dimensions and welds)

Casing Installation – LSCE will witness borehole conditioning and casing assembly installation. Specific items of inspection include, but not limited to:

- Fluid Conditioning Before Removal of Drill Pipe
- Installation of Tremie Pipe and Calculate Total Depth of Tremie
- Establishment of Fluid Circulation Through Tremie Pipe Before Casing Installation
- Installation of Gravel Fill Pipe to Prescribed Depth
- Monitor Proper Handling of Casing and Screens
- Installation Order of Casing

- Proper Placement of Casing Guides
- Installation of Sounding Tube
- Inspection of Welds and Alignment Hole Filling
- Verification that Well Casing is Hanging in Borehole to Prescribed Depth
- Verify Proper Accessory Pipe Orientation

Gravel and Annular Seal Placement – LSCE will inspect gravel and seal(s) installation and estimate final quantities to be installed. Specific inspection items include, but not limited to:

- Placement of Gravel Using Tremie Pipe
- Disinfection of Gravel Material
- Calculation of Minimum Gravel Volume Required
- Amount of Gravel Placed
- Gravel Consolidation
- Placement of Sealing Material Using Tremie Pipe
- Verification of Proper Sealing Material
- Calculation of Minimum Volume of Sealing Material Required
- Amount of Sealing Material Placed
- Confirm Placement of Seal to Specified Depth

Well Development and Discharge Monitoring – LSCE will witness initial well development techniques with the drilling rig, final development of the well by pumping, and compliance with all discharge requirements. Specific inspection items include, but not limited to:

- Notification of Water Discharge to Appropriate Regulatory Agencies
- Collection of Discharge Water Parameters as Required by Permitting Agency
- Initial Open-Ended Well Development Progress
- Swab-Airlift Development

- Monitoring of Water Turbidity, Approximate Discharge Rates, Swab Time Per Screen Interval
- Evaluate Effectiveness of Operation
- Record Daily Static Water Levels
- Disposal of Water According to Specifications and Permit Requirements
- Acceptance of Rig Development
- Recommend Test Pump Depth Setting and Development Rates
- Witness Pump Development Procedures

Well Testing – LSCE will witness acceptance tests for minimum sand production and maximum well efficiency, monitor well pump tests, and evaluate well performance in order to develop pump design criteria. Specific tasks include, but not limited to:

- Monitor and Record Static and Pumping Water Levels, Turbidity, Sand Content, Discharge Rate, Specific Capacity, and Gravel Level
- Install Pressure Transducers in Production Well and Monitoring Wells
- Witness Final Sand Testing Before Pump Testing
- Recommend Pump Test Rates
- Collection and Submission of Water Quality Samples that Meet Title 22 Drinking Water Requirements
- Recommend Design capacity

Video Inspection, Plumbness and Alignment Testing, Well Disinfection – LSCE will witness video, plumbness and alignment testing, and final well disinfection. Specific task to include, but not limited to:

- Witness Video Inspection of Well Casing
- Witness Plumbness and Alignment Testing of Well and Evaluate Results for Compliance with Tolerances Set Forth in Construction Specifications
- Provide Disinfection Program for Well to Contractor and Witness Implementation

Cleanup – LSCE will witness contractor's compliance with site cleanup and well security requirements.

Specific tasks include, but not limited to:

- Verify that Well Casing and Accessory Pipes are Secured
- Verify Well Casing and Accessory Pipes Have Specified Stick-Up Above Ground Surface
- Inspect Project Site to Ensure Equipment, Materials, Cuttings, Debris are Removed from Site
- Prepare punch list of items requiring completion and monitor completion
- Verify that the Project Site is Left in the Condition Specified in the Construction Specifications

Payment and Acceptance – LSCE will review all invoices for accuracy and make recommendations for payment and for final acceptance. LSCE will review all change order requests and make recommendations to the City regarding acceptance or denial.

Well Construction Summary Report - LSCE will prepare two bound copies of a Well Construction and Testing Summary Report, including a written summary of entire project, all testing results, and as-built diagrams. A PDF version of the report will also be provided on compact disk. Items to be included in the summary report are, but not limited to:

- Written Summary of Project
- Lithologic Log
- Geophysical Logs
- Caliper Log
- As-Built Diagrams
- State of California Well Driller's Completion Report
- Material Delivery Receipts
- Development Records
- Pump Test Results
- Pump Test Hydrographs
- Video Survey
- Plumbness and Alignment Survey Results
- Water Quality Summary

- Contractor's Daily Tour Reports
- Project Photographs
- Copy of Well Design Report
- Any Other Relevant Materials

Task 5– Pump Station Design and Construction

Task 5.1 – Preliminary Pump Station Design Activities

LSCE will meet with and conduct site visits with City personnel to discuss the overall pump station project design requirements, construction concepts, and site constraints at both pump station sites. Design topics to be discussed include the following, but not limited to:

Existing Utilities: LSCE will request the City provide any additional information pertaining to the site and existing City facilities and other utilities, including: property deeds, Title Insurance reports, and development plans for the immediate area (if available). LSCE will identify the availability of utilities needed to support the operation of the pump stations (i.e. water, sewer and storm, electrical power). One of the first items to be addressed is the filing of the application for electrical service with Silicon Valley Power (SVP) (if needed).

Permitting: LSCE will discuss the DDW permitting process and discuss interaction with applicable agencies for permitting and approvals, including: Santa Clara County Environmental Health Department, District and Bay Area Air Quality Management District (BAAQMD). LSCE will assist the City with preparation of the Water Supply Permit Amendment, Drinking Water Source Assessment and Protection Program, encroachment permit, Storm Water Pollution Prevention Plan, National Pollutant Discharge Elimination System (NPDES)/Waste Discharge Requirements, electrical service application, etc.

Land Survey: Discussion of a topographical survey of the site needed for design purposes. The survey will include the area of the well sites, and nearby utilities. The exact limits of the survey will be established following an initial assessment of the availability of utilities that will serve the pump stations.

Geotechnical: Discussion of all requisite geotechnical investigation for the two well pump station sites. The Geotechnical investigation will include but not limited to soil borings, field and laboratory testing of soil properties needed for the building foundation design, pavement, and for utility trenching and compaction as needed.

Building: Review of the pump station building elements desired by the City and ensure consistency with the City's existing pump station building materials and general layout/configuration. Other features such as standardization of disinfection systems, station piping, and controls and panels will be incorporated into the design. LSCE has

developed several unique features to each of the well/pump houses that have been designed to permit not only the efficient removal of the well pump for service, be the pump a vertical lineshaft pump or of a submersible configuration but permits direct access to the well in the event a well service rig is utilized. Other considerations will include but not limited to protection from unwanted access to the building, safety measures to provide the utmost safety considering the station is in close proximity to residential areas, and ventilation/heating and cooling factors required for long-term operation of the station.

Electrical Service: LSCE's will make an application to the power utility company immediately upon notice to proceed to expedite the installation of utility service. LSCE recognizes that SVP does require certain documents, such as plans and specifications including exact power loads, however, LSCE intends to initiate the process early on by basing anticipated loads on previous experience in the area and will provide required documentation to SVP as the design/construction process warrants. Emphasis will also be made in the electrical design process to ensure that the control logic and Supervisory Control and Data Acquisition (SCADA) system design conform to City's existing SCADA system to ensure standardization and uniformity for ease of operation, and maintenance in the future.

Electrical: Review of the required lighting, heating, cooling and security measures required by the City and ensure that all systems are designed not only to promote ease in maintenance but provide for maximization of efficiency.

Landscaping: Discussion of landscaping needs and options with the City. Some minimal landscaping will need to be incorporated into the design to blend the facility in with the adjacent area and present a favorable visual to the passing public.

Pre-Design Engineering Report

LSCE will prepare a pre-design engineering report (PER) with conceptual site plans that show the proposed location of the wells and pump station facilities including site access, piping, building, fencing, paving, and tie-ins to utilities for both well pump station sites. The PER will also delineate the preferences developed from meeting with the City and any improvements, instrumentation and control description, recommended pump design and determination of adequacy or any required upgrades to the existing utility services. A preliminary cost estimate will be included in the PER for each pump station which will be developed from defining the scope of design elements required for sites.

The PER will identify the design elements needed to serve the new facilities including, new water supply connections, storm drain pump-to-waste (overboard) operations, building sewer, electrical service, radio communications, access controls, etc. The design will include a Concrete Masonry Unit (CMU) building to house the well, station piping and chemical treatment systems with bulk liquid sodium hypochlorite delivery. The building design and size will consider the pump type (submersible or vertical lineshaft), noise control, and access to wellhead for maintenance. LSCE's building designs

will incorporate a removable roof section for ease of access with a drill rig for future rehabilitation.

A description of the basis for sizing the well pumps based on an assumed flow, head and horsepower will be provided in the PER. Given that the well may not be completed by the time the PER is written, LSCE will utilize assumptions for pumping water level and flow based on staff review of the hydrogeology from available data in Task 2 and selects the well pumps to complete electrical load calculations. The design and selection of the pumping equipment will be based upon an analysis of the relationship between the system flow requirements, their effect on pumping levels in the well, and the variable hydraulic losses in the well head piping and distribution pressures. The development of the resulting system-head relationship will provide the criteria for selecting the most efficient well pump to meet the target flow rates. The City will provide the system head curve at the point where the well pump stations tie into the distribution system. LSCE will recommend the well pump type, selection of the appropriate prime mover for the pumping unit, and selection of electrical switchgear, controls and instrumentation to properly operate and protect the equipment for optimal service life.

Task 5.2 – Obtain Survey Basemap and Geotechnical Investigation

Following the City's review/acceptance of the PER, LSCE will solicit the services of a geotechnical sub consultant to perform geotechnical investigation which will include a site visit to review physical site conditions and mark proposed drilling/trenching locations for geotechnical analysis and development of a report of findings for both sites. The report will include soil boring analysis and laboratory testing results from samples collected in the field. Site clearing and grading, foundation design and pipeline design, bearing capacity/settlement potential, utility trench backfill, and corrosion potential will be covered in the geotechnical report.

Completion of a topographic survey base map in AutoCAD format will be needed for both project sites. The basemap will be used for preliminary layout of the pump stations that in turn will be used for preparing the final bidding plans. The basemap will also be used for preparing the SVP applications.

Task 5.3 –Pump Station Design and Construction Specifications

LSCE will develop one set of the pump station plans and technical specification for construction improvements at either one or both the Serra Tanks and Fire Station No. 5 site locations. The scope of work covered by the engineering plans and technical specifications will consist of a submersible pump and motor, motor control center, discharge piping, chemical treatment systems, standby diesel generator, instrumentation, electrical control panels, SCADA communication, and CMU block building to house the above ground components at each site. The design will also address site modifications and improvements including grading, drainage, paving, fencing, and painting. The electrical control logic will be designed to conform to existing City control logic and SCADA system which will permit effective communication

between the new facilities and the City's existing central system. Other specific design elements to be addressed in the plans and specifications include, but not limited to:

Best Management Practices (BMPs): SWPPP and CEQA mitigation measures will be incorporated for control of storm water, construction water, and any other required mitigations the contractor shall follow such as for noise, light, work hours, etc.

Site Improvements: Drainage, replacement paving, above-ground and below-ground piping for the connection to the distribution system (including detailed fittings and valves), frontage improvements, landscaping and site fencing and/or access improvements.

General Plans: Title page includes general project information (location, contacts, etc.). Additional general sheets include the sheet index, well profile, standard symbols, notes and abbreviations.

Structural Plans: A CMU building to house the pump station components, the station piping, and electrical switchgear and controls. Structural plans will include but not limited to design for the pump pedestal, pad equipment and building structure.

Electrical Plans: Electrical service (SVP), electrical metering and disconnect, standby emergency generator and transfer switch (if needed), single line and process and instrumentation diagrams, Variable Frequency Drive (VFD) control system, pump-to-waste overboard circuitry, SCADA and radio communication, instrumentation, electrical conduits and conductors.

Mechanical Plans: Well pump, station piping, and mechanical conduits, chemical injection systems for sodium hypochlorite and provisions for future chemical treatment (if needed).

Standard Construction Details: Plans will include but not limited to pipe supports, pump pedestal construction and other applicable standard details.

Startup and Commissioning: Performance testing of all components and commissioning of the facilities and equipment for approval by the City and LSCE.

The design will be completed at 60%, 90%, 99% and 100% stages. LSCE will also develop an Engineer's Estimate at each stage of the design. In the 60% stage, the design submittal will include but not limited to design plans from all disciplines (civil, electrical, mechanical, structural), proposed technical specifications and provide sufficient detail to outline the fundamental components and scope of the project for the City's review. LSCE will complete the 60% design concurrent with construction of the production wells at both sites. Digital copies of the 60% plans and specifications will be submitted to the City for review.

After review of the 60% by the City, LSCE will prepare the complete set of plans and specifications at the 90% stage, incorporating any comments received from the City in the previous design review. The City will review and provide one redlined set of 60%

plans and specifications. The 90% design plans and specifications will build upon the 60% set, incorporating landscaping drawings as well as additional civil, electrical, mechanical, structural plan details and technical specifications as needed. LSCE will modify the plans and specifications as needed, to incorporate the data collected during the drilling of the two production wells. LSCE will also conduct field reconnaissance to resolve any site conflicts with the project design. Digital copies of the 90% plans and specifications will be submitted to the City for review.

After review of the 90% by the City, LSCE will prepare the complete set of plans and specifications at the 99% stage, incorporating any comments received from the City in the previous design review. The City will review and provide one redlined set of 90% plans and specifications. The 99% design plans and specifications will build upon the 90% set, incorporating landscaping drawings as well as additional civil, electrical, mechanical, structural plan details and technical specifications as needed. LSCE will modify the plans and specifications as needed, to incorporate the data collected during the drilling of the two production wells. LSCE will also conduct field reconnaissance to resolve any site conflicts with the project design. Digital copies of the 99% plans and specifications will be submitted to the City and SWRCB/DDW for review.

After receipt of the City 90% review comments and SWRCB 99% review comments, the final 100% plans and specifications will be prepared for the City's approval prior to bidding. The City will review and provide one redlined set of plans and specifications. 90% design submittal review comments will have been incorporated unless otherwise discussed with and agreed to by the City. If any comments are not incorporated, an explanation will be provided (it is anticipated that verbal explanations will be provided; written explanations only if requested). Digital copies of the 100% plans and specifications will be submitted to the City and the SWRCB for review and approval.

After completion of the City and all permitting agencies review of the 100% Submittal, LSCE will incorporate final comments and provide a final checkprint of the bid documents. The City will provide a final checkprint review of the complete package of bid documents before the bid sets are produced. It is assumed that only very minor changes will be needed prior to bidding. LSCE will incorporate final comments on the checkprint set for the final bid documents. LSCE, including subcontractors, will stamp the final bid documents for the construction drawings and technical specifications. Four full size and four half size drawing sets will be needed as well as 8 copies of the technical specifications.

Task 5.4 – Pump Station Bidding Assistance

LSCE will provide a list of a minimum of six (6) general and specialty contractors who may be interested in bidding on this project, for the City's review and approval. LSCE has developed pump specifications to require all well pump work be performed by a company specializing in the sales, installation and maintenance of deep well pumps. The City will prepare and distribute advertisements for bids in newspaper, Builders Exchanges, and other media.

LSCE will conduct a mandatory pre-bid conference for prospective contractors with the City and LSCE project managers in attendance. Based upon questions from contractors, LSCE will assist the City with preparation of any required written clarifications and/or addendums to clarify the technical scope throughout the bidding process. Upon publicly opening the bids, LSCE will assist the City with review and tabulation of all formal bids to ensure responsiveness with the contract requirements. LSCE will assist the City with conduction of a thorough background check on three lowest bidders for their qualifications and references, and the findings of that review will be discussed with the City. LSCE will assist the City with preparation of a formal bid summary and make a recommendation for award to the lowest responsible bidder.

Task 5.5 – Pump Station Construction and Commissioning

LSCE's approach to providing construction support services will involve a close relationship with construction timing, schedule, progress and administrative processes so as to not delay progress. LSCE will act on behalf of the City and work in close coordination with the City's assigned project manager. LSCE will assume the scope of construction period services include the following, but not limited to:

Pre-Construction Meeting: LSCE will hold a pre-construction conference to discuss the baseline schedule and the procedure for construction progress, Request for Information's (RFI's), status of submittals, and any miscellaneous items throughout construction. Additional construction meetings will be held at the job site or the City's office (as needed) and they will be conducted as a means to address project issues or significant items which require in-person resolution. A formal agenda and meeting minutes documenting the status of the construction meetings will be prepared.

Construction Staking: LSCE will coordinate with the surveyor to provide the Contractor with an initial set of construction staking for the pump station site, including building corners for both sites. LSCE assumes no more than 2 site visits are required by the surveyor for construction staking.

Submittal Review: LSCE will complete the review and transmittal of technical submittals provided by the general contractor. A submittal spreadsheet log will be maintained for use in tracking and documenting submittal review. LSCE assumes no more than 50 submittals will need to be reviewed/approved.

Requests for Information (RFI): During the construction period, the general contractor will ask questions on details of the contract, substitutions, and alternative approaches that are best answered by the designer. LSCE will review questions and provide written clarifications. LSCE assumes no more than 15 RFIs will need to be reviewed.

Change Order Assistance: LSCE will assist in the preparation of any necessary field instructions and change orders. Anticipated assignments may include but not limited to: preparing requests to the general contractor for proposals for extra or changed work; review of contractor requests for change order to determine if work proposed is considered extra work; opinion of probable construction cost; and, review and

negotiation of cost estimates. LSCE will also prepare drawings, sketches or specifications for extra or changed work items. LSCE assumes no more than 5 change orders will need to be reviewed/approved.

Monthly Pay Requests: Every month, or as required under City general contracting procedure, the general contractor will submit a pay application for work completed to-date. LSCE will review the completed pay application and provide a recommendation for approval based upon actual work completed, material delivered and retention release. The City will review/enforce labor compliance requirements and certified payroll record requirements. LSCE assumes no more than 12 payment applications will need to be reviewed/approved.

On-site Inspections: LSCE will provide scheduled on-site milestone inspections including special inspections for electrical, structural and mechanical components. LSCE will prepare an inspection report for each site-visit indicating the date and times, people on-site, material delivered, work completed and corrections noted. The following milestone inspections will be required which include but not limited to:

Civil/Mechanical Engineer Support

Furnish an engineer for field observation of station layout/grading; pedestal construction and well pump installation; station piping/valving installations; transducer installation; utility service lines/conduits and ventilation system construction; and chemical feed equipment installations. An estimated six site visits are needed to perform this work.

Structural Engineer Support

Furnish an engineer for field observation of construction of pump station building components including the rebar, concrete slab, CMU wall, and removable roof section. Six site visits from a civil engineer will be needed to cover this inspection.

Geotechnical Engineering Services

The work will include observation of major excavations and fill areas to confirm that material encountered is consistent with assumptions developed during the design. Observe and advise field staff on unusual, questionable, or unanticipated soil conditions. Perform compaction testing of earthwork for pad/footing subgrade and utility trench backfill operations. Other examples of as-needed geotechnical services will be attendance at meetings, or responding to written RFIs or telephone questions. LSCE will also track the work and maintain and copy the City records of inspection and test results. An estimated four site visits are needed to perform this work, however, additional site visits may be needed.

Electrical Engineering Support

Inspection of conduit routing, equipment anchorage, control and distribution panel configuration and electrical switchgear will be performed. Also included in this task will be to inspect the electrical for "green tagging" for power company electrical service

connection. Six site visits by the electrical engineer are estimated to be needed for this scope of work.

Commissioning: LSCE will oversee and be responsible for the approval of the contractor's startup and commissioning activities for a fully functioning and operable facility, including all equipment acceptance testing, communications and programming, and close-out permitting requirements. This process will involve coordinating the general contractor, sub-contractors, systems integrator, equipment manufacturers, City staff and regulatory agencies.

A preliminary site inspection will be conducted during startup/testing & commissioning of the pump station, in which LSCE will prepare list of incomplete construction items (punch list) for the general contractor to complete prior to final acceptance of the project by the City. LSCE will perform a follow-up visit to certify completion of the punch list. Hydraulic performance acceptance testing will also be conducted to ensure the completed down hole pump assemblies at both sites operate as warranted by the equipment manufacturer and to ensure the plants are operating at the flow rates, pressures and efficiencies for which the entire facility was designed. A total of four site visits by LSCE and the electrical engineer are estimated to be needed for this scope of work.

At the end of the construction phase of the project, LSCE will modify the project drawings into a set of project Record Drawings based on field changes and red-line markups from the general contractor and LSCE construction management staff. Record Drawings and Operation & Maintenance manuals will be provided to the City after they have been reviewed and approved by LSCE and the City. Digital copies of the record drawings and technical specifications will be provided for City's records.

Following acceptance of the project, LSCE will assist with the final DDW amended water supply permit, building upon the preliminary permit submittal in the Task 3. This will involve permitting for the new wells, equipment and preparation of the DWSAP for the facilities.

OPTIONAL TASK – Preparation of CEQA Documentation for Two New Wells

In this optional task, LSCE will assist City with the preparation of documents required per the California Environmental Quality Act (CEQA) for the construction of two new wells and pump station facilities within the City of Santa Clara. Hurlbert Consulting (Hurlbert) will assist LSCE as a subconsultant with the preparation of the required CEQA documentation.

Subtask 1 Preparation of Administrative Draft Initial Study/Mitigated Negative Declaration

This task will include the preparation of an Administrative Draft Initial Study/Mitigated Negative Declaration to meet the requirements of City of Santa Clara (the Lead Agency) according to §15063(d) of the CEQA Guidelines and City of Santa Clara's Environmental Procedures. The Initial Study shall consist of, but not limited to:

- A project description, including location maps;
- An identification of the environmental setting;
- An identification of the environmental effects of the project (using CEQA Guidelines format). All checklist answers will be explained. The explanation will be more or less detailed depending upon the importance of the environmental topic to the Project;
- Identification and discussion of mitigation measures necessary to reduce identified significant effects to a less than significant level;
- A consistency evaluation of the project with respect to the Santa Clara County and City of Santa Clara General Plans, Integrated Regional Water Management Plan, zoning ordinance, and other pertinent City of Santa Clara regulations.

The Administrative Draft Initial Study will evaluate all environmental topics contained in the CEQA Guidelines checklist and City of Santa Clara's environmental procedures. This scope does not include technical studies by biologists or traffic engineers; at this time such special technical studies do not appear warranted. All conclusions will be explained. The Initial Study will address, but not limited to:

- 1) Relevant regulatory requirements of other agencies (such as Regional Water Quality Control Board, State Water Quality Control Board – Department of Drinking Water, and other Responsible Agencies);
 - 2) Specific design and operational features included to meet Responsible Agency and other regulatory requirements; and
 - 3) How project design features avoid or minimize potential environmental effects.
- Electronic copies of the Administrative Draft Initial Study/Mitigated Negative Declaration (IS/MND) will be submitted to the City for review.

Subtask 2 Preparation of Circulation Draft Initial Study/Mitigated Negative Declaration

The Administrative Draft Initial Study will be revised in response to the City's comments. After approval, an electronic file of the document in PDF format will be supplied to the City for reproduction and distribution by the City. Notices for use by the City will be prepared for local distribution and posting, and the State Clearinghouse. The document distribution through the State Clearinghouse is triggered when review by state agencies is required.

Subtask 3 Respond to Public Comments on the Negative Declaration /Public Hearing / Mitigation Monitoring Program (MMP)

After completion of the public review process, draft responses to public comments will be prepared and electronic copies of the Comment Responses provided to the City for review. Upon review of the response to public comments by the City, the Comment Responses will be finalized. Upon approval, electronic copies of the final responses will be submitted to the City for insertion into City staff's report to the Planning Commission or City Council. Hurlbert Consulting, will attend one public hearing on the project before the City of Santa Clara. At this meeting, Hurlbert Consulting, will be available to answer questions regarding the IS/MND and the environmental process.

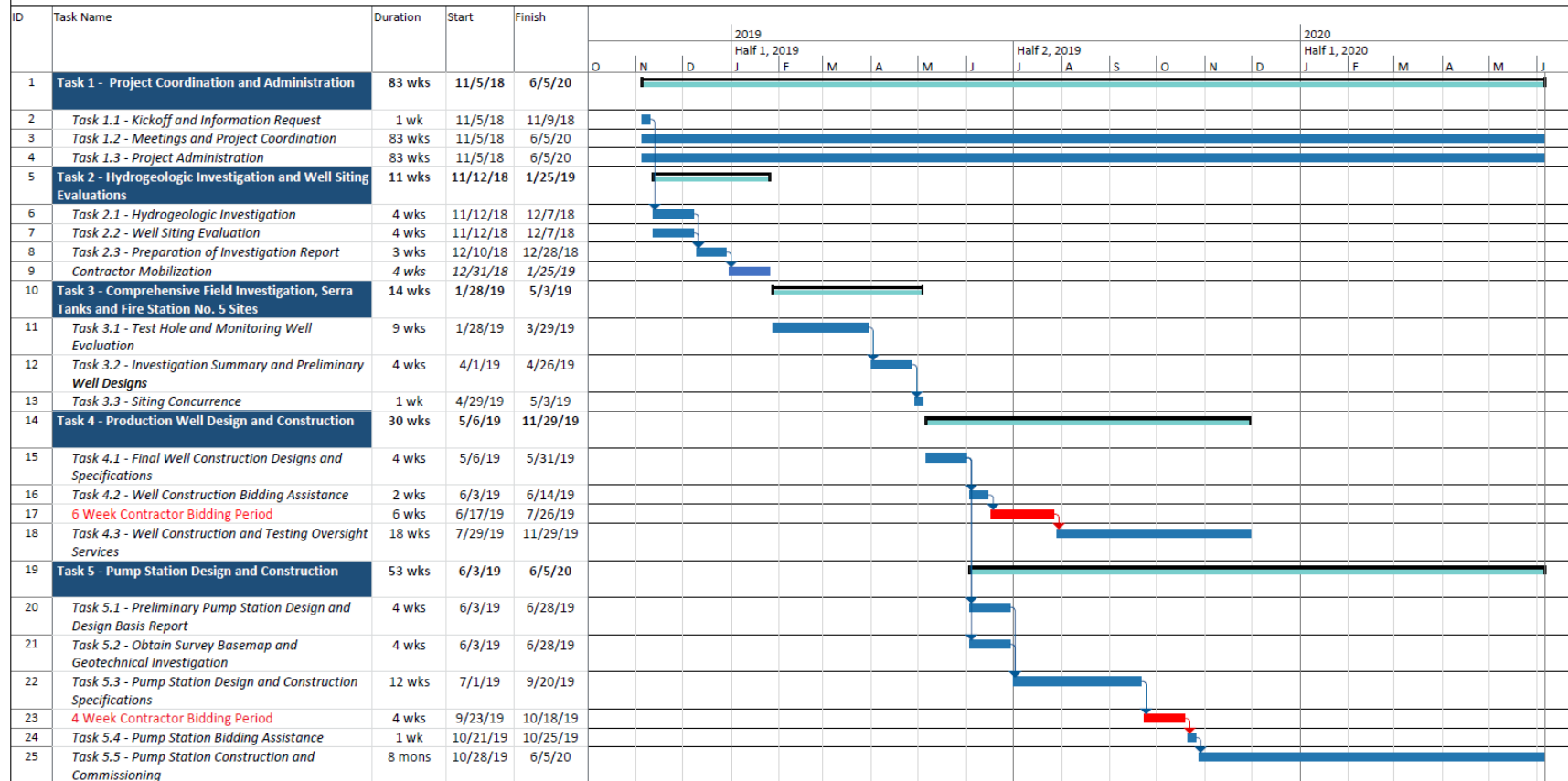
As part of this task, a mitigation monitoring program for all mitigation measures, a Notice of Determination and De Minimus Impact Finding will be prepared for posting by the City.

Assumptions

The scope and cost provisions of this proposal are based upon several assumptions that are summarized below to further define the proposed scope of work. LSCE recognizes that these assumptions may be subject to change by the City during the project. While such changes would not necessarily result in modification of the scope, schedule, or cost, LSCE reserves the right to propose such modifications in the event of such changes.

- Work on the IS/MND will not be initiated until engineering plans are completed to a level with sufficient detail to permit the environmental review of the proposed project. LSCE generally has found that this corresponds to the 60 percent level of engineering design.
- There will be no alteration to the project description during the course of work once accepted by the City. Subsequent revisions to the project description may result in increased costs or a delay in project completion.
- The City will provide a copy of its environmental procedures relevant to the project for use in the environmental review.

City of Santa Clara Feasibility Study for New Wells



Note that this is a tentative schedule and subject to change due to the City's needs.

Project Organizational Chart

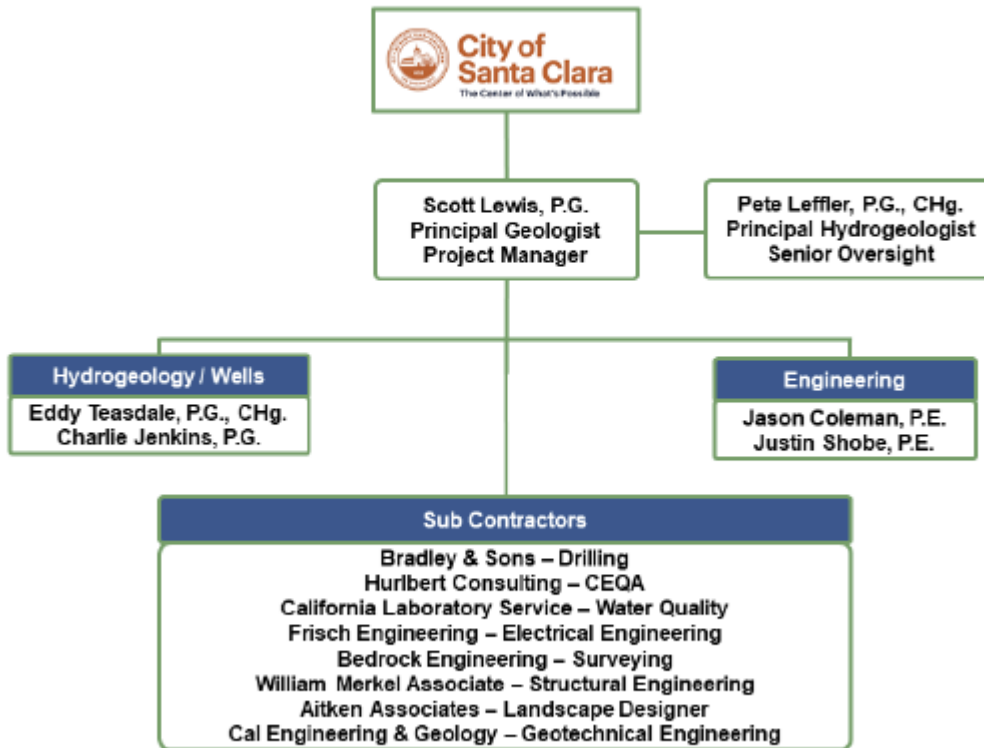


EXHIBIT B SCHEDULE OF FEES

Contractor will bill City on a monthly basis for Services provided by Contractor during the preceding month on an invoice and in a format approved by City and subject to verification and approval by City. City will pay Contractor within thirty (30) days of City's receipt of an approved invoice.

The total payment to LSCE for basic services, as stated in Exhibit A, shall not exceed one million, sixty-one thousand, seven hundred and forty-five dollars (\$1,061,745). Payment to LSCE for optional tasks, as stated in Exhibit A, shall not exceed twenty-six thousand, ninety dollars (\$26,090). This payment for optional tasks of twenty-six thousand, ninety dollars (\$26, 090) is included in the pre-approved additional services not to exceed amount of one hundred and six thousand, one hundred and seventy-five dollars (\$106,175) as stated below.

The amount billed to City for pre-approved additional services shall not exceed the sum of one hundred and six thousand, one hundred and seventy-five dollars (\$106,175) and shall be billed at the following hourly rates:

<i>SCHEDULE OF FEES - ENGINEERING AND FIELD SERVICES</i>	
<i>2018</i>	
<i>Professional:</i>	
<i>Senior Principal</i>	<i>\$205/hr.</i>
<i>Principal Professional</i>	<i>\$202/hr.</i>
<i>Project Manager</i>	<i>\$190/hr.</i>
<i>Senior Professional</i>	<i>\$182/hr.</i>
<i>Project Professional</i>	<i>\$142 to 170/hr.</i>
<i>Staff Professional</i>	<i>\$120 to 130/hr.</i>
<i>Technical:</i>	
<i>Engineering Inspector</i>	<i>\$120 to 130/hr.</i>
<i>ACAD Drafting/GIS</i>	<i>\$125 to 130/hr.</i>
<i>Engineering Assistant</i>	<i>\$100/hr.</i>
<i>Technician</i>	<i>\$100/hr.</i>
<i>Clerical Support:</i>	
<i>Word Processing, Clerical</i>	<i>\$72/hr.</i>

In no event shall the amount billed to City by LSCE for services under this agreement exceed one million, one hundred and sixty-seven thousand, nine hundred and twenty dollars (\$1,167,920), subject to budget appropriations.

Client: City of Santa Clara
 Project: 18-2002
 Est. By: BL-JC
 Date: 6/11/2018

Estimated Costs for Well Site Feasibility Study and the Design and Construction of Two Wells and Pump Stations



Task	Description	Principal Professional	Senior Professional	Project Professional	Staff Professional	Staff Professional Prevailing Wage	AutoCAD	Clerical	Bradley & Sons (T/M/W Drilling)	Fitch Engineering (Electrical)	William Marks Associates (Structural)	Hurbert Consulting (CEQA)	Bedrock Engineering (Surveying)	Cal Engineering & Geology (Geotechnical)	Aiken Associates (Landscaping)	Water Quality	Direct Expenses	Summary
Task 1 - Project Coordination and Administration		\$202	\$182	\$170	\$130	\$157	\$125	\$72	Included	Lump*	Lump*	Lump*	Lump*	Lump*	Lump*	Included	Included	
Task 1.1 - Kickoff and Information Request	Test Hours	18	18	12	12													\$97
	Test Cost	\$3,232	\$2,912	\$2,040	\$1,860	\$0	\$0	\$72										\$5,976
	Direct Expenses																\$240	\$240
	Sub-Consultant																	\$0
	SubTotal	\$3,232	\$2,912	\$2,040	\$1,860	\$0	\$0	\$72										\$10,048
Task 1.2 - Meetings and Project Coordination	Test Hours	50	50	24	0	\$0	\$0	\$216										\$30,870
	Test Cost	\$12,120	\$14,560	\$4,080	\$0	\$0	\$0	\$216										\$30,870
	Direct Expenses																\$2,320	\$2,320
	Sub-Consultant																	\$0
	SubTotal	\$12,120	\$14,560	\$4,080	\$0	\$0	\$0	\$216										\$35,190
Task 1.3 - Project Administration	Test Hours	54	40	18	0	\$0	\$0	\$1,440										\$24,348
	Test Cost	\$12,924	\$7,200	\$2,736	\$0	\$0	\$0	\$1,440										\$24,348
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$12,924	\$7,200	\$2,736	\$0	\$0	\$0	\$1,440										\$24,348
Total Task Cost Estimate																		\$67,620
Task 2 - Hydrogeologic Investigation and Well Siting Evaluations																		
Task 2.1 - Hydrogeologic Investigation	Test Hours	40	40	60	260													400
	Test Cost	\$9,080	\$7,280	\$10,200	\$33,800	\$0	\$0	\$0										\$59,360
	Direct Expenses																\$1,500	\$1,500
	Sub-Consultant																	\$0
	SubTotal	\$9,080	\$7,280	\$10,200	\$33,800	\$0	\$0	\$0										\$60,860
Task 2.2 - Well Siting Evaluation	Test Hours	30	18	18	30													90
	Test Cost	\$4,848	\$2,912	\$2,040	\$5,200	\$0	\$1,500	\$0										\$15,500
	Direct Expenses																\$240	\$240
	Sub-Consultant																	\$0
	SubTotal	\$4,848	\$2,912	\$2,040	\$5,200	\$0	\$1,500	\$0										\$17,200
Task 2.3 - Preparation of Investigation Report	Test Hours	40	12	12	12													72
	Test Cost	\$9,080	\$1,456	\$2,040	\$3,120	\$0	\$1,000	\$0										\$15,656
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$9,080	\$1,456	\$2,040	\$3,120	\$0	\$1,000	\$0										\$15,656
Total Task Cost Estimate																		\$100,296
Task 3 - Comprehensive Field Investigation, Sema Tanks and Pits Station No. 6 Sites																		
Task 3.1 Test Hole and Monitoring Well Evaluation	Test Hours	24		60	120													204
	Test Cost	\$4,848	\$0	\$13,600	\$25,120	\$0	\$0	\$0										\$43,568
	Direct Expenses																\$3,000	\$3,000
	Sub-Consultant																	\$0
	SubTotal	\$4,848	\$0	\$13,600	\$25,120	\$0	\$0	\$0										\$36,568
Task 3.2 - Investigation Summary and Preliminary Well Designs	Test Hours	40		34	34													98
	Test Cost	\$8,080	\$0	\$4,080	\$3,120	\$0	\$0	\$0										\$15,280
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$8,080	\$0	\$4,080	\$3,120	\$0	\$0	\$0										\$15,280
Task 3.3 - Siting Consultance	Test Hours	8		12	12													32
	Test Cost	\$1,616	\$0	\$2,040	\$1,560	\$0	\$0	\$0										\$5,216
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$1,616	\$0	\$2,040	\$1,560	\$0	\$0	\$0										\$5,216
Total Task Cost Estimate																		\$205,604
Task 4 - Production Well Station Design and Construction																		
Task 4.1 - Final Well Construction Designs and Specifications	Test Hours	30		34	14			18										94
	Test Cost	\$4,040	\$0	\$4,080	\$1,680	\$0	\$2,000	\$0										\$11,600
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$4,040	\$0	\$4,080	\$1,680	\$0	\$2,000	\$0										\$11,680
Task 4.2 - Well Construction Bidding Assistance	Test Hours	18		18	18													52
	Test Cost	\$3,232	\$0	\$0	\$2,080	\$0	\$0	\$0										\$5,312
	Direct Expenses																\$243	\$243
	Sub-Consultant																	\$0
	SubTotal	\$3,232	\$0	\$0	\$2,080	\$0	\$0	\$0										\$6,644
Task 4.3 - Well Construction and Testing Oversight Services	Test Hours	30		30	300													648
	Test Cost	\$16,160	\$0	\$37,400	\$5,200	\$47,100	\$1,000	\$0										\$106,860
	Direct Expenses																\$8,000	\$8,000
	Sub-Consultant																	\$0
	SubTotal	\$16,160	\$0	\$37,400	\$5,200	\$47,100	\$1,000	\$0										\$122,860
Total Task Cost Estimate																		\$140,984
Task 5 - Pump Station Design and Construction																		
Task 5.1 - Preliminary Pump Station Design and Design Basic Report	Test Hours			44	76			18										138
	Test Cost	\$0	\$0	\$7,480	\$9,880	\$0	\$2,000	\$216										\$19,576
	Direct Expenses																\$293	\$293
	Sub-Consultant																	\$0
	SubTotal	\$0	\$0	\$7,480	\$9,880	\$0	\$2,000	\$216										\$20,869
Task 5.2 - Obtain Survey Basemap and Geotechnical Investigation	Test Hours			4	4													8
	Test Cost	\$0	\$0	\$680	\$520	\$0	\$0	\$0										\$1,200
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$0	\$0	\$680	\$520	\$0	\$0	\$0										\$1,200
Task 5.3 - Pump Station Design and Construction Specifications	Test Hours	18		180	216			18										240
	Test Cost	\$3,232	\$0	\$26,500	\$27,300	\$0	\$21,875	\$1,152										\$79,059
	Direct Expenses																\$1,500	\$1,500
	Sub-Consultant																	\$0
	SubTotal	\$3,232	\$0	\$26,500	\$27,300	\$0	\$21,875	\$1,152										\$79,059
Task 5.4 - Pump Station Bidding Assistance	Test Hours			26	36													62
	Test Cost	\$1,616	\$0	\$4,760	\$4,680	\$0	\$0	\$576										\$11,632
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$1,616	\$0	\$4,760	\$4,680	\$0	\$0	\$576										\$11,632
Task 5.5 - Pump Station Construction and Commissioning	Test Hours			8	15													23
	Test Cost	\$1,616	\$0	\$37,740	\$45,760	\$0	\$5,000	\$1,152										\$91,268
	Direct Expenses																	\$0
	Sub-Consultant																	\$0
	SubTotal	\$1,616	\$0	\$37,740	\$45,760	\$0	\$5,000	\$1,152										\$91,268
Total Task Cost Estimate																		\$205,196
SUMMARY																		
	Total LSCF Hours	264	200	340	1118	640	718	81										3428
	Total LSCF Cost	\$93,728	\$36,000	\$160,080	\$145,360	\$72,200	\$34,375	\$4,632										\$494,618
	Total Sub-consultant Cost								\$233,000	\$136,637	\$32,008	\$7,200	\$18,699	\$24,299	\$12,996	\$33,000	\$19,761	\$494,618
	Direct Expenses																	\$19,761
	Total Preparation Cost																	\$19,761
Total Cost Estimate																		\$1,061,745

Item Number	Item Description/Title	Unit of Measure	Estimated Quantity	Unit Price	Total Cost
1. Serra Tanks					
1.1	Site Investigation	LS	1	8,694	8,694
1.2	Preliminary Field Investigation	LS	1	3,391	3,391
1.3	Comprehensive Field Investigation	LS	1	151,534	151,534
1.4	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
1.5	Pre-Design Development (60%)	LS	1	7,640	7,640
1.6	Detail Design (90%)	LS	1	88,301	88,301
1.7	Detail Design (99%)	LS	1	26,354	26,354
1.8	Final Design (100%)	LS	1	3,500	3,500
1.9	Bid. Construction Support & As-Builts	LS	1	166,977	166,977
1.10	Permitting	LS	1	2,608	2,608
1.11	Project Administration & Coordination	LS	1	33,814	33,814
Total Cost for Well Design at Serra Tanks Site					495,055
2. Fire Station No. 5					
2.1	Site Investigation	LS	1	8,694	8,694
2.2	Preliminary Field Investigation	LS	1	3,391	3,391
2.3	Comprehensive Field Investigation	LS	1	151,534	151,534
2.4	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
2.5	Pre-Design Development (60%)	LS	1	7,640	7,640
2.6	Detail Design (90%)	LS	1	88,301	88,301
2.7	Detail Design (99%)	LS	1	26,354	26,354
2.8	Final Design (100%)	LS	1	3,500	3,500
2.9	Bid. Construction Support & As-Builts	LS	1	166,977	166,977

2.9	Permitting	LS	1	2,608	2,608
2.10	Project Administration & Coordination	LS	1	33,814	33,814
Total Cost for Well Design at Fire Station No. 5					495,055

Item Number	Item Description/Title	Unit of Measure	Estimated Quantity	Unit Price	Total Cost
3. Well No. 35					
3.1	Site Investigation	LS	1	8,694	8,694
3.2	Preliminary Field Investigation	LS	1	3,391	3,391
3.3	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
Total Cost Well No. 35					14,327
4. Well No. 14					
4.1	Site Investigation	LS	1	8,694	8,694
4.2	Preliminary Field Investigation	LS	1	3,391	3,391
4.3	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
Total Cost Well No. 14					14,327
5. Well No. 3-02					
5.1	Site Investigation	LS	1	8,694	8,694
5.2	Preliminary Field Investigation	LS	1	3,391	3,391
5.3	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
Total Cost Well No. 3-02					14,327
6. Well No. 7					
6.1	Site Investigation	LS	1	8,694	8,694
6.2	Preliminary Field Investigation	LS	1	3,391	3,391

6.3	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
Total Cost Well No. 7					14,327

Item Number	Item Description/Title	Unit of Measure	Estimated Quantity	Unit Price	Total Cost
7. Well No. 4					
7.1	Site Investigation	LS	1	8,694	8,694
7.2	Preliminary Field Investigation	LS	1	3,391	3,391
7.3	Site Recommendations Technical Memorandum	LS	1	2,242	2,242
Total Cost Well No. 4					14,327

TOTAL PROPOSAL COST	1,061,745
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Cost Estimate for Optional Tasks to Prepare CEQA Documentation for Two New Wells:

Task	Cost
1. Preparation of Administrative Draft Initial Study/Mitigated Negative Declaration	\$13,750
2. Preparation of Circulation Draft Initial Study/Mitigated Negative Declaration	\$4,340
3. Respond to Comments / MMP	\$3,250
4. Meetings/Coordination	\$4,750
Total	\$26,090

EXHIBIT C

INSURANCE REQUIREMENTS

Without limiting the Consultant's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Consultant shall provide and maintain in full force and effect during the period of performance of the Agreement and for twenty-four (24) months following acceptance by the City, at its sole cost and expense, the following insurance policies from insurance companies authorized to do business in the State of California. These policies shall be primary insurance as to the City of Santa Clara so that any other coverage held by the City shall not contribute to any loss under Consultant's insurance. The minimum coverages, provisions and endorsements are as follows:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

1. Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

\$1,000,000 Each Occurrence
\$2,000,000 General Aggregate
\$2,000,000 Products/Completed Operations Aggregate
\$1,000,000 Personal Injury
2. Exact structure and layering of the coverage shall be left to the discretion of Consultant; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.
3. The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Consultant to comply with the insurance requirements of this Agreement:
 - a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;
 - b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and
 - c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability.

B. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than one million dollars (\$1,000,000) each accident using, or providing coverage at

least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned (if any), non-owned and hired autos.

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated materials, Consultant and/or its subcontractors involved in such activities shall provide coverage with a limit of one million dollars (\$1,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

C. WORKERS' COMPENSATION

1. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.
2. The indemnification and hold harmless obligations of Consultant included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).
3. This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

D. PROFESSIONAL LIABILITY

Professional Liability or Errors and Omissions Insurance as appropriate shall be written on a policy form coverage specifically designed to protect against negligent acts, errors or omissions of the Consultant. Covered services as designated in the policy must specifically include work performed under this agreement. Coverage shall be in an amount of not less than one million dollars (\$1,000,000) per claim or two million dollars (\$2,000,000) aggregate. Any coverage containing a deductible or self-retention must first be approved in writing by the City Attorney's Office.

E. COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

1. Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Consultant's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85, or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.
2. Primary and non-contributing. Each insurance policy provided by Consultant shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the indemnitied may possess, including any self-insurance or self-insured retention they may have. Any other insurance indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Consultant's insurance.
3. Cancellation.
 - a. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.
 - b. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.
4. Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through E of this Exhibit C, above.

F. ADDITIONAL INSURANCE RELATED PROVISIONS

Consultant and City agree as follows:

1. Consultant agrees to ensure that subcontractors, and any other party involved with the Services, who is brought onto or involved in the performance of the Services by Consultant, provide the same minimum

insurance coverage required of Consultant, except as with respect to limits. Consultant agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this Agreement. Consultant agrees that upon request by City, all agreements with, and insurance compliance documents provided by, such subcontractors and others engaged in the project will be submitted to City for review.

2. Consultant agrees to be responsible for ensuring that no contract used by any party involved in any way with the project reserves the right to charge City or Consultant for the cost of additional insurance coverage required by this Agreement. Any such provisions are to be deleted with reference to City. It is not the intent of City to reimburse any third party for the cost of complying with these requirements. There shall be no recourse against City for payment of premiums or other amounts with respect thereto.
3. The City reserves the right to withhold payments from the Consultant in the event of material noncompliance with the insurance requirements set forth in this Agreement.

G. EVIDENCE OF COVERAGE

Prior to commencement of any Services under this Agreement, Consultant, and each and every subcontractor (of every tier) shall, at its sole cost and expense, provide and maintain not less than the minimum insurance coverage with the endorsements and deductibles indicated in this Agreement. Such insurance coverage shall be maintained with insurers, and under forms of policies, satisfactory to City and as described in this Agreement. Consultant shall file with the City all certificates and endorsements for the required insurance policies for City's approval as to adequacy of the insurance protection.

H. EVIDENCE OF COMPLIANCE

Consultant or its insurance broker shall provide the required proof of insurance compliance, consisting of Insurance Services Office (ISO) endorsement forms or their equivalent and the ACORD form 25-S certificate of insurance (or its equivalent), evidencing all required coverage shall be delivered to City, or its representative as set forth below, at or prior to execution of this Agreement. Upon City's request, Consultant shall submit to City copies of the actual insurance policies or renewals or replacements. Unless otherwise required by the terms of this Agreement, all certificates, endorsements, coverage verifications and other items required to be delivered to City pursuant to this Agreement shall be mailed to:

EBIX Inc.
City of Santa Clara [*Water and Sewer Utilities]
P.O. Box 100085 – S2 or 1 Ebix Way
Duluth, GA 30096 John's Creek, GA 30097
Telephone number: 951-766-2280
Fax number: 770-325-0409
Email address: ctsantaclara@ebix.com

I. QUALIFYING INSURERS

All of the insurance companies providing insurance for Consultant shall have, and provide written proof of, an A. M. Best rating of at least A minus 6 (A- VI) or shall be an insurance company of equal financial stability that is approved by the City or its insurance compliance representatives.

EXHIBIT D LABOR COMPLIANCE ADDENDUM

This Agreement is subject to the requirements of California Labor Code section 1720 et seq. requiring the payment of prevailing wages, the training of apprentices, and compliance with other applicable requirements.

J. Prevailing Wage Requirements

1. Contractor shall be obligated to pay not less than the General Prevailing Wage Rate, which can be found at www.dir.ca.gov and are on file with the City Clerk's office, which shall be available to any interested party upon request. Contractor is also required to have a copy of the applicable wage determination posted and/or available at each job site.
2. Specifically, contractors are reminded of the need for compliance with Labor Code Section 1774-1775 (the payment of prevailing wages and documentation of such), Section 1776 (the keeping and submission of accurate certified payrolls) and 1777.5 in the employment of apprentices on public works projects. Further, overtime must be paid for work in excess of 8 hours per day or 40 hours per week pursuant to Labor Code Section 1811-1813.
3. Special prevailing wage rates generally apply to work performed on weekends, holidays and for certain shift work. Depending on the location of the project and the amount of travel incurred by workers on the project, certain travel and subsistence payments may also be required. Contractors and subcontractors are on notice that information about such special rates, holidays, premium pay, shift work and travel and subsistence requirements can be found at www.dir.ca.gov.
4. Only bona fide apprentices actively enrolled in a California Division of Apprenticeship Standards approved program may be employed on the project as an apprentice and receive the applicable apprenticeship prevailing wage rates. Apprentices who are not properly supervised and employed in the appropriate ratio shall be paid the full journeyman wages for the classification of work performed.
5. As a condition to receiving progress payments, final payment and payment of retention on any and all projects on which the payment of prevailing wages is required, Contractor agrees to present to City, along with its request for payment, all applicable and necessary certified payrolls (for itself and all applicable subcontractors) for the time period covering such payment request. The term "certified payroll" shall include all required documentation to comply with the mandates set forth in Labor Code Section 1720 et seq, as well as any additional documentation requested by the City or its designee including, but not limited to: certified

payroll, fringe benefit statements and backup documentation such as monthly benefit statements, employee timecards, copies of wage statements and cancelled checks, proof of training contributions (CAC2 if applicable), and apprenticeship forms such as DAS-140 and DAS-142.

6. In addition to submitting the certified payrolls and related documentation to City, Contractor and all subcontractors shall be required to submit certified payroll and related documents electronically to the California Department of Industrial Relations (DIR). Failure to submit payrolls to the DIR when mandated by the project parameters shall also result in the withholding of progress, retention and/or final payment.
7. No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
8. No contractor or subcontractor may be awarded a contract for public work on a public works project, unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. Contractors **MUST** be a registered “public works contractor” with the DIR **AT THE TIME OF BID**. Where the prime contract is less than \$15,000 for maintenance work or less than \$25,000 for construction alternation, demolition or repair work, registration is not required.
9. All contractors/subcontractors and related construction services subject to prevailing wage, including but not limited to: trucking, surveying and inspection work must be registered with the Department of Industrial Relations as a “public works contractor”. Those who fail to register and maintain their status as a public works contractor shall not be permitted to perform work on the project.
10. Should any contractor or subcontractors not be a registered public works contractor and perform work on the project, Contractor agrees to fully indemnify the City for any fines assessed by the California Department of Industrial Relations against the City for such violation, including all staff costs and attorney’s fee relating to such fine.
11. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

K. Audit Rights

All records or documents required to be kept pursuant to this Agreement to verify compliance with this Addendum shall be made available for audit at no cost to City, at any time during regular business hours, upon written request by the City Attorney, City Auditor, City Manager, or a designated representative of any of these officers. Copies of such records or documents shall be provided to City for audit at City Hall when it is

practical to do so. Otherwise, unless an alternative is mutually agreed upon, the records or documents shall be made available at Contractor's address indicated for receipt of notices in this Agreement.

L. Enforcement

1. City shall withhold any portion of a payment; including the entire payment amount, until certified payroll forms and related documentation are properly submitted, reviewed and found to be in full compliance. In the event that certified payroll forms do not comply with the requirements of Labor Code Section 1720 et seq., City may continue to hold sufficient funds to cover estimated wages and penalties under the Agreement.
2. Based on State funding sources, this project may be subject to special labor compliance requirements of Proposition 84.
3. The City is not obligated to make any payment due to Contractor until Contractor has performed all of its obligations under these provisions. This provision means that City can withhold all or part of a payment to Contractor until all required documentation is submitted. Any payment by the City despite Contractor's failure to fully perform its obligations under these provisions shall not be deemed to be a waiver of any other term or condition contained in this Agreement or a waiver of the right to withhold payment for any subsequent breach of this Addendum.

City or the California Department of Industrial Relations may impose penalties upon contractors and subcontractors for failure to comply with prevailing wage requirements. These penalties are up to \$200 per day per worker for each wage violation identified; \$100 per day per worker for failure to provide the required paperwork and documentation requested within a 10-day window; and \$25 per day per worker for any overtime violation.