TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER
DATE: AUGUST 4, 2003

TITLE: APPROVAL OF AMENDMENT NUMBER 1 TO THE PHASE I CAROLLO CONTRACT (CMR:248:02) TO INCLUDE AN ENVIRONMENTAL IMPACT REPORT (EIR) AND DELETE THE FINAL DESIGN AND CONSTRUCTION SERVICES FOR THE EL CAMINO PARK RESERVOIR, PUMP STATION AND WELL

RECOMMENDATION

Staff recommends that Council approve and authorize the Mayor to execute the attached contract amendment with Carollo Engineers to: (1) delete the final design and construction services for the El Camino Park reservoir; pump station and well; (2) provide services to conduct environmental review of all components of the emergency water supply project, which includes the proposed El Camino Park reservoir, pump station, and new well; two additional new wells and five rehabilitated existing wells; and the Mayfield Pump station improvements and (3) reduce the total compensation to $1,596,942.

BACKGROUND

The 1999 Water Wells, Regional Storage, and Distribution System Study (1999 Study) recommended improvements to the water system to meet state requirements for an 8-hour stand-alone emergency water supply and to prepare the water distribution system for the SFPUC disinfectant conversion from chlorine to chloramine later this year. The 1999 Study project recommendations were planned by staff to be designed and constructed in three separate phases. Phase I included the environmental review, design and construction management services for a new well, pump station, reservoir and improvements to the existing foothill water booster stations and reservoirs. The improvements to the existing foothill water booster stations and reservoirs are being
designed and constructed to prepare the water distribution system for the SFPUC disinfectant conversion from chlorine to chloramine later this year. Phase II included the environmental review, design and construction management services for two additional new wells and the rehabilitation of five existing City wells. Phase III included the environmental review, design and construction management services for the Mayfield Pump Station improvements. Council originally approved the Carollo Phase I professional engineering services contract in amount of $2,324,637 on May 20, 2002 in CMR:248:02.

DISCUSSION
As planning work progressed on the projects in Phase I, community concerns were expressed regarding the planned environmental review process that was being implemented for the emergency water supply projects as a whole. After review, staff concluded that all of the 1999 Study system improvements for emergency water supply should be evaluated as a single project under CEQA, and that the consultant’s contract should be amended to provide for these services. Therefore, the Phase I contract is being amended to include this review.

The environmental analysis will include a review of the potential environmental impacts of and feasible alternatives to the emergency water supply projects including a new well, pump station and reservoir in Phase I, two new and five rehabilitated wells in Phase II, and improvements to the existing Mayfield Reservoir Pump Station planned for Phase III. Once the environmental review is complete, including being presented to Council, and assuming a decision is made to proceed with the new facilities projects, the contract may be further amended to provide for final design and construction management services for the Phase I improvements. The Phase II and III final design and construction management services contracts would also brought to Council under the same conditions.

Amending the Phase I Contract will provide an opportunity for staff and the community to determine whether a portion or all of the reservoir proposed for El Camino Park could be constructed beneath the new Roth Park before it is developed and/or possibly relocating the proposed Middlefield Well in such a way as to not impact parkland, near the reservoir. Relocating all or part of the reservoir from El Camino Park to the Roth Park site and siting a well without impacting parkland could provide the City with the opportunity to create a fully designed Roth Park using the Utility CIP contribution to the General Fund. The ongoing maintenance of a Roth Site park could be funded from annual fees paid by the Water Utility to the General Fund for use of the space under the developed Roth Park surface.

The amended Phase I contract with Carollo Engineers is included in Attachment A. The amended Phase I professional engineering services contract scope of work is
included as Exhibits A-R in Attachment A. The amended scope of work reduces the value of the Phase I contract by $727,695 to $1,596,942.

The changes to the Phase I contract exhibits are summarized below:

- All of the CEQA preparation for the eight hour emergency water supply improvements is now contained in Exhibit A, Phase I Distribution System Improvement Project and Project EIR, including the analysis of alternate reservoir sites as presented in Exhibits C, E-J and Exhibits Q and R. Exhibits A through R have been revised to move the environmental review services from Exhibits B (El Camino Park Well), C (El Camino Park Reservoir), E (Coyote Hill Reservoir), F (Old Quarry Reservoir), G (Esther Clark Park Reservoir), H (Gunn High School Reservoir), I (Terman Park Reservoir), J (Juana Briones Park Reservoir), and N (Duties of the City) to Exhibit A.

- Two new alternate reservoir site Exhibits have been added as part of the contract amendment, Exhibits Q (2 smaller reservoirs at El Camino Park and Roth Park) and R (Roth Park Reservoir - one underground reservoir). These two additional alternates have been developed from community input since the completion of the 1999 Study and are included in the project environmental review in Exhibit A.

- Exhibit D includes construction support services only for the basic improvement projects to the existing foothill pump stations, regulator stations and reservoirs and water quality-related improvements that support the SFPUC Hetchy Hetchy system chloramine conversion later this year.

- No further design or construction related to the improvements described in Exhibits B, C, E through J, Q and R would take place until the environmental review described in Exhibit A is completed and Council has approved the projects. Consultant contracts for final design and construction management services would then be brought forward.

- Each alternative selected in the environmental review process for further evaluation will be reviewed. All of the well sites described in the exhibits are included as potential alternatives to be addressed in the EIR and to be considered for design of the new reservoir(s) and well(s).

- Exhibit L (Project Budget Allocation and Estimated Engineering Hours and Costs - revised) contains the project cost tracking spreadsheets and has been updated to reflect the changes made in the other attached exhibits. The environmental review work from the Phase II and III project is now included in
the amended scope of work for Phase I contract. The amended scope of work reduces the contract total value by $727,965 by removing the final design and construction management services for a well, pump station and reservoir from Phase I. The construction management services costs for the existing improvements projects (Reservoir Booster Station Improvements, Distribution System Water Quality Enhancement and Existing Booster Station Improvements) are projected to increase due to these projects being constructed on a different schedule than the new projects (a new well, pump station and reservoir) in Phase I. Once the environmental review is complete, and assuming a decision is made to proceed with the new well, pump station, and reservoir projects, the contract may be further amended to provide for final design and construction management services for these new facility projects included in Phase I. The total project budget may need to be increased at that time.

- Exhibit Q was added to include the options of considering a smaller reservoir (1.39 MG) and pump station and a well on the El Camino Park Site, to only serve the emergency water needs of the area West of El Camino Real Pressure Area, and to also investigate a small reservoir (1.04 MG) and pump station under the proposed Roth Park site. A 1.39 MG trapezoidal reservoir could fit and be operated in the northwestern corner of El Camino Park. Stanford staff has expressed a preference for this Northwest corner area of El Camino Park to be used by the City to construct a reservoir, pump station and well. A 1.04 MG reservoir and well could also fit under the proposed Roth Park Site to serve emergency water supply needs of the downtown area, Pressure Area 1 (PA1).

- Exhibit R was added to include the alternative of investigating one large reservoir (2.43 MG), pump station, and a well at the proposed Roth Park site. The investigation to use the proposed Roth Park site for the 2.43 MG reservoir, pump station and well would also include additional distribution system improvements to move some of the stored emergency water (1.39 MG) from PA1 into PA3.

- Drilling well test holes for the El Camino and proposed Roth Park sites is included as part of the environmental review included in Exhibit A. No test wells will be necessary for the proposed Middlefield Road or Eleanor Pardee Park Well sites. The City has site geology for both of these sites from previous wells bored on these sites.

Staff anticipates at least one interim report to the Utilities Advisory Committee, with the final report going to City Council in June 2004 as shown on Exhibit M.

RESOURCE IMPACT
The amended contract will not increase the total amount of the 1999 Study project funding and the funds have been included in the Water Fund Capital Improvement Program Budget.

ENVIRONMENTAL ASSESSMENT

The “project” for the purposes of the California Environmental Quality Act (CEQA) is the entire 1999 Study (8-hour emergency water supply capital improvement) projects program. Accordingly, the environmental review conducted for all three phases of work needed to implement the project shall be included in the amended Phase I consultant agreement, as outlined in Attachment A.

POLICY IMPLICATIONS

This project supports the Utilities Strategic Plan Objectives 1 and 2, “Enhance customer satisfaction by delivering valued products and services” and “Invest in Utility Infrastructure to deliver reliable service.”

Since some of the proposed improvements and installation of new wells could occur on City of Palo Alto parkland, these projects could require a park improvement ordinance. The environmental review to occur under the amended Phase I scope of work will determine the scope of impacts to parkland. In addition to park resources impacts, land use issues such as visual and noise impacts, maintenance and neighborhood compatibility will be addressed. This will include a discussion of land use and Comprehensive Plan policies and consistency analysis.

ATTACHMENTS:
A: Amendment 1 to Contract C2138257 and Revised Scope of Work Exhibits A - R

PREPARED BY: Romel Antonio
Roger Cwiak
Scott Bradshaw

DEPARTMENT HEAD: JOHN ULRICH
Director of Utilities

CITY MANAGER APPROVAL: EMILY HARRISON
Assistant City Manager
AMENDMENT NO. ONE TO AGREEMENT NO. ________
BETWEEN THE CITY OF PALO ALTO AND
CAROLLO ENGINEERS, P.C.

This Amendment No. One to Agreement No. ________
(“Agreement”) is entered into ________, by and between the
CITY OF PALO ALTO (“CITY”), and CAROLLO ENGINEERS, P.C., an Arizona
Corporation, located at 2700 Ygnacio Valley Road, Suite 300, Walnut
Creek, CA 94598 (“CONTRACTOR”).

RE C I T A L S:

WHEREAS, the Agreement was entered into between the
parties for the provision of design, project management and
administration of Phase I: Water Distribution System Improvements
Project; and

WHEREAS, the parties wish to amend the Agreement to
revise the scope of services to delete the final design and
construction services for the El Camino Park Reservoir; pump
station and well; and to provide services to conduct environmental
review of all components of the emergency water supply project
including the proposed reservoir, pump station, new well; two
additional new wells and five rehabilitated existing wells; and the
Mayfield Pump station improvements.

NOW, THEREFORE, in consideration of the covenants, terms,
conditions, and provisions of this Amendment, the parties agree:

SECTION 1. Subsection 2.1 of Section 2 is hereby amended
to read as follows:

“The scope of Services and Deliverables
constituting the Project will be performed,
delivered or executed by CONSULTANT under the
phases of the Basic Services as described
below and herein contained in Exhibits “A”
through “J” and Exhibits “Q” and “R”.”

SECTION 2. Subsection 5.1 of Section 5 entitled
“COMPENSATION” is hereby amended, to read as follows:

“In consideration of the full performance of
the Basic Services as described in Exhibits
“A” through “J”, and Exhibits “Q” and “R”,
including any authorized reimbursable
expenses, CITY will pay CONSULTANT a fee not
to exceed One Million Five Hundred Ninety-Six
Thousand Nine Hundred Forty-Two Dollars
($1,596,942.00). The amount of compensation
will be calculated in accordance with the
hourly rate schedule set forth in Exhibit "K", on a time and materials basis, up to the maximum amount set forth in this Section. The fees of the consultants, who have direct contractual relationships with CONSULTANT, will be approved, in advance, by CITY. CITY reserves the right to refuse payment of such fees, if such prior approval is not obtained by CONSULTANT.

SECTION 3. Subsection 5.2.1 of is hereby amended to read as follows:

"5.2.1 Payment of the Basic Services will be made in monthly progress payments in proportion to the quantum of services performed, or in accordance with any other schedule of payment mutually agreed upon by the parties, as set forth in Exhibits "K", "L", and "M", within thirty (30) days of submission, in triplicate, of such requests if a schedule of payment is not specified. Final payment will be made by CITY after CONSULTANT has submitted all Deliverables, including, without limitation, reports which have been approved by the project manager."

SECTION 4. Exhibits "A" through "R" to the Agreement are hereby amended to read in their entirety as set forth in the attachments to this Amendment, which are incorporated in full by this reference:

a. Exhibit "A" entitled "Scope of Services - Duties of Consultant - Phase I Distribution System Improvements Project and Project EIR";

b. Exhibit "B" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the El Camino Park Well";

c. Exhibit "C" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the El Camino Park Reservoir and Pump Station";

d. Exhibit "D" entitled "Construction Support Services - Duties of Consultant - Phase I Distribution System Improvements Project";

e. Exhibit "E" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Coyote Hill Reservoir";

f. Exhibit "F" entitled "Scope of Work - Duties of
Consultant - Preliminary Design of the Old Quarry Reservoir Site;

g. Exhibit "G" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Esther Clark Park Reservoir Site";

h. Exhibit "H" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Gunn High School Reservoir Site";

i. Exhibit "I" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Terman Park Reservoir Site";

j. Exhibit "J" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Juana Briones Park Reservoir Site";

k. Exhibit "K" entitled "Carollo Engineers, PC Fee Schedule";

l. Exhibit "L" entitled "Project Budget Allocation";

m. Exhibit "M" entitled "EIR, Phase 1 Basic Improvement Project Reservoir Booster Station Improvements, Distribution System Water Quality Enhancement, Existing Booster Station Improvements and Future Reservoir and Pump Station and Land Acquisition - Project Schedule";

n. Exhibit "N" entitled "Scope of Services - Duties of the City of Palo Alto - Phase I Distribution System Improvements Project";

o. Exhibit "O" entitled "Certificate of Insurance";

p. Exhibit "P" entitled "Certificate of NonDiscrimination";

q. Exhibit "Q" entitled "Scope of Work - Duties of Consultant - Preliminary and Final Design of the El Camino Park Reservoir and Pump Station, and the Roth Park Reservoir and Pump Station"; and

r. Exhibit "R" entitled "Scope of Work - Duties of Consultant - Preliminary Design of the Roth Park Reservoir and Pump Station Site".

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SECTION 4. Except as herein modified, all other provisions of the Agreement, including any exhibits and subsequent amendments thereto, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have by their duly authorized representatives executed this Amendment on the date first above written.

ATTEST:

City Clerk

CAROLLO ENGINEERS, P.C.

By: __________________________

Name: _________________________

Title: _________________________

APPROVED AS TO FORM:

Senior Asst. City Attorney

By: __________________________

Name: _________________________

Title: _________________________

Assistant City Manager

By: __________________________

Name: _________________________

Title: _________________________

CITY OF PALO ALTO

Mayor

Director of Administrative Services

By: __________________________

Name: _________________________

Title: _________________________

Director of Utilities

By: __________________________

Name: _________________________

Title: _________________________

Insurance Review

Taxpayer Identification No.

86-0899222

(Compliance with Corp. Code § 313 is required if the entity on whose behalf this contract is signed is a corporation. In the alternative, a certified corporate resolution attesting to the signatory authority of the individuals signing in their respective capacities is acceptable)

Attachments:

Exhibits "A" through "R" - As described above
CERTIFICATE OF ACKNOWLEDGMENT
(Civil Code § 1189)

STATE OF __________________________)
COUNTY OF __________________________)

On __________________________, before me, the undersigned, a notary public in and for said County, personally appeared personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public
CERTIFICATE OF ACKNOWLEDGMENT
(Civil Code § 1189)

STATE OF ____________________________

COUNTY OF __________________________

On __________________________, before me, the undersigned, a
notary public in and for said County, personally appeared
personally known to me (or proved to me on the basis of
satisfactory evidence) to be the person(s) whose name(s) is/are
subscribed to the within instrument, and acknowledged to me that
he/she/they executed the same in his/her/their authorized
capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the
person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public
EXHIBIT A

SCOPE OF SERVICES

DUTIES OF CONSULTANT

PHASE I DISTRIBUTION SYSTEM IMPROVEMENTS PROJECT and PROJECT EIR

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 study recommended a suite of capital improvements to correct system deficiencies that were identified in the study. These have been divided into two projects; the improvements for the chloramine conversion project and the improvements for the emergency water supply project.

This project comprises the majority of the predesign work described in the 1999 Study related to emergency supply and design and construction management for the chloramine conversion improvements. Several work elements for the chloramine conversion project consist largely of upgrades to existing pump stations and pressure regulating stations. The design of those elements will be completed in this Exhibit. The design and construction of the other major elements (i.e. rehabilitating the existing wells, constructing the new wells, and constructing the new reservoir) will be handled separately (Phase II). Rehabilitating the existing wells and constructing the new wells (except for the well associated with the selected reservoir site) will be accomplished under a separate contract (Phase II). Constructing a new reservoir is a complex matter requiring the coordination of many affected parties including Stanford University. For that matter, this Exhibit A includes the public involvement program to assist the CITY with selecting, approving and constructing a new reservoir at one of the eight identified sites. Once the CITY has obtained the approval to develop a new reservoir at one of the eight sites, the contract will need to be amended to authorize design and construction management services.

The projects contained in this Phase I, as well as those in Phase II and Phase III require environmental review under the California Environmental Quality Act (CEQA). The project for the purposes of CEQA is the entire 8-hour emergency water supply capital improvements program. CEQA-related efforts for all three phases is to be conducted under the Phase I contract. Specifically, the proposed facilities to be included in the Environmental Impact Analysis are as follows:

- A new reservoir and pump station, including analysis of alternative sites as described in Exhibits B, C, E through J, and Q and R.
- New well sites at three of the eight potential new sites identified in the 1999 Study. Whichever reservoir site is selected through the EIR process a new well will be located at or near that
Rehabilitation of up to five existing wells.
Upgrade/expansion to the existing Mayfield pump station.

The other basic improvements (listed in Task A3 below) in this Phase I contract are outside of 8-hour emergency water supply capital improvements are not in the "project" under CEQA. These projects consist largely of upgrades to existing foothill pumping facilities to improve water quality following the SFPUC conversion from chlorine to chloramine disinfectant in the Hetch Hetchy water supply in late 2003. As such, they will undergo separate environmental analysis that is also included in the Phase I contract.

In the 1999 Study, the CONSULTANT reviewed a number of alternative sites for both reservoir and well locations. The approach to gaining public support of the above projects includes an environmental constraints analysis to supplement the work conducted to date by CONSULTANT. The environmental constraints analysis would be included as part of the public review for this project. This approach would provide several advantages for project completion: 1) it will provide for an integrated review (engineering and environmental factors) of proposed project sites within the context of additional work conducted since the 1999 Study; 2) it will identify preferred sites for reservoir and well implementation based upon these factors; 3) it will develop a preferred project and alternatives for both public and CITY Council review prior to approving the Final EIR.

During the EIR process, all well and reservoir sites will be analyzed at an equal level of detail, thereby allowing the CITY to implement at any of the identified sites. It is anticipated, however, that preferred sites will be identified as part of the stakeholder involvement workshop, and that project approval will include identification of those sites for implementation. In the event that implementation cannot occur at an individual site due to geologic constraints (i.e., the water quality is not favorable or the quantity of water at the site is insufficient to proceed with developing a well), this approach will provide the CITY with the flexibility to return to the CITY Council with alternative sites that can proceed under the analysis presented in the EIR.

The EIR approach will examine the recommendations of the 1999 Study relating to emergency supply reliability, delivered water quality, and groundwater effects, as well as examine the potential environmental impacts surrounding construction, and emergency operation, and maintenance issues relating to the individual facilities. This approach provides the most flexibility with respect to well and reservoir implementation, and will provide the CEQA foundation for construction at individual well and reservoir sites. CONSULTANT's environmental subconsultant will examine the construction-related and operational impacts of individual well and reservoir sites using a performance standard approach that will define the types of impacts anticipated, identify appropriate mitigation measures, and establish a performance standard envelope. This can then be applied to individual sites as they are identified by the CITY for implementation. If individual sites are within the "performance envelope" established by the EIR, the City could then proceed using the EIR analysis and recommended mitigation measures. This approach will allow identification and disclosure of impacts, identification of mitigation measures, and will provide the framework for implementation at individual well sites. The key to the approach will be development of a detailed Mitigation Monitoring and Reporting Program that identifes specific measures that that can be applied to all project sites to reduce or minimize impacts to acceptable levels.

This Exhibit A consist of the following tasks:

Task A1 – Project Management

This task covers general project and quality management duties for the following:

a. The work covered in this Exhibit A.
b. The new El Camino Park well preliminary design (Exhibit B).

c. The reservoir preliminary design services (for one reservoir) covered in Exhibits C and E through J, Q or R.

d. The construction management services covered in Exhibit D for the other basic improvements to support the SFPUC chloramine conversion project.

The budget for the anticipated preliminary design phase project meetings is also included in this Task.

Task A2 – Planning Considerations

This task includes tracking the project budget and progress, developing and assisting the CITY with its public review for selecting a new reservoir site, and a limited amount of as-needed services to further assist the CITY in selecting a new reservoir site. One of the key elements of this task is to select a preferred new reservoir location at one of the proposed sites. That selection will initiate moving forward with one of the Exhibits C or E – J, Q and R and with Exhibit B if the El Camino Park site is selected for a reservoir.

Task A3 - Pre-Design, Design, And Cost Criteria of Improvements for the Chloramine Conversion Project

This task includes performing preliminary design, final design, and cost estimates for the following projects which support the SFPUC chloramine conversion in late 2003:

a. Pump replacement and necessary mechanical, structural, electrical and instrumentation upgrades at the Dahl, Corte Madera, and Quarry pump stations.

b. A new pressure area 4 pressure regulating station near the intersection of Page Mill Road and Coyote Hill Road.

c. Reservoir mixing systems at the Monte Bello, Dahl, Park, and Mayfield reservoirs.

d. Ammonia feed systems at the Hale, Peers Park, and Rinconada well sites.

e. A water quality monitoring program.

f. Mobile dechlorination equipment.

g. Pressure regulating station upgrades at the Quarry, Corte Madera, Boronda, Park, and Dahl booster stations.

In addition to developing plans, specifications and cost estimates for the above-described improvements, CONSULTANT shall also assist the CITY during the bid procurement process by answering questions from the bidding contractors and preparing addenda to the bid documents. The above improvements are not part of the 8-hour emergency system & therefore are not being included in the EIR. These projects are modifications to existing facilities to support the SFPUC chloramine disinfectant conversion in late 2003 and will receive separate environmental review as part of the Phase I contract.

Task A4 - Environmental Impact Report for the 8-hour Emergency Water Supply Project

This task includes the effort involved developing the Environmental Impact Report and associated public hearings for the new reservoir project, the new well projects, rehabilitating the existing wells, and the Mayfield reservoir pump station upgrade/expansion project.

SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

Task A1 - PROJECT MANAGEMENT AND ADMINISTRATION

Exhibit A Carollo Phase I Amendment 1

July 21, 2003
Task A1.1 - Project Management. Under this task, CONSULTANT will prepare a Project Management Plan, manage CONSULTANT’s team, and monitor project schedule and budget as described herein.

CONSULTANT shall:

1. Prepare a Project Management Plan with the following sections:
   a. An introduction covering the project objectives and the project goals.
   b. The scope of services and list of deliverables for all items included in this Exhibit A.
   c. Key personnel assignments/organization chart.
   d. Project schedule.
   e. Project budget.
   f. A description of the quality management procedures of the project.
   g. A description of the monthly project reporting.
   h. A description of team communication procedures and contact information.

2. Maintain coordination of the project team consisting of the CONSULTANT and its SUBCONSULTANTS. This task includes internal team meetings, meetings with various subconsultants, and regular correspondence with team members.

3. CONSULTANT shall prepare monthly progress reports that include a summary of the work completed by task for the month, the work anticipated to be completed in the following month, and a status report on the project schedule and budget. The budget for this task assumes a total of 24 monthly project reports are generated. The progress reports will be drafted, discussed, finalized, and delivered to the CITY within three weeks after the subject month. This is to allow coordination with the CONSULTANT's billing cycle.

Deliverables:

1. Project Management Plan as described above.

2. Up to 24 monthly progress reports.

Task A1.2 - Project Meetings. Under this task, CONSULTANT will conduct preliminary design phase project meetings as described herein. Project meetings to be held during the construction phase of the basic improvements to support the chloramine conversion are covered in Exhibit D.

CONSULTANT shall:

1. Conduct the following project meetings:
   a. Project kickoff meeting.
   b. 21 additional preliminary design phase meetings as described in the Exhibits A, B, C, and E through J, Q or R of this contract. Meetings needed for construction phase
services for the Chloramine Conversion Project (Exhibit D) are included in that exhibit.

2. CONSULTANT shall prepare meeting summaries for the meetings conducted by the CONSULTANT and provide them to the CITY within five working days following the meeting.

Deliverables:

1. Meeting agendas, and handout materials.

2. Meeting summaries of up to 22 meetings (the kickoff meeting and 21 additional meetings) conducted by CONSULTANT.

**Task A1.3 - Quality Management.** CONSULTANT shall perform quality management reviews of deliverables as described herein to maintain a standard of care consistent with other practicing professional engineers performing the same or similar work at the time the notice to proceed is issued.

CONSULTANT shall:

1. Dedicate senior staff with applicable experience to conduct quality management reviews of each deliverable to the CITY. CONSULTANT shall provide the services of a senior-level engineer for technical review of the project deliverables prior to submittal to the CITY.

Deliverables:

None.

**Task A2 - PLANNING CONSIDERATIONS**

**Task A2.1 – Budget and Schedule Tracking.** Under this task, CONSULTANT shall prepare and maintain software tools for tracking the project schedule and budget.

CONSULTANT shall:

1. Prepare a project schedule using Microsoft Project with the critical milestones and estimated duration for each of the CIP projects included under this agreement.

2. Update the schedule monthly and provide a printout. The budget is based on an assumed project duration of 24 months.

Deliverables:

1. Microsoft Project schedule updated each month for 24 months.

**Task A2.2 – Permit Assessment.** Under this task, CONSULTANT shall identify the permits that are necessary for completion of the design and construction phase services for the Chloramine Conversion Project and the 8-hour Emergency Water Supply Project.

CONSULTANT shall:

1. Create a Permit “roadmap” that defines the regulatory requirements, contacts, time lines, and subsequent documentation needs for final design. Obtaining right of way is not anticipated for the project and is not included in this scope of services.
Deliverables:

1. A table summarizes the permit contacts and requirements.

Task A2.3 – Stakeholder Involvement. Under this task, CONSULTANT shall assist the CITY with public review efforts. The focus of this task will be to involve the public and interested parties that may be affected by the new reservoir portion of this project.

CONSULTANT shall:

1. Develop the public involvement program with CITY staff input. The program will include a plan and schedule for meetings, workshops and other outreach.

2. Conduct one public review coordination meeting at the CITY’S offices to organize the CITY’s efforts toward involving the public. The CONSULTANT and senior CITY officials involved in the public involvement process will attend the meeting. It is assumed that the CITY will provide a list of major and potential stakeholders including Stanford University, the public, and the Architectural Review Board.

3. With CITY input, develop draft and final information packets and fact sheets for distribution to the stakeholders. The draft packets will be presented at the first workshop and then finalized based on comments received. The packets will contain some essential background material defining the problem, various options, a proposed project schedule, and names and telephone numbers of people to contact.

4. Conduct up to three (3) public involvement workshops with stakeholders. The first workshop will be designed to provide the needed background information regarding the water supply reliability problems the project is attempting to solve. The following meeting will be designed to present the alternatives for consideration, elicit any new alternatives from the public, and prepare an initial ranking of the alternatives. The third and final meeting will be designed to prepare an opinion summary that captures the opinions of the public regarding the reservoir alternatives including the identification of a preferred alternative, if possible by the public. CITY staff will then present the opinion summary to the CITY Council and recommend which reservoir site and well sites should be pursued. It is anticipated that these workshops will be held in the late afternoon at the CITY’s offices.

5. Conduct up to three (3) public meetings near the selected new reservoir site. These meetings will serve to provide technical detail and identify the concerns of the stakeholders to be addressed during the preliminary design phases of the project. It is anticipated that these meetings will be held in the late afternoon at the CITY’s offices.

6. Develop, host, and maintain a project website to provide project information to the public and to collect public comments on the project. Public comments will be collected, tabulated, and sent to the CITY in electronic form. Meeting minutes, action items, and recommendations from the three public involvement workshops and the three public meetings will be summarized, tabulated, and posted to the website at the CITY’s request. The website shall be maintained for the duration of the project (estimated at two years).

Deliverables:

1. Meeting minutes of the internal public involvement coordination meeting.
2. Draft and final information packets.

3. Agenda, presentation materials and minutes for the three (3) public involvement workshops.

4. Agenda, materials, and minutes for the three (3) public meetings.

5. Project website.

6. Opinion summary resulting from the three workshops.

7. Final design recommendations resulting from the three public meetings.

**Task A2.4 – Additional Assistance for Reservoir Site Selection.** Under this task, CONSULTANT shall provide additional as-needed technical support services in support of the CITY’s efforts to make a final new reservoir site selection.

CONSULTANT shall:

1. Assist the CITY as needed to help facilitate the selection of the preferred reservoir site. CONSULTANT shall provide technical assistance and information in response to the CITY’s requests for information.

2. The budget for this task is limited to $3,000.

**Deliverables:**

1. As determined during the as-needed services subject to the budget limitations of this task.

**Task A2.5 – Environmental Constraints Analysis.** Under this task, CONSULTANT’s environmental subconsultant shall review proposed well and reservoir site locations for environmental issue areas, and prepare a constraints report identifying environmental issues at each well and reservoir site. This analysis will consist of site reconnaissance, review of site conditions, review of appropriate environmental databases (CNDDB), and identification of land uses. Subconsultant shall identify environmental constraints at each site location and rank each of the sites with respect potential environmental impact. Issue areas to be examined include: geology and soils, surface water resources, groundwater resources, biological resources, cultural/historical resources, land use, aesthetics, traffic and circulation, and noise.

**Deliverables:**

1. Draft and final Environmental Constraints Analysis reports (10 copies).

**Task A3 – PRE-DESIGN, DESIGN, AND COST CRITERIA FOR THE CHLORAMINE CONVERSION PROJECT**

**Task A3.1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

The following work is not part of the eight-hour emergency water supply project. This work is being performed to repair or improve the foothill pump stations and reservoirs to maintain the distribution system water quality. The City must operate the water distribution system differently with chloramine being used as the disinfectant. Water in the foothill reservoirs will be used in the distribution system on a daily basis to maintain water quality. This additional movement of the water into and out of the reservoirs will require more distribution system pumping. The preliminary design for the replacement...
of the existing sixty-year-old pumps and controls at the existing foothill pump stations will be completed as part of this task. An ammonia feed system needs to be designed for use at the existing well sites to allow the City to produce chloramine treated water that is compatible with the SFPUC Hetch Hetchy water that will be supplied to the City in late 2003.

CONSULTANT shall:

1. Prepare a maximum of three alternative conceptual designs for each of the following projects:
   a. Pump replacement at the Dahl, Corte Madera, and Quarry pump stations as described in the 1999 Study.
   b. A new pressure area 4 pressure regulating station in the vicinity of the Quarry pump station, and the intersection of Page Mill Road and Coyote Hill Road.
   c. Reservoir mixing systems at the Monte Bello, Dahl, Park, and Mayfield reservoirs.
   d. Ammonia feed systems at the Hale, Peers Park, and Rinconada well sites.
   e. A water quality monitoring program for monitoring the parameters related to the SFPUC conversion to chloramine disinfection.
   f. Mobile dechlorination equipment for neutralizing the disinfectant from hydrant flows during water main flushes.
   g. Pressure regulating station upgrades at the Quarry, Corte Madera, Boronda, Park, and Dahl booster stations as described in the 1999 Study.

The alternative conceptual designs will consist of a description, a simple graphic, a cost estimate, and a listing of the pros and cons for each preliminary design. This predesign effort will include the electrical, instrumentation, and SCADA considerations for each of the improvement alternatives. Note that for some of the projects there may be only one alternative conceptual design that is practical and feasible.

2. CONSULTANT will assist the CITY in obtaining the permits needed to complete the projects described in this task.

3. Conduct a preliminary design meeting at the CITY’s offices where the CONSULTANT will present the conceptual alternative designs. The meeting attendees will comment and select a preferred alternative. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

4. CONSULTANT’s environmental subconsultant (ESA) will review each of the seven other project components, which are primarily improvements or upgrades to existing facilities, and describe the CEQA review requirements of each. CONSULTANT’s environmental subconsultant will conduct a site reconnaissance and environmental review of the existing facilities where projects are proposed to determine if a CEQA Categorical Exemption under Article 15301 (b) is appropriate. If CONSULTANT’s environmental subconsultant finds that there are sensitive resources or environmental conditions that could raise the potential for impact, further environmental review may be required.

If appropriate, ESA will prepare a Categorical Exemption under Article 15301 (b) for review and comment by the City and CONSULTANT. ESA will respond to one round of comments on the administrative draft documents and prepare the updated Categorical Exemption for posting with the County clerk.

5. Geotechnical information shall be gathered to design the pipeline crossing under Page Mill Road for the new redundant PA4 PRS. Perform a geologic site reconnaissance, and prepare a geologic map showing the geologic units and/or hazards affecting construction. Drill, log,
and sample up to four (4) borings to depths up to 10 feet. Backfill the borings with cement grout. Dispose of the cuttings in accordance with CITY standards. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils. Perform engineering analysis based on the results obtained from the above tests and develop recommendations for design and construction.

6. Conduct a field survey at the site of the new PA4 pressure regulating station to establish ground control for aerial photography, mapping, and field location (x,y) of surface utilities. Horizontal coordinates will be referenced to the California Coordinate System of 1983, 1991.35 epoch (CCS83 (1991.35), Zone 3. Elevations will be based on the North American Vertical Datum of 1988. Digital photogrammetric mapping will be compiled for the pipeline route. A field survey will be performed in these areas to locate all surface utilities. The CONSULTANT will perform potholing at selected utilities, and a survey crew will return to the site for up to two (2) days to locate these potholes.

7. Prepare a basis of design document for the selected alternatives. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected alternatives, the final design criteria, the descriptions of the alternatives, and a summary of the meeting where the alternatives were selected.

**Deliverables:**

1. Conceptual design of the improvement projects.
2. Environmental review documents for the improvement projects.
3. Geotechnical report with recommendations needed for final design.
4. Aerial photograph of the new PA4 pressure regulating station site.
5. Basis of design document for the selected alternatives.

**Task A3.2 – Final Design.** CONSULTANT shall prepare final design documents for the Basis Improvement alternatives selected in Task 3.1. The CONSULTANT’s level of effort budget allowance for this Task is limited to 2,241 hours as shown on Exhibit L. If additional level of effort is required to adequately design and describe the work, and the CITY desires to have the CONSULTANT proceed with the work the CITY will issue a change order to the CONSULTANT for a mutually agreed amount.

CONSULTANT shall:

1. Prepare 35 percent design submittal package. The 35 percent drawings will include sufficient dimensions and description of the selected components to illustrate how the concepts developed in Task A3.1 will be implemented. The level of detail shall include such items as facility siting, facility dimensions, equipment locations and relative size, piping and other appurtenance locations, and proposed process and system control diagrams.

Specifications will not be developed at this stage of design. Draft control descriptions of the new equipment will be prepared for review.

The 35 percent submittal package will also include the following:

Site plans
Piping and instrumentation diagrams.  
Piping layout drawings.  
Building floor plan.  
Equipment locations for all major equipment.  
Control descriptions.  
Equipment data sheets for all major equipment.  
Instrument lists.  
Drawing list.  
List of specific items requiring CITY decision.  
Updated project cost estimate and project schedule.

The purpose of these documents is to provide sufficient information for CITY staff to assess and identify potential impacts of the improvements on the project goals, operational constraints, and maintenance issues including equipment experiences or preferences.

2. Prepare 65 percent design submittal package. The 65 percent drawings will include additional dimensions and description of the selected components to illustrate how the concepts developed in Task 3.1 will be implemented. The level of detail shall include such items as facility siting, facility dimensions, equipment locations and relative size, piping and other appurtenance locations, and proposed process and system control diagrams. The 65 percent submittal will account for the comments received from the CITY on the 35 percent submittal.

Specifications will include an outline of proposed construction sequencing and constraints; general criteria, installation requirements and testing procedures for major equipment; and listing of proposed bid item breakdown.

The 65 percent submittal package will also include the following:  
Typical details.  
Site plans  
Piping and instrumentation diagrams.  
Piping layout drawings.  
Building elevations and floor plan (if applicable).  
Equipment layouts for all major equipment.  
Electrical single line drawings.  
Control descriptions.  
Control system architecture block diagrams (SCADA).  
Equipment data sheets for all major equipment.  
Instrument lists.  
Drawing list.  
Specification table of contents.  
Specification sections for major equipment.  
Draft standard and special provisions.  
List of specific items requiring CITY decision.  
Updated project cost estimate

3. Prepare 90 percent design submittal package. The 90 percent submittal package will address all the CITY’s comments on the 65 percent submittal package as well as the comments resulting from the CONSULTANT’S internal QA/QC program. This submittal will represent a near-biddable set of construction documents. The purpose of this submittal is to allow the CITY a final opportunity for comments.

4. Prepare a 100 percent design submittal package. The 100 percent submittal package will address the final comments made by the CITY’s review team as well as the CONSULTANT’S review team. The purpose of this submittal package is to present to the CITY how the final
comments were addressed and to obtain buy-in prior to preparing the bid package.

5. Prepare a bid package.

6. CONSULTANT shall assist the CITY during bidding by conducting one (1) on-site pre-bid conference, answering bidding contractor’s questions during the bid period, and preparing up to two (2) addenda, as needed.

7. CONSULTANT services such as conducting a preconstruction conference, preparing conformed drawings, inspection, construction management, and submittal review are included under Exhibit D. CONSULTANT shall receive a separate notice to proceed from the CITY when construction management services detailed in Exhibit D are to begin.

Deliverables:

1. 2 full-size copies and 10 half-size copies of the 35 percent drawings.
2. 10 copies of the 35 percent specifications.
3. 35 percent design cost estimate.
4. 2 full-size copies and 10 half-size copies of the 65 percent drawings.
5. 10 copies of the 65 percent specifications.
6. 65 percent design cost estimate.
7. 2 full-size copies and 10 half-size copies of the 90 percent drawings.
8. 10 copies of the 90 percent specifications.
9. 90 percent design cost estimate.
10. 1 full-size copy and 5 half-size copies of the 100 percent drawings.
11. 5 copies of the 100 percent specifications.
12. 100 percent design cost estimate.
13. Bid set documents: 1 CD of the final drawings and specifications, 1 master full-size reverse-plotted mylars, 1 print-ready master set of specifications, 100 half-size copies of the drawings, and 100 copies of the project specifications.

Task A4 - ENVIRONMENTAL IMPACT REPORT FOR THE 8-HOUR EMERGENCY WATER SUPPLY PROJECT

Task A4.1 Project Team Kickoff Meeting and Information Review. CONSULTANT’s environmental subconsultant and CONSULTANT shall meet with CITY to review the following: 1) analysis approach and strategy; 2) public outreach and NOP circulation; 3) preliminary CEQA project objectives and alternatives; 4) site specific construction/operational information developed by the CITY and CONSULTANT.

The project under CEQA is the 8-hour Emergency Water Supply Project which includes:
- A reservoir, pump station and well,
- New well sites at two of the eight potential new sites identified in the 1999 Study,
- Rehabilitation of up to five existing wells and
- Upgrade/expansion to the existing Mayfield pump station.

**Deliverables:**

1. Meeting notes from the EIR Kick-off meeting.

**Task A4.2 Notice of Preparation.** Under this task, CONSULTANT’s environmental subconsultant shall prepare and submit draft Notice of Preparation (NOP) and circulation list for review by CITY. Subconsultant shall prepare a CEQA environmental checklist to support the NOP. If identified as appropriate, Subconsultant shall use this mechanism to screen out those CEQA issues that do not require additional analysis. Subconsultant shall assist in the coordination of scoping meeting dates with staff. Following receipt of comments from CITY, subconsultant shall prepare and circulate NOP to State Clearinghouse and circulation list.

**Deliverables:**

1. Draft and Final NOP (10 copies).
2. Draft Circulation List.
3. Circulation of NOP (50 copies).

**Task A4.3 EIR Scoping Meeting and Agency Consultation.** Under this task, CONSULTANT’s environmental subconsultant shall develop scoping meeting materials to provide an overview of the project for stakeholder and interested public. This presentation will incorporate previous efforts under Task A25. Following the scoping meeting presentation, subconsultant shall prepare a scoping meeting memo identifying key issues and the need for any adjustments to project approach. Agency coordination will be focused on local agencies that could be affected by the project, such as other pumpers. One (1) public scoping meeting and three (3) agency meetings are assumed for budgetary purposes. Additional outreach tasks, such as preparation of an article for City of Palo Alto newsletter, or project brochures can be developed with the project team if necessary, but have not been included in this scope of work. CONSULTANT and environmental subconsultant shall attend both scoping and agency meetings to provide technical assistance.

**Deliverables:**

1. Scoping meeting presentation.
2. Scoping meeting memo.
3. Agency coordination meeting notes.

**Task A4.4 CEQA Project Description.** Under this task, CONSULTANT’s environmental subconsultant shall develop the CEQA project description, incorporating information developed by CONSULTANT. Information for the proposed well site locations and rehabilitations will include: CEQA project objectives, list of required project actions by other agencies, identification of operational and maintenance scenarios, well locations, typical well site layout, typical construction scenarios, including 24-hour drilling and operational scenarios for the well sites. Information to complete the project description for reservoirs will include: reservoir site layout, identification of operational and maintenance scenarios, earthwork estimates, pump station plan/profile, typical construction scenarios, and construction trip estimates. Well site details that will need to be identified include...
enclosure description, ancillary facility description, typical connection piping, chemical storage, deliveries/maintenance, fencing/lighting, and other site details. Subconsultant shall work closely with the CITY and CONSULTANT to develop a project description that provides an appropriate level of detail, as well as a flexible design envelope that will allow for onsite conditions at individual well and reservoir sites. CONSULTANT shall provide information for and review of project description developed by subconsultant.

Deliverables:

1. Draft Project Description (10 copies).

**Task A4.5 Administrative Draft EIR.** Under this task, CONSULTANT's environmental subconsultant shall prepare Administrative Draft EIR (ADEIR) to include sections and issues identified as potentially significant and requiring further analysis during the preparation of the Environmental Checklist. CONSULTANT will provide information as stated and will provide review of the ADEIR.

The ADEIR will analyze potential impacts based upon the Project Description and initial analysis (Environmental Checklist) prepared under Task A4.4 above. Subconsultant will describe the environmental setting and prepare an analysis of the direct and indirect environmental impacts of the projects. Subconsultant will use tables, charts and graphics as appropriate to illustrate and help communicate the impact analysis. Subconsultant will establish clear impact significance criteria for each issue and clearly establish whether an impact is significant or less than significant. The ADEIR will also identify feasible mitigation measures for significant impacts, clarify whether a mitigation measure has been proposed as part of the project or identified through the EIR process and discuss the effectiveness of the proposed mitigation measures. Based upon the understanding of the project, it is anticipated that analysis in the following issue areas will be required. Additional issue areas may be identified during the course of scoping or project development that may require adjustments to the proposed scope of work and project budget.

1. **Geology and Soils.** The ADEIR will examine potential impacts associated with groundwater pumpage scenarios and specific facility installation. Subconsultant will use information from available sources, including previous analysis conducted by CONSULTANT and CITY regarding subsidence, liquefaction and settlement potential, to address those issues required by the CEQA checklist, including: fault proximity, ground shaking, liquefaction, landslides, soil erosion, expansive soils, and soil instability. Appropriate operational measures, design measures or mitigation will be identified as appropriate.

2. **Water Resources.** The analysis will summarize the results of groundwater information prepared and provided by CONSULTANT, and will characterize potential changes in groundwater elevations associated with proposed groundwater use during emergency outages. Secondary impacts to existing pumpers in the basin, including potential drawdown effects, will be examined. The analysis will be based upon general drawdown parameters established by CONSULTANT applied to a radius area of effect. CONSULTANT shall also perform two test holes: one at El Camino Park and one at the Roth Park site. The City has test hole data for two other potential well sites, the Middlefield Road well site and Eleanor Pardee Park. The data from these test holes will be used to assess the viability of these sites as new emergency water resources. This will then be used to identify appropriate mitigation measures in the event project implementation results in drawdown effect due to the geographic relationship between wells. Subconsultant shall identify appropriate mitigation measures in the event that impacts are identified. Additionally, impacts to surface water associated with well facilities, including discharge of well start up water, will be examined. Appropriate locational measures and permit requirements will be identified, as necessary.

3. **Water Quality.** Subconsultant shall use existing studies conducted by the CITY and others to

Exhibit A Carollo Phase I Amendment 1                                                                 July 21, 2003
address potential impacts to groundwater quality, and will discuss delivered water quality within the context of available information provided by CONSULTANT and CITY. The data gathered when performing the two new test holes (described under Water Resources above) will be used to supplement the existing groundwater quality data.

4. **Biological Resources.** This analysis will review potential biologically sensitive areas at facility locations, and will identify potential constraints for reservoir and well siting, which may include impacts to wetlands. In addition, federal, state and local policies with respect to sensitive species will be summarized and evaluated. The proposed scope of work includes reconnaissance level surveys to assess potential habitat conditions, and to identify the need for sensitive species surveys. Subconsultant is available to provide protocol level surveys on a time and materials basis, but such surveys are not included in this scope of work. Responses to the environmental checklist will be provided as well as mitigation measures for potentially significant impacts relative to biological resources. Mitigation measures will be identified as appropriate to reduce impacts to a less than significant level.

5. **Land Use/Recreation.** This section will address potential conflicts to surrounding land uses, including short-term construction related impacts and long-term land use conflicts. Analysis will include review and identification of surrounding land uses and future land use plans governing reservoir, pump station, and well sites, and assessment of potential land use impacts. This analysis will include review of existing land use and zoning ordinance designations, integration of nuisance impacts, such as noise, dust generation, and light and glare discussions, and will reference appropriate measures to minimize impacts to the degree feasible. Potential impacts to recreational facilities will also be assessed and included, including short-term construction related impacts associated with facility access and use. Subconsultant shall examine potential land use compatibility issues, and potential conflict between recreational uses and groundwater infrastructure. Appropriate mitigation measures will be identified to reduce potential impacts to the degree feasible.

6. **Cultural Resources.** Subconsultant will hire William Self and Associates to conduct a Phase I archival records search of proposed facility locations to identify known cultural or historical resources. Analysis will also include a discussion of potential methodology to be used for the evaluation of any resources which may be accidentally discovered during project construction; and a discussion of methods of mitigating impacts to these resources.

7. **Hazards and Hazardous Materials.** Subconsultant shall use exiting databases and existing studies conducted by CONSULTANT, CITY and others to identify potential hazardous materials release sites within the vicinity of proposed project locations. The proposed scope of work will rely on existing compiled information, and does not provide for file review. Known hazardous materials sites will be identified to provide a site screening tool for future property acquisitions if any hazardous material is identified, soil sampling and further assessments are not part of the scope of this contract. Analysis will also discuss storage of treatment chemicals at individual facility sites, and will identify appropriate design measures to reduce potential impacts to a less than significant level.

8. **Air Quality.** Subconsultant shall examine emissions during construction based on EPA emission factors, identify "sensitive receptors" (e.g., residences, retirement homes, schools), and evaluate air pollutant emissions associated with long term operations from a regional and local standpoint. Standard Best Management Practices (BMPs) established by Bay Area Air Quality Management District (BAAQMD) for construction activities will be identified and applied as appropriate.

9. **Noise.** Sensitive receptors such as residences and schools will be considered in evaluating construction and operating impacts associated with implementing well facilities. Twenty-four
(24)-hour drilling scenarios will be examined, including their impact to adjacent sensitive receptors. Standard BMPs, including varying levels of onsite noise control, such as setbacks or engineered sound walls, will be identified. Subconsultant shall utilize data collected from other well operators in the Bay Area, including ACWD and Zone 7 Water Agency, to characterize pump station, well, and reservoir construction and operations. The significance of any potential noise impacts will be determined by comparing projected levels with applicable City noise ordinance requirements, and appropriate mitigation measures, such as enclosure and noise reduction mechanisms, will be identified.

10. **Transportation/Traffic.** Subconsultant shall analyze impacts to local roadways during the construction of proposed facilities and will identify suitable mitigation measures, such as providing advance notification and establishing detours. Available traffic data will be relied on for the analysis, which will focus on major roadways within the vicinity of identified facilities.

11. **Aesthetics.** Subconsultant shall describe the potential visibility of project components and the need for mitigation features to minimize adverse effects. Subconsultant shall take photographs at select points and prepare finished photographic figures for use in the EIR that illustrate representative and impact-sensitive land uses. Enhancement opportunities such as revegetation, architectural features, and screening will be identified. The scope of work includes two aesthetic renderings: one of a typical reservoir (pump station) site and one of a typical well site. The scope of work limits the comments for these renderings to one (1) set per drawing. Additional renderings or rounds of edits can be provided on a time and materials basis.

12. **Cumulative Effects.** CONSULTANT will provide to subconsultant analysis identifying the cumulative drawdown effect of individual wells by examining drawdown at worst case emergency scenarios. Additionally, this section will address other groundwater operations (if any), and discuss their relationship to the reliability project. Potential cumulative effects of the proposed project with other groundwater management programs or operations will be examined.

13. **Growth Inducement.** Proposed facilities will improve CITY water supply reliability, rather than generate a new water supply source. However, growth remains a sensitive issue within the area, and a discussion of the project as it relates to potential growth inducement will be necessary. Analysis will rely on the previous growth discussions provided in the Palo Alto General Plan, and will describe the proposed project within the context of that analysis.

14. **Alternatives.** After review of the environmental constraints analysis which shall address all the alternative reservoir sites described in exhibits C, E-J, Q and R a range of feasible alternatives shall be selected by City and Consultant for analysis in the EIR. Subconsultant shall describe the selected feasible project alternatives and the No Project Alternative. The analysis will examine these alternatives with respect to their ability to meet the proposed project objectives, their environmental impacts and mitigation requirements, and other appropriate comparative information, such as implementation costs and feasibility. Subconsultant shall discuss the relative environmental effects and trade-offs of the various alternatives identified. It is assumed in the project budget that CONSULTANT will provide order of magnitude engineering/construction costs for up to four (4) alternatives and statements regarding feasibility.

15. **Summary.** Subconsultant shall prepare a summary of the project description, impact analysis, and alternatives discussion to provide for public review.

16. Subconsultant shall prepare initial Administrative Draft EIR and provide copies to CITY and CONSULTANT for review. Subconsultant shall meet with CITY and CONSULTANT to receive
Subconsultant will revise the EIR to incorporate comments from CITY and CONSULTANT and will prepare a screencheck draft. Subconsultant has budgeted up to 80 hours of technical staff time to respond to staff comments and prepare the screencheck draft in strike/block format for review by the CITY and CONSULTANT. This step provides an opportunity for focused review by CITY to ensure that comments were appropriately addressed.

**Deliverables:**

1. Initial ADEIR (10 copies).
2. Screencheck draft of ADEIR (10 copies).

**Task A4.6 Draft EIR/Notice of Completion.** Under this task, subconsultant will prepare and circulate 100 copies of the Draft EIR, including submittal of 15 copies and the Notice of Completion (NOC) to the State Clearinghouse. A Notice of Availability will be included identifying the Public Meeting date, and subconsultant will assist in newspaper ad development and placement.

**Deliverables:**

1. Notice of Completion.
2. Notice of Availability/Newspaper.
3. Draft EIR Circulation (100).

**Task A4.7 Draft EIR Public Hearing.** Under this task, subconsultant will prepare appropriate presentation materials (i.e., overhead transparencies) for presentation at the public meeting, and will prepare summary presentations to the CITY Council, as determined necessary. The scope of work includes five (5) presentations during the public review period: one (1) at a public workshop, (1) at a Parks and Recreation Commission meeting, (1) at the Architectural Review Board meeting, (1) at a Utility Advisory Commission meeting and one (1) before the CITY Council.

**Deliverables:**


**Task A4.8 Response to Comment Addendum/Final EIR.** Under this task, subconsultant will prepare written responses to written and verbal comments received on the Draft EIR. Subconsultant will attend two (2) meetings with staff for public comment review and response strategies. Subconsultant shall prepare an Administrative Response to Comments/Final EIR for review and comment, and will prepare the final Response to Comments Addendum/Final EIR for public distribution. The scope of work assumes 130 hours for the response to comment effort. Additional effort may be required depending upon the level of comments received.

**Deliverables:**

1. Administrative Draft Response to Comments/FEIR (10 copies).
2. Circulate Response to Comments/FEIR (50 copies).

**Task A4.9 Mitigation Monitoring and Reporting Program.** Under this task, subconsultant will prepare a Mitigation Monitoring and Reporting Program (MMRP) identifying mitigation implementation and tracking responsibilities. The MMRP will provide the CITY with a framework for implementing
future projects at individual facility sites, and will identify analysis envelopes, performance standards, and required mitigation measures identified in the EIR analysis.

**Deliverables:**

1. Draft and Final MMRP.

**Task A4.10 Certification Hearing and Materials.** Under this task, subconsultant will prepare materials for certification, including: Findings, Statement of Overriding Considerations, and Notice of Determination. The scope of work assumes CITY staff or legal counsel will prepare appropriate resolutions. Subconsultant shall present the findings of the EIR to CITY Council. Findings shall be reviewed by the CITY’s legal counsel. Subconsultant will also prepare the draft and final Notice of Determination to be filed with the State Clearinghouse following project approval.

**Deliverables:**

1. Administrative Draft and Final Findings (10 copies).

2. Administrative Draft and Final NOD (10 copies).
EXHIBIT B

SCOPE OF WORK

DUTIES OF CONSULTANT

PRELIMINARY DESIGN OF THE EL CAMINO PARK WELL

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 study recommended a suite of capital improvements to correct system deficiencies that were identified in the study. The El Camino Park well is only one of three wells and other improvements recommended in the Water Wells, Regional Storage, and Distribution System Study (1999 Study). A well in this general vicinity will improve the ability of the CITY's water distribution system to supply water during water supply emergencies, particularly to the CITY's pressure area 3. The purpose of the El Camino Park well is to provide a sustained water supply to pressure area 3 when the SFPUC aqueducts are shut down due to severe damage caused by an earthquake or some other emergency.

The work described in this Exhibit will only be performed if the City issues a notice to proceed with these services.

This Exhibit B consists of the following tasks:

**Task B1 – Preliminary Design**

This task entails performing preliminary design efforts for the new El Camino Park well that consist of the following:

a. Construct a test hole to determine the final design of the well casing and screens and the capacity of the pumping system.

b. The necessary CEQA compliance efforts for this project will be conducted under Phase I Exhibit A.

c. Prepare an aerial survey of the site for the new well and the discharge pipeline.

d. Route the discharge pipeline to avoid existing utilities.

e. Prepare a basis of design (preliminary design) report to document the final design criteria of the new well.

**Task B2 - Final Design**

A final design may be prepared under a future contract amendment if this site is selected for use through the environmental review performed under Exhibit A.

SCOPE OF SERVICES
The following sections describe the detailed scope of services covered in this exhibit.

**Task B1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. CONSULTANT’s hydrogeologist subconsultant will hire a drilling contractor to construct the test hole. The test hole will be six-inches in diameter and drilled to a depth of 800 feet. During drilling, lithologic samples from the borehole will be collected and logged by a qualified geologist. After reaching final depth, the borehole will be geophysically logged (resistivity, spontaneous potential and natural gamma). Upon completion of the test hole, borehole will be backfilled with concrete in accordance with State law.

   It is assumed that the test hole drilling can take place on an 8-hour daylight basis and can be completed in approximately one (1) week. It is also assumed that required permits for test hole drilling will be limited to a well construction permit. Special permitting or environmental review should not be required. The budget for this task includes permitting of the test hole drilling with Santa Clara County Health Department and Santa Clara Valley Water District, contractor services, hydrogeologic supervision and data collection, and preparation of brief data transmittal to City staff.

   Data from the test hole will be compiled, reviewed, and compared with available proximate hydrogeologic data. The compiled data will be utilized to prepare a draft basis-of-design for the new well. This document will recommend an overall well design, an approach to construction techniques, and discuss well construction logistical issues.

2. Prepare aerial and topographic surveys of the well site. As with the CEQA compliance efforts described in Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park reservoir (Exhibit C).

   Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

   After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

   Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

3. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

4. Conduct a well preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.
5. Prepare a basis of design document for the new well. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed final design is in progress under a future contract. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Basis-of-design report from the well test hole program.
2. Digital electronic file of the aerial photography and survey.
3. Minutes of the well project selection meeting.
4. Basis of design report for the new well.
INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system's ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City's ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC's planned conversion to chloramine disinfection will impact water quality in the City's water distribution system.

The El Camino Park reservoir site is only one of seven reservoir sites evaluated in the 1999 Study for a new reservoir. The new reservoir will improve the ability of the CITY's water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, a reservoir in the vicinity of El Camino Park or a reservoir at another location nearby will assist in fire suppression efforts in the CITY's pressure areas 1 and 3. Six other alternative reservoir sites were identified in the 1999 Study and two additional sites have been added since the study completion. The work involved in preparing preliminary designs for a reservoir at any of the alternate sites is covered under Exhibits E through J, R, or Q.

The work described in this Exhibit will only be performed if the City issues a notice to proceed with these services. This Exhibit C consists of the following tasks:

Task C1 – Preliminary Design

This task entails performing preliminary design efforts for the new El Camino Park reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be conducted under Phase I Exhibit A.

c. Develop architectural renderings of the proposed above-ground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.
Task C2 - Final Design

A final design may be prepared under a future contract amendment if this site is selected for use following the completion of the project EIR performed under Exhibit A.

SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

Task C1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).
Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.

2. Architectural design concepts of the new pump station.

3. Geotechnical report of the reservoir site.

4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.

5. Minutes of the reservoir project selection meeting.

6. Basis of design of the selected alternative.
EXHIBIT D

CONSTRUCTION SUPPORT SERVICES

DUTIES OF CONSULTANT

PHASE I DISTRIBUTION SYSTEM IMPROVEMENTS PROJECT
(CHLORAMINE CONVERSION PROJECT)

Basic Improvement projects to support the SFPUC chloramine conversion in late 2003 (upgrades to existing pump stations, regulator stations and reservoirs and water quality-related improvements).

INTRODUCTION

This Exhibit D covers the Construction Support Services including the combined CONSULTANT office engineering, construction management tasks, and startup services required for the Phase 1 Distribution System Improvements Project for the Basic Improvement projects to support the SFPUC chloramine conversion in late 2003 (upgrades to existing pump stations, regulator stations and reservoirs and water quality-related improvements).

The CONSULTANT shall provide the construction support services as described herein. The scope of these services is based on a total construction period of 180 calendar days from Contractor’s notice-to-proceed for the basic improvement projects. The scope also assumes involvement of CITY’s staff for field support activities as described herein.

The Construction Support Services are organized into three sections entitled: Office Services, Field Services, and Startup Services.

DEFINITIONS

CITY: City of Palo Alto

CITY Resident Engineer: City’s staff engineer assigned to this project for inspection and resident engineering duties as described herein.

CONSULTANT: Carollo Engineers, P.C.

CONSULTANT Project Manager: CONSULTANT’s staff engineer assigned to this project to perform office project management duties as described herein.

CONSULTANT Construction Manager: CONSULTANT’s staff engineer assigned to the field office to perform field construction management duties as described herein.

BASIC IMPROVEMENT PROJECTS CONSTRUCTION MANAGEMENT
I - OFFICE SERVICES

Task D1.0 General Administration

The CONSULTANT Project Manager shall furnish general administrative services to provide for organized execution of work and retrieval of information. Such services shall include the following:

D1.1 *Correspondence and File Maintenance.* Review and route project correspondence furnished by the CONTRACTOR. Maintain a logical and retrievable filing system. Maintain logs of all correspondence and other project documentation transmittals.

D1.2 *Monthly Progress Reports.* Provide to the CITY each month a brief written progress report on the services performed. Such reports shall include the cumulative percentage of the overall budget expended, a brief description of work performed during the reporting period, and such other information as may be appropriate. This progress report will be inserted as an attachment to the monthly Construction Management Progress Report.

Task D2.0 Conformed Drawings and Specifications

The CONSULTANT Project Manager shall conform Drawings and Specifications to include all changes made by addenda during bidding.

D2.1 *Conformed Drawings and Specifications.* Prepare within 30 days after Notice-to-Proceed with construction one conformed original full-size set of Drawings and one conformed original Specifications. Provide eight (8) copies of conformed full-size and half-size Drawings and conformed Specifications necessary for construction.

Task D3.0 Award Contract

D3.1 *Contract Award.* Assist the CITY in awarding the construction contract, including assistance in reviewing the required contract documents, issuing Notice to Award, executing the construction agreement with the successful contractor, and issuing a Notice to Proceed. Services shall not include legal review.

Task D4.0 Attendance at Meetings

D4.1 *Attend Preconstruction Conference.* The CONSULTANT Project Manager shall attend a Preconstruction Conference with the Contractor, and CITY staff. The CONSULTANT Project Manager shall submit meeting minutes to all attendees and the CITY within 14 calendar days of the meeting.

D4.2 *Attend Regularly Scheduled Meetings.* The CONSULTANT Project Manager shall attend and participate in certain project meetings at the job site in order to keep abreast on construction activities and be involved in questions that may arise concerning construction progress. The regularly scheduled meetings are the Weekly Construction Progress Meetings to be held at the job site. During construction site visits to attend the
weekly meetings, the CONSULTANT Project Manager shall walk the job site with the CITY representative to observe the construction progress and discuss relevant construction issues. The CONSULTANT Project Manager shall attend two weekly meetings per month to facilitate resolution of design issues (12 total meetings).

D4.3 *Attend Special Technical Meetings.* The CONSULTANT's design team representative (structural, electrical, instrumentation, architectural, environmental, or geotechnical) shall attend up to 26 special meetings to discuss and assist in resolving any construction issues as requested by the CITY.

**Task D5.0 Engineering Review Services**

The CONSULTANT and its design team shall perform the following engineering review services during construction:

D5.1 *Shop Drawing Submittal Review.* Review process related shop drawing submittals to verify conformance with the intent of the contract documents. Submittals shall be reviewed and marked-up with appropriate comments in triplicate. Two marked-up submittals shall be returned to the CONSULTANT Construction Manager for processing and distribution. The scope of services is based on an estimate of 50 individual submittals and 25 resubmittals at an average of 4 hours per submittal.

The budgets provided herein do not include review of “off brand or equal” equipment substitutions which require research related to the manufacturer's qualifications and ability to perform as specified or which require verification that alternative materials and configurations are acceptable. Review of “off brand or equal” equipment substitutions can be performed under separate authorization.

D5.2 *Design Clarifications.* The CONSULTANT Project Manager or design team representative shall respond to Contractor's Requests for Information (RFIs). RFIs shall be tracked through the CM field office. The CONSULTANT Project Manager or his design team representative shall issue interpretations and clarifications of the contract documents and prepare sketches to clarify contract documents where necessary. The scope of services includes responding to a total of 20 RFIs at an average of 4 hours per RFI response.

D5.3 *Request for Proposal Review.* It is recognized that the Contractor may request changes to the Contract work during construction. The CONSULTANT Construction Manager shall screen these requests for merit. If it is determined that the request is worthy of further review, the CONSULTANT Construction Manager shall issue a formal Request for Proposal (RFP). The RFP shall be reviewed by the CONSULTANT Project Manager for impact on design intent, costs and impacts to the construction schedule. The CONSULTANT shall review up to 8 RFPs at an average of 8 hours per RFP response.

D5.4 *Change Orders.* In the event design related changes to the Contract Documents are required, the following procedures will be followed. Upon determination by the CITY or CONSULTANT that a change order is required, the CONSULTANT Construction Manager shall review the potential change order (PCO). Where the PCO requires redesign, the CONSULTANT Project Manager shall prepare change order specifications,
drawings, or sketches. The CONSULTANT Project Manager will prepare all cost estimates for each change order. The CONSULTANT Construction Manager will negotiate the cost and time extension of the Contract associated with the change order with the Contractor.

Any field changes for which a change order is not issued will be checked by CONSULTANT Construction Manager for general compliance with the intent of the design.

The budget for this task is based on review of 4 PCOs prepared by the CONSULTANT at 12 hours each.

Task D6.0 Inspection Services

The CONSULTANT's design team shall provide the following:

D6.1 Project Final Inspection Assistance. The CONSULTANT Project Manager and required discipline engineers shall be present during the final project "walk-through" inspections with the CITY.

Task D7.0 Construction Record Drawings

D7.1 As-Built Record Drawings. One set of Mylar reproducible drawings and one CD containing the Construction Record Drawings shall be delivered to the CITY. Construction Record Drawings will be prepared from field markups provided by the Contractor.

II - FIELD SERVICES

Task D8.0 Contract Administration

The CONSULTANT's level of effort budget allowance for this Task is limited to 160 hours as shown on Exhibit L. If additional level of effort is required, the CITY will issue a change order to the CONSULTANT for a mutually agreed amount. The CONSULTANT Construction Manager shall perform the following construction management services at the job site:

D8.1 Conduct Project Meetings. Conduct and document weekly progress meetings and other special technical meetings.

D8.2 Maintain Project Records. Maintain project records including daily logs, inspection reports, photos, measurement of quantities, schedules, and correspondence and documentation of all major decisions and actions.

D8.3 Prepare Monthly Reports. Prepare and submit to the CITY a monthly progress report including Construction progress summary and schedule; construction cash flow and payments; and summary logs for change orders, RFIs and RFPs.

D8.4 Review Monthly Progress Payments. Review and approve the Contractor's construction
schedule, updates, and revisions in accordance with the contract documents. Evaluate monthly progress payment requests from the Contractor and recommend payment.

D8.5 Review RFIs and RFPs. Review and respond to RFIs and RFPs concerning construction issues and screen RFIs and RFPs related to design issues prior to forwarding to the CONSULTANT Project Manager.

D8.6 Document and Negotiate Change Orders. Prepare PCOs, and in conjunction with the design staff, determine changed conditions, define scope, prepare independent cost estimate, negotiate with Contractor, prepare and process change orders for incorporation into the construction contract.

D8.7 Permits. Monitor Contractor compliance with construction permits. Recommend course of action to CITY if required permits are not being met by the Contractor.

D8.8 Monitor Construction Record Drawings. Monitor construction record drawings maintained by the Contractor on a regular basis.

D8.9 Coordinate Design Clarifications. Coordinate, document, and manage the Drawings and Specifications clarification and interpretation process between the CONSULTANT Project Manager and the Contractor.

D8.10 Coordinate Shop Drawing Review Process. Coordinate and manage the shop drawing and submittal review process. The CONSULTANT shall review all shop drawing submittals, quality control submittals, manufacturer's O&M manuals, and construction closeout submittals.

D8.11 Claims Management. Identify potential claims and make recommendations to resolve them. The budget for this sub-task is limited to $10,000.

D8.12 Information Management. Utilize a computerized integrated software package to manage communications and develop reports. The software will control and document submittals, schedules, cost issues, meeting notes, log change orders, log requests for information and other related project documents.

Task D9.0 Field Inspection

The CONSULTANT's level of effort budget allowance for this Task is limited to 310 hours as shown on Exhibit L. If additional level of effort is required, the CITY will issue a change order to the CONSULTANT for a mutually agreed amount. The CITY shall provide a Resident Engineer to work under the supervision of the CONSULTANT Construction Manager.

D9.1 Field Inspection. The CONSULTANT Construction Manager shall provide construction inspection with assistance from the CITY's Resident Engineer to monitor that the Contractor's work for compliance with the contract documents.

D9.2 Video Documentation. The CONSULTANT Construction Manager shall prepare a video of initial site conditions prior to Contractor's commencement of construction. Visual
D9.3 **Field Changes.** The CONSULTANT Construction Manager shall coordinate and document all field changes to the Drawings and Specifications.

D9.4 **Specialty Inspection.** The CONSULTANT Construction Manager shall coordinate specialty inspection services such as structural, geotechnical, mechanical, electrical and instrumentation. The scope of this effort is based on a total of 8 site visits by the CONSULTANT’s discipline engineers at 8 hours per trip.

D9.5 **Inspection Reports.** The CITY’s Resident Engineer and/or Field Inspector shall prepare Daily Inspection Reports and prepare a summary Weekly Inspection Report. The CONSULTANT Construction Manager shall review the weekly reports prior to distribution to the CITY.

**Task D10.0 Testing**

D10.1 **Compliance Testing.** The Contractor is responsible for materials, concrete and soils compaction confirmation tests. However, periodic independent testing may be required for soils compliance tests and other field conditions. The budget allowance for independent testing by the CONSULTANT is $10,000.

**Task D11.0 Project Completion**

D11.1 **Substantial and Final Completion.** The CONSULTANT Construction Manager shall schedule and conduct substantial completion inspections; issue punch lists, and recommend final acceptance by the CITY.

D11.2 **Prepare Final Report.** The CONSULTANT Construction Manager shall prepare a Final Report that includes: Summary of the work performed including change orders, project cost and schedule analysis, closeout and acceptance documentation, and final resolution of any claims or disputed work.

D11.3 **Project Documents.** The CONSULTANT Construction Manager shall provide the CITY with a complete set of all records of the project, indexed and properly filed, and a listing of warranties provided under the project including the items covered and the warranty duration.

**III – STARTUP**

**Task D12.0 Startup Assistance**

D12.1 **Testing and Startup Services.** CONSULTANT Construction Manager, with assistance from the Resident Engineer, shall provide startup assistance, and coordinate any specified vendor training. The CONSULTANT’s level of effort budget allowance for this task is limited to 68 hours as shown in Exhibit L.

D12.2 **Operations and Maintenance Manual.** CONSULTANT shall prepare and operations and
maintenance manual for the new equipment constructed under this project. CONSULTANT will coordinate organization, format, and layout of the Manual with the CITY. The CONSULTANT’s level of effort budget allowance for this task is limited to 260 hours as shown in Exhibit L.
EXHIBIT E

SCOPE OF WORK

DUTIES OF CONSULTANT

PRELIMINARY DESIGN OF THE COYOTE HILL RESERVOIR

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system's ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City's ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC's planned conversion to chloramine disinfection will impact water quality in the City's water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the CITY's water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the CITY's pressure areas 1 and 3. Seven alternative reservoir sites were identified. Coyote Hill, located in the Stanford Research Park off Deer Creek Road, is one of the seven alternative reservoir sites (Study table 5.7).

The work described in this Exhibit will only be performed if the City issues a notice to proceed with for these services. This Exhibit E consists of the following tasks:

Task E1 – Preliminary Design

This task entails performing preliminary design efforts for the new Coyote Hill reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be conducted under Phase I Exhibit A.

c. Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.

SCOPE OF SERVICES
The following sections describe the detailed scope of services covered in this exhibit.

**Task E1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping...
at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.
2. Architectural design concepts of the new pump station.
3. Geotechnical report of the reservoir site.
4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.
5. Minutes of the reservoir project selection meeting.
6. Basis of design of the selected alternative.
INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the CITY’s water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the CITY’s pressure areas 1 and 3. Seven alternative reservoir sites were identified.

The Old Quarry site, located west of the Page Mill Road and Coyote Hill Road intersection, is one of the seven alternative reservoir sites.

The work described in this Exhibit will only be performed if the City issues a notice to proceed with these services. This Exhibit F consists of the following tasks:

Task F1 – Preliminary Design

This task entails performing preliminary design efforts for the new Old Quarry reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be conducted under Phase I Exhibit A.

c. Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.
SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

Task F1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.
After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY's offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.

2. Architectural design concepts of the new pump station.

3. Geotechnical report of the reservoir site.

4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.

5. Minutes of the reservoir project selection meeting.

6. Basis of design of the selected alternative.
INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system's ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City's ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC's planned conversion to chloramine disinfection will impact water quality in the City's water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the CITY's water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the CITY's pressure areas 1 and 3. Seven alternative reservoir sites were identified.

The Esther Clark Park site, located at the end of Old Adobe Road at Trace Lane, is one of the seven alternative reservoir sites.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services. This Exhibit G consists of the following tasks:

Task G1 – Preliminary Design

This task entails performing preliminary design efforts for the new Esther Clark Park reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be constructed under Phase I Exhibit A.

c. Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.
SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

**Task G1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   - Review the available geotechnical data for this site and for other sites in the vicinity.
   - Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   - Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   - Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   - Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   - Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   - Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   - Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.
After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY's offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.

2. Architectural design concepts of the new pump station.

3. Geotechnical report of the reservoir site.

4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.

5. Minutes of the reservoir project selection meeting.

6. Basis of design of the selected alternative.
INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the CITY’s water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the CITY’s pressure areas 1 and 3. Seven alternative reservoir sites were identified in the 1999 Study (Study Table 5.7).

The Gunn High School site, located at the intersection of Foothill Expressway and Arastradero Road, is one of the seven alternative reservoir sites.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services. This Exhibit H consists of the following tasks:

**Task H1 – Preliminary Design**

This task entails performing preliminary design efforts for the new Gunn High School reservoir that consist of the following:

- Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.
- The necessary CEQA compliance efforts for this project will be constructed under Phase I Exhibit A.
- Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.
- Conduct the geotechnical investigation necessary for final structural design.
- Conduct the photogrammetric topographical survey to support final design efforts.
- Route the inlet/outlet pipeline to avoid existing utilities.
- Conduct a preliminary design meeting to finalize the design criteria.
- Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.

**SCOPE OF SERVICES**

ExH.PA Phil Design Scope.ExH.072203

July 22, 2003
The following sections describe the detailed scope of services covered in this exhibit.

**Task H1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. **Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station.** A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. **Develop a preliminary architectural design for the new pump station.** Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. **Prepare the final geotechnical design criteria.** Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. **Prepare aerial and topographic surveys of the reservoir site.** As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping...
at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.
2. Architectural design concepts of the new pump station.
3. Geotechnical report of the reservoir site.
4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.
5. Minutes of the reservoir project selection meeting.
6. Basis of design of the selected alternative.
EXHIBIT I

SCOPE OF WORK

DUTIES OF CONSULTANT

PRELIMINARY DESIGN OF THE TERMAN PARK RESERVOIR SITE

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system's ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City's ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC's planned conversion to chloramine disinfection will impact water quality in the City's water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the City's water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the City's pressure areas 1 and 3. Seven alternative reservoir sites were identified in the 1999 Study (Study Table 5.7). The Terman Park site, located behind the Jewish Community Center on Arastradero Road, is one of the seven alternative reservoir sites.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services. This Exhibit I consists of the following tasks:

Task I1 – Preliminary Design

This task entails performing preliminary design efforts for the new Terman Park reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be constructed under Phase I Exhibit A.

c. Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.

SCOPE OF SERVICES

July 22, 2003
The following sections describe the detailed scope of services covered in this exhibit.

**Task I Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping...
at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.

2. Architectural design concepts of the new pump station.

3. Geotechnical report of the reservoir site.

4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.

5. Minutes of the reservoir project selection meeting.

6. Basis of design of the selected alternative.
EXHIBIT J
SCOPE OF WORK
DUTIES OF CONSULTANT
PRELIMINARY DESIGN OF THE JUANA BRIONES PARK RESERVOIR SITE

INTRODUCTION
In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system's ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City's ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC's planned conversion to chloramine disinfection will impact water quality in the City's water distribution system.

The 1999 Study recommended that the City construct a new reservoir to improve the ability of the CITY's water distribution system to supply water during DHS-defined water supply emergency, as well as other water supply emergencies. Specifically, the new reservoir would assist in fire suppression efforts in the CITY's pressure areas 1 and 3. Seven alternative reservoir sites were identified in the 1999 Study (Study Table 5.7). The Juana Briones Park site, located on Arastradero Road, is one of the seven alternative reservoir sites.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services. This Exhibit J consists of the following tasks:

Task J1 – Preliminary Design

This task entails performing preliminary design efforts for the new Juana Briones Park reservoir that consist of the following:

a. Prepare conceptual design alternatives for the new reservoir for the CITY to select one for implementation.

b. The necessary CEQA compliance efforts for this project will be constructed under Phase I Exhibit A.

c. Develop architectural renderings of the proposed aboveground facilities (pump station) for review, comment, and approval.

d. Conduct the geotechnical investigation necessary for final structural design.

e. Conduct the photogrammetric topographical survey to support final design efforts.

f. Route the inlet/outlet pipeline to avoid existing utilities.

g. Conduct a preliminary design meeting to finalize the design criteria.

h. Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir.
SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

Task J1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives. The project alternative descriptions of the pros and cons will incorporate the results of the environmental and geotechnical studies conducted in this task, as appropriate.

2. Develop a preliminary architectural design for the new pump station. Deliverables will include rendered elevations (color pencil) and sketch perspectives of the selected design.

3. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:

   a. Review the available geotechnical data for this site and for other sites in the vicinity.
   b. Review published maps and geologic reports pertinent to the site area and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils; including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

4. Prepare aerial and topographic surveys of the reservoir site. As with the CEQA compliance efforts described in task Exhibit A, this work is assumed to be conducted with the survey work performed for the proposed El Camino Park well (Exhibit B).

   Set control at the site. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.
After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

5. Conduct a utility conflict survey to develop potential route(s) for the discharge pipeline. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline route including whether existing utilities should be relocated.

6. Conduct a reservoir preliminary design meeting at the CITY's offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

7. Prepare a basis of design document for the new reservoir. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

Deliverables:

1. Conceptual design of the improvement projects.
2. Architectural design concepts of the new pump station.
3. Geotechnical report of the reservoir site.
4. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.
5. Minutes of the reservoir project selection meeting.
6. Basis of design of the selected alternative.
EXHIBIT K
CAROLLO ENGINEERS, PC
FEE SCHEDULE

As of March 1, 2003
CITY OF PALO ALTO CIP PROJECTS

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</table>

This fee schedule is subject to annual revisions in March due to labor adjustments.
### ALLOCATION PHILOSOPHY

<table>
<thead>
<tr>
<th>Project Task</th>
<th>Consultant Task Budget</th>
<th>Reservoir Booster Station Improvements (MPN#0110)</th>
<th>Distribution System Water Quality Enhancement (MPN#0111)</th>
<th>Existing Booster Station Improvements (MPN#0112)</th>
<th>El Camino Park Reservoir and Pump Station Improvements (MPN#0200)</th>
<th>El Camino Park Well Pump Station (MPN#0206)</th>
<th>Phase II and III Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 Proj. Management and Administration</td>
<td>$268,980</td>
<td>$18,966</td>
<td>$4,740</td>
<td>$4,740</td>
<td>$194,702</td>
<td>$11,850</td>
<td>NA</td>
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<tr>
<td>A2 Planning Considerations</td>
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<td>$11,506</td>
<td>$4,139</td>
<td>$2,788</td>
<td>$114,522</td>
<td>$6,856</td>
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<tr>
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<td>$101,855</td>
<td>$50,928</td>
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<tr>
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<td>$0</td>
<td>$0</td>
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<td>$30,219</td>
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<td>O - Construction Management</td>
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<td>$88,984</td>
<td>$36,288</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$1,939,842</strong></td>
<td><strong>$615,369</strong></td>
<td><strong>$160,618</strong></td>
<td><strong>$93,715</strong></td>
<td><strong>$480,635</strong></td>
<td><strong>$46,967</strong></td>
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### ALLOCATION AMOUNTS

<table>
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<th>Project Task</th>
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<th>Distribution System Water Quality Enhancement (MPN#0111)</th>
<th>Existing Booster Station Improvements (MPN#0112)</th>
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<td>$4,740</td>
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<td>NA</td>
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<td>$206,270</td>
<td>$206,270</td>
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<td>$50,928</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>A4 Environmental Impact Report</td>
<td>$237,723</td>
<td>$0</td>
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<td>$0</td>
<td>NA</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>$615,369</strong></td>
<td><strong>$160,618</strong></td>
<td><strong>$93,715</strong></td>
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<td><strong>$46,967</strong></td>
<td><strong>$185,263</strong></td>
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**Note:** NA = Not applicable. These costs are covered under a separate contract.
### EXHIBIT A - BASIC CIP PROJECTS

<table>
<thead>
<tr>
<th>Task</th>
<th>Estimate</th>
<th>Design Phase</th>
<th>Construction Phase</th>
<th>Testing</th>
<th>Post-Construction</th>
<th>Total Direct Costs</th>
<th>Total Design</th>
<th>Design % Share</th>
<th>Benefit Analysis</th>
<th>Cost Share</th>
<th>Total</th>
<th>Actual Direct Costs</th>
<th>Actual Design</th>
<th>Actual Construction</th>
<th>Actual Testing</th>
<th>Actual Post-Construction</th>
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**Total**:
- **PCC**: $1,214,279
- **PCC % Share**: 100%
- **PCC Note**: 100% of the total project cost is represented.
**EXHIBIT 1 - BASIC IMPROVEMENT PROJECTS CONSTRUCTION MANAGEMENT**

<table>
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<th>Task</th>
<th>Description</th>
<th>Estimated Engineering Hours</th>
<th>Estimated Cost</th>
<th>Task</th>
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<th>Estimated Cost</th>
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**EXHIBIT D - TOTALS**

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<th>Total Cost</th>
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<td>$180,000</td>
<td></td>
</tr>
</tbody>
</table>

(1) Project Supplement and Communication Expenditures as specified in the contract schedule (Table I).
(2) Includes all labor requirements and all labor time required for demonstration of the know-how and design. The labor hours will be based on local labor rates.
(3) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(4) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(5) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(6) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(7) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(8) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.
(9) Includes all labor required for the construction and maintenance costs. It should be noted that this is for all labor amounts and for all labor amounts.

[Exhibit D: Basic Improvement Projects Construction Management]
EXHIBIT M

EIR, Phase 1 Basic Improvement Project Reservoir Booster Station Improvements, Distribution System Water Quality Enhancement, Existing Booster Station Improvements and Future Reservoir and Pump Station and Land Acquisition – Project Schedule

PROJECT SCHEDULE

Assuming the CONSULTANT receives Contract Amendment by August 11, 2003 to proceed with the EIR, the anticipated schedule for completion is as follows:

<table>
<thead>
<tr>
<th>MILESTONE</th>
<th>SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Council Award Date</td>
<td>May 20, 2002</td>
</tr>
<tr>
<td>Notice to proceed/Kickoff Meeting</td>
<td>July 17, 2002</td>
</tr>
<tr>
<td><strong>Basic Improvement Projects to support SFPUC Chloramine Conversion in Late 2003</strong></td>
<td></td>
</tr>
<tr>
<td>Phase I 35 percent design submittal</td>
<td>May 21, 2003</td>
</tr>
<tr>
<td>Phase I 65 percent design submittal</td>
<td>October 14, 2003</td>
</tr>
<tr>
<td>Phase I 90 percent design submittal</td>
<td>December 23, 2003</td>
</tr>
<tr>
<td>Phase I 100 percent design submittal</td>
<td>March 23, 2004</td>
</tr>
<tr>
<td>Contractor notice to proceed</td>
<td>July 17, 2004</td>
</tr>
<tr>
<td>Construction complete</td>
<td>June 21, 2005</td>
</tr>
<tr>
<td><strong>New Reservoir, Pump Station, and Well Site Selection and CEQA Process</strong></td>
<td></td>
</tr>
<tr>
<td>Submit Environmental Constraints Analysis</td>
<td>September 16, 2003</td>
</tr>
<tr>
<td>Complete EIR Process (certified EIR).</td>
<td>June 14, 2004</td>
</tr>
<tr>
<td><strong>New Reservoir and Pump Station Preliminary Design Report</strong></td>
<td></td>
</tr>
<tr>
<td>Preliminary Design Report Submittal</td>
<td>August 17, 2004</td>
</tr>
</tbody>
</table>
EXHIBIT N

SCOPE OF SERVICES

DUTIES OF THE CITY OF PALO ALTO

PHASE I DISTRIBUTION SYSTEM IMPROVEMENTS PROJECT

This exhibit describes the duties of the City and how City staff will support the consultant’s work on the “Project” EIR and the construction management of basic improvement projects designed in Task A 3, Exhibit A.

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 study recommended a suite of capital improvements to correct system deficiencies that were identified in the study.

The CITY shall have the responsibilities indicated below for each of the project tasks listed. If a task is not listed, then no specific assistance is expected of the CITY by the CONSULTANT. The project tasks are presented below in the order of their respective contract exhibits.

EXHIBIT A – PHASE I BASIC SERVICES

Task A1 - PROJECT MANAGEMENT AND ADMINISTRATION

Task A1.1 - Project Management. Under this task, CONSULTANT will prepare a Project Management Plan, manage CONSULTANT’s team, and monitor project schedule and budget as described herein.

CITY shall:

1. Review and provide comments and acceptance of the project management plan.

Task A1.2 - Project Meetings. Under this task, CONSULTANT will conduct preliminary and final design phase project meetings as described herein. Project meetings to be held during the construction phase are covered in Exhibit D.

CITY shall:

1. Determine which CITY staff are needed at the meetings and commit their time for the meetings.
2. Review and provide any comments on the meeting summaries prepared by the CONSULTANT. Compile, tabulate, and resolve any conflicting comments prior to transmitting to CONSULTANT.

Task A2 - PLANNING CONSIDERATIONS

Task A2.1 – Budget and Schedule Tracking. Under this task, CONSULTANT shall prepare and maintain software tools for tracking the project schedule and budget.

CITY shall:

1. Review the project schedule and provide timely comments to the CONSULTANT.

Task A2.2 – Permit Assessment. Under this task, CONSULTANT shall identify the permits that are necessary for completion of the design and construction phase services.

CITY shall:

1. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

Task A2.3 – Stakeholder Involvement. Under this task, CONSULTANT shall assist the CITY with public involvement efforts. The focus of this task will be to involve the public parties that may be affected by the new reservoir portion of this project. Public involvement for the other portions of this project described in Task A.3.1 is not included in this contract.

CITY shall:

1. Provide input and assist in developing the public review program. The program will consist of a plan and schedule for selecting a preferred alternative, proceeding with design and planning construction of a new reservoir at one of the alternate sites (construction by others).

2. Participate in one public involvement coordination meeting at the CITY’S offices to organize the CITY’S efforts toward public review. The meeting will be attended by the CONSULTANT and senior CITY officials involved in the public involvement process. It is assumed that the CITY will provide a list of major and potentially affected stakeholders including Stanford University, the public, and the Architectural Review Board.

3. Provide input in developing draft and final information packets and fact sheets for distribution. Review the draft documents and provide the information needed such that the final documents accurately represent the CITY’s plans.

4. Identify the CITY staff that will be part of the public involvement workshops and commit their time for the workshops. Identify and reserve the facilities needed for the public workshops. Present the resulting public review/opinion summary to the CITY Council for consideration with the staff recommended reservoir site.

5. Identify the key CITY staff that will participate in the stakeholder meetings near the selected new reservoir site. Identify and reserve the facilities needed for the meetings.

6. Review the information the CONSULTANT intends to post and/or is posting on the project website. At the CONSULTANT’s request, provide supplemental information as needed for posting.

Task A2.5 – Environmental Constraints Analysis. Under this task, CONSULTANT’s environmental subconsultant shall review proposed well and reservoir site locations for environmental issue areas,
and prepare a constraints report identifying environmental issues at each well and reservoir site. This analysis will consist of site reconnaissance, review of site conditions, review of appropriate environmental databases (CNDBB), and identification of land uses. Subconsultant shall identify environmental constraints at each site location and rank each of the sites with respect potential environmental impact. Issue areas to be examined include: geology and soils, surface water resources, groundwater resources, biological resources, cultural/historical resources, land use, aesthetics, traffic and circulation, and noise.

CITY shall:

1. Provide site access and background material as necessary to facilitate completing the environmental constraints analysis. Identify and commit the time of the CITY staff that will be involved in reviewing the project environmental documents. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A3 – PRE-DESIGN, DESIGN, AND COST CRITERIA

Task A3.1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the various sites involved in this project.

2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

4. Identify and commit the time of the CITY staff who should be involved in reviewing the project environmental documents. Review and comment on an administrative draft Categorical Exemption. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A3.2 – Final Design. A final design may be prepared under a future contract amendment and the CONSULTANT may be authorized to prepare final design documents for the improvement alternatives selected in Task 3.1.

CITY shall:

1. Identify the CITY staff that need to be involved in reviewing and commenting on the 35 percent complete, 65 percent complete, and 90 percent complete plans and specifications. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

2. Attend one (1) on-site pre-bid conference. Determine which CITY staff should attend the pre-
bid conference and commit their time.

3. Advertise the bid package to obtain bids from qualified contractors.

4. Sell and distribute plans, specifications, and addenda to bidding contractors.

Task A4 - ENVIRONMENTAL IMPACT REPORT

Task A4.1 Project Team Kickoff Meeting and Information Review. CONSULTANT’s environmental subconsultant and CONSULTANT shall meet with CITY to review the following: 1) analysis approach and strategy; 2) public outreach and NOP circulation; 3) preliminary CEQA project objectives and alternatives; 4) site specific construction/operational information developed by the CITY and CONSULTANT.

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in reviewing the project CEQA process. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A4.2 Notice of Preparation. Under this task, CONSULTANT’s environmental subconsultant shall prepare and submit draft Notice of Preparation (NOP) and circulation list for review by CITY. Subconsultant shall prepare a CEQA environmental checklist to support the NOP. If identified as appropriate, Subconsultant shall use this mechanism to screen out those CEQA issues that do not require additional analysis. Subconsultant shall assist in the coordination of scoping meeting dates with staff. Following receipt of comments from CITY, subconsultant shall prepare and circulate NOP to State Clearinghouse and circulation list.

CITY shall:

1. Review and comment on the draft environmental checklist, NOP, and circulation list documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT. Assist in developing scoping meeting dates.

Task A4.3 EIR Scoping Meeting and Agency Consultation. Under this task, CONSULTANT’s environmental subconsultant shall develop scoping meeting materials to provide an overview of the project for stakeholder and interested public. This presentation will incorporate previous efforts under Task A4.5. Following the scoping meeting presentation, subconsultant shall prepare a scoping meeting memo identifying key issues and the need for any adjustments to project approach. Agency coordination will be focused on local agencies that could be affected by the project, such as other pumpers. One (1) public scoping meeting and three (3) agency meetings are assumed for budgetary purposes. Additional outreach tasks, such as preparation of an article for City of Palo Alto newsletter, or project brochures can be developed with the project team if necessary, but have not been included in this scope of work. CONSULTANT and environmental subconsultant shall attend both scoping and agency meetings to provide technical assistance.

CITY shall:

1. Review and comment on the draft scoping meeting materials. Identify stakeholders who should be invited to the meeting. Assist in making the invitations.

Task A4.4 CEQA Project Description. Under this task, CONSULTANT’s environmental subconsultant shall develop the CEQA project description, incorporating information developed by CONSULTANT. Information for the proposed well site locations and rehabilitations will include:
CEQA project objectives, list of required project actions by other agencies, identification of operational and maintenance scenarios, well locations, typical well site layout, typical construction scenarios, including 24-hour drilling and operational scenarios for the well sites. Information to complete the project description for reservoirs will include: reservoir site layout, identification of operational and maintenance scenarios, earthwork estimates, pump station plan/profile, typical construction scenarios and construction trip estimates. Well site details that will need to be identified include enclosure description, ancillary facility description, typical connection piping, chemical storage, deliveries/maintenance, fencing/lighting, and other site details. Subconsultant shall work closely with the CITY and CONSULTANT to develop a project description that provides an appropriate level of detail, as well as a flexible design envelope that will allow for onsite conditions at individual well and reservoir sites. CONSULTANT shall provide information for and review of project description developed by subconsultant.

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in developing the project description. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A4.5 Administrative Draft EIR. Under this task, CONSULTANT's environmental subconsultant shall prepare Administrative Draft EIR (ADEIR) to include sections and issues identified as potentially significant and requiring further analysis during the preparation of the Environmental Checklist. CONSULTANT will provide information as stated and will provide review of the ADEIR.

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in reviewing the ADEIR. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A4.6 Draft EIR/Notice of Completion. Under this task, CONSULTANT’s environmental subconsultant will prepare and circulate 100 copies of the Draft EIR, including submittal of 15 copies and the Notice of Completion (NOC) to the State Clearinghouse. A Notice of Availability will be included identifying the Public Meeting date, and subconsultant will assist in newspaper ad development and placement.

Deliverables:

1. Notice of Completion.
2. Notice of Availability/Newspaper.
3. Draft EIR Circulation (100).

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in reviewing the newspaper ad development and placement. Review and comment on the draft documents. Compile and tabulate the City review comments and resolve any conflicting comments before transmitting to CONSULTANT.
Task A4.7 Draft EIR Public Hearing. Under this task, subconsultant will prepare appropriate presentation materials (i.e., overhead transparencies) for presentation at the public meeting, and will prepare summary presentations to the CITY Council, as determined necessary. The scope of work includes three (3) presentations during the public review period: one (1) at a public workshop, one (1) at UAC (Utility Advisory Commission) and one (1) before the CITY Council.

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in the public hearings. Schedule and reserve facilities to hold the meetings as appropriate.

Task A4.8 Response to Comment Addendum/Final EIR. Under this task, subconsultant will prepare written responses to written and verbal comments received on the Draft EIR. Subconsultant will attend two (2) meetings with staff for public comment review and response strategies. Subconsultant shall prepare an Administrative Response to Comments/Final EIR for review and comment, and will prepare the final Response to Comments Addendum/Final EIR for public distribution. The scope of work assumes 130 hours for the response to comment effort. Additional effort may be required depending upon the level of comments received.

CITY shall:

1. Identify and commit the time of the CITY staff who will be involved in reviewing the Administrative Response to Comments/Final EIR. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A4.9 Mitigation Monitoring and Reporting Program. Under this task, subconsultant will prepare a Mitigation Monitoring and Reporting Program (MMRP) identifying mitigation implementation and tracking responsibilities. The MMRP will provide the CONSULTANT and CITY with a framework for implementing future projects at individual facility sites, and will identify analysis envelopes, performance standards, and required mitigation measures identified in the EIR analysis.

CITY shall:

1. Identify and commit the time of the CITY staff who should be involved in reviewing the MMRP. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

Task A4.10 Certification Hearing and Materials. Under this task, subconsultant will prepare materials for certification, including: Findings, Statement of Overriding Considerations, and Notice of Determination. The scope of work assumes CITY staff or legal counsel will prepare appropriate resolutions. Subconsultant shall present the findings of the EIR to CITY Council. The CITY's legal counsel shall review findings. Subconsultant will also prepare the draft and final Notice of Determination to be filed with the State Clearinghouse following project approval.

CITY shall:

1. Identify and commit the time of the CITY staff (including the City Attorney's Office) who should be involved in reviewing the Findings, Statement of Overriding Considerations, and Notice of Determination. Review and comment on the draft documents. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
EXHIBIT B – EL CAMINO PARK WELL

Task B1 El Camino Park Well Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the El Camino Park site as needed.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that will be involved in reviewing and commenting on the draft basis of design document. Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the CITY staff review comments on the draft basis of design document and resolve any conflicting comments before transmitting to CONSULTANT.
4. Provide available as-built drawings of all underground utilities in and around the El Camino Park site.

EXHIBIT C – EL CAMINO PARK RESERVOIR

Task C1 El Camino Park Reservoir Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the El Camino Park site.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
5. Provide available as-built drawings of all underground utilities in and around the El Camino Park site.

EXHIBIT D - CONSTRUCTION SUPPORT SERVICES - BASIC IMPROVEMENTS TO
SUPPORT SFPUC CHLORAMINE CONVERSION PROJECTS

I - OFFICE SERVICES

Task D1.0 General Administration

CITY shall:

D1.2 Review the monthly progress reports and provide comments as needed.

Task D2.0 Conformed Drawings and Specifications

CITY shall:

D2.1 Distribute the conformed drawings to various CITY staff as appropriate.

Task D3.0 Award Contract

CITY shall:

D3.1 Issue the Notice to Award, execute the construction agreement with the successful contractor, and issue a Notice to Proceed.

Task D4.0 Attendance at Meetings

CITY shall:

D4.1 Attend Preconstruction Conference. Identify the CITY staff that should attend the preconstruction conference and commit their time. Identify and reserve the facilities needed for the conference.

D4.2 Attend Regularly Scheduled Meetings. Identify the CITY staff that should attend the regularly scheduled meetings and commit their time. During construction site visits to attend the weekly meetings, the CONSULTANT Project Manager shall walk the job site with the CITY representative(s) to observe the construction progress and discuss relevant construction issues.

Task D5.0 Engineering Review Services

CITY shall:

D5.4 Change Orders. Review change order requests. Assist the CONSULTANT Project Manager in processing change orders with the CITY.

II - FIELD SERVICES

Task D9.0 Field Inspection

CITY shall:

Provide a Resident Engineer to work under the supervision of the CONSULTANT Construction Manager for the duration of the construction project.
D9.1  *Field Inspection.* Assist the CONSULTANT Construction Manager with monitoring the Contractor's work for compliance with the contract documents.

D9.5  *Inspection Reports.* The CITY's Resident Engineer and/or Field Inspector shall prepare Daily Inspection Reports and prepare a summary Weekly Inspection Report. The CONSULTANT Construction Manager shall review the weekly reports prior to distribution to the CITY.

### III – STARTUP

**Task D12.0 Startup Assistance**

**CITY shall:**

D12.1  *Testing and Startup Services.* The CITY's Resident Engineer shall assist the CONSULTANT Construction Manager with testing and startup services, and coordinate any specified vendor training.

**EXHIBIT E – COYOTE HILL RESERVOIR**

**Task E1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if the EIR process approves this site.

**CITY shall:**

1. Provide the CONSULTANT and its subconsultants access to the project site.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
5. Provide available as-built drawings of all underground utilities in and around the project site.

**EXHIBIT F – OLD QUARRY RESERVOIR**

**Task F1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.

**CITY shall:**
1. Provide the CONSULTANT and its subconsultants access to the project site.

2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

5. Provide available as-built drawings of all underground utilities in and around the project site.

EXHIBIT G – ESTHER CLARK PARK RESERVOIR

Task G1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project site.

2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

5. Provide available as-built drawings of all underground utilities in and around the project site.

EXHIBIT H – GUNN HIGH SCHOOL RESERVOIR

Task H1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.
CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project site.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
5. Provide available as-built drawings of all underground utilities in and around the project site.

EXHIBIT I – TERMAN PARK RESERVOIR

Task I1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project site.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
5. Provide available as-built drawings of all underground utilities in and around the project site.

EXHIBIT J – JUANA BRIONES RESERVOIR

Task J1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to
develop the basis for the final design efforts if this site is selected in the EIR process.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project site.

2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump station. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

5. Provide available as-built drawings of all underground utilities in and around the project site.

EXHIBIT Q – PRELIMINARY AND FINAL DESIGN OF THE EL CAMINO PARK RESERVOIR AND PUMP STATION, AND THE ROTH PARK RESERVOIR AND PUMP STATION

Task Q1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project sites.

2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.

3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump stations. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.

5. Provide available as-built drawings of all underground utilities in and around the project site.
EXHIBIT R – PRELIMINARY AND FINAL DESIGN OF THE ROTH PARK RESERVOIR AND PUMP STATION

Task R1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts if this site is selected in the EIR process.

CITY shall:

1. Provide the CONSULTANT and its subconsultants access to the project sites.
2. Provide assistance in identifying and contacting CITY employees who may be involved in the permitting process.
3. Identify the CITY staff that need to be involved in reviewing and commenting on the draft improvement plans (basis of design document). Prepare an invitation list for the preliminary design review meeting consisting of representatives from operations and engineering. Commit the time of the CITY staff members to assist in completing this work in a timely manner. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
4. Identify and commit the time of the CITY staff who should be involved in reviewing the project preliminary architectural design. Review and comment on the preliminary architectural design for the proposed pump stations. Compile and tabulate the review comments and resolve any conflicting comments before transmitting to CONSULTANT.
5. Provide available as-built drawings of all underground utilities in and around the project site.
**ACORD CERTIFICATE OF LIABILITY INSURANCE**

**PRODUCER**
Professional Practice Insurance Brokers, Inc.
1-949-729-0777

**INSURED**
Carollo Engineers P.C.
3100 South Harbor Boulevard, Suite 200
Santa Ana, CA 92704

**DATE (MM/DD/YY)**
07/22/03

**CERTIFICATE OF LIABILITY INSURANCE**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

**INSURERS AFFORDING COVERAGE**

- **INSURER A:** Greenwich Insurance Company c/o XL Insurance
- **INSURER E:**

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

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**DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS**

Design & Project Management & Administration of Phase I; Water Distribution System Improvements Project

Carollo Project #: 6542A.10

10 Days Notice For Cancellation Due To Non-Payment Of Premium

**CERTIFICATE HOLDER**

City of Palo Alto
Office of City Clerk
P.O. Box 10250
Palo Alto, CA 94303

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, SUCH NOTICE TO BE BEFORE THE ISSUE OF ANY SMALL CLAIMS AND ANY INSURER TO PROVIDE WRITTEN NOTICE OF POSSIBLE DAMAGE TO THE INSURED.

**AUTHORIZED REPRESENTATIVE**
Certification of Nondiscrimination

As suppliers of goods or services to the City of Palo Alto, the firm and individuals listed below hereby certify:

a) that they are currently in compliance with all federal and state of California laws covering nondiscrimination in employment; and

b) that, if awarded the contract, the proposer will not discriminate in employment of any person under the contract because of race, color, national origin or ancestry, religion, disability, gender or marital status of such person.

THE INFORMATION HEREIN IS CERTIFIED CORRECT BY SIGNATURE(S) BELOW.

Firm:
Signature:
Name:

(Print or type name)

Signature:
Name:

(Print or type name)

Note: California Corporations Code Section 313 requires two corporate officers to execute contracts.

*The signature of First Officer* must be one of the following: Chairman of the Board; President; or Vice President.

**The signature of the Second Officer** must be one of the following: Secretary; Assistant Secretary; Chief Financial Officer; or Assistant Treasurer.

(In the alternative, a certified corporate resolution attesting to the signatory authority of the individuals signing in their respective capacities is acceptable)
EXHIBIT Q

SCOPE OF WORK

DUTIES OF CONSULTANT

PRELIMINARY DESIGN OF THE EL CAMINO PARK RESERVOIR AND PUMP STATION, AND THE ROTH PARK RESERVOIR AND PUMP STATION

INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 Study recommended constructing a new reservoir largely to supply water for fire suppression efforts in pressure areas 1 and 3. Since the completion of that study, the CITY has developed additional alternatives for implementing these improvements. One of the additional alternatives the CITY review is to build two smaller reservoirs and pump stations. This Exhibit covers preliminary efforts for two smaller reservoirs and pump stations at separate sites:

- A new reservoir and pump station in El Camino Park sized to meet the emergency water demands of pressure area 3.
- A new reservoir and pump station in the planned Roth Park sized to meet the emergency water demands of pressure area 1.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services.

This Exhibit Q consists of the following tasks:

Task Q1 – Preliminary Design

This task entails performing preliminary design efforts for the new El Camino Park reservoir and pump station and the new Roth Park reservoir and pump station that consist of the following:

a. Prepare conceptual design alternatives for the new reservoirs and pump stations for the CITY to select projects for implementation.

b. Conduct the geotechnical investigation necessary for final structural design.

c. Conduct the photogrammetric topographical survey to support final design efforts.

d. Route the inlet/outlet pipelines to avoid existing utilities.

e. Conduct a preliminary design meeting to finalize the design criteria.

f. Prepare a basis of design (preliminary design) report to document the final design
criterion of the new reservoirs and pump stations.

SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

Task Q1 Pre-Design. Under this task, CONSULTANT shall perform the preliminary design work to develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for both of the new reservoir and pump station projects. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives.

2. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:
   a. Review the available geotechnical data for Roth Park and El Camino Park.
   b. Review published maps and geologic reports pertinent to the site areas and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the sites, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
   d. Obtain a drilling permit for the 50-foot-deep borings, as required by the Santa Clara Valley Water District (SCVWD) for all borings deeper than 45 feet.
   e. Drill, log, and sample four (4) borings at both sites (total of eight borings) to a minimum depth of 50 feet using a truck-mounted drilling rig utilizing hollow-stem augers under the direction of a geotechnical engineer. Backfill the borings with cement grout, as required by the SCVWD. Measure and record the depth to groundwater within the borings, if encountered. Dispose of the drill cuttings off-site.
   f. Perform laboratory tests on the collected soil samples to evaluate the engineering characteristics of the subsurface soils, including direct shear and triaxial shear strength, classification, shrink-swell, consolidation, gradation, and moisture density, as judged appropriate.
   g. Perform engineering analyses based on the results obtained from the above tasks and develop recommendations oriented toward the above-stated purpose of these services.
   h. Prepare a report summarizing the findings and recommendations, including a vicinity map, a vicinity geologic map, a site plan, boring logs, laboratory test results, and conclusions and recommendations.

3. Prepare aerial and topographic surveys of the reservoir sites. Set control at the sites. Perform a flight to obtain high-resolution black and white, vertical aerial photography using a precision, calibrated, cartographic camera. Photography will be taken at a height of 1,200 feet above mean terrain, which will result in an average photo scale of 1:2,400 (1 inch = 200 feet). The number of models and photos will vary according to the length of pipeline right of way to be mapped.

   After receiving the new vertical photos, prepare digitally compiled photogrammetric mapping at the site. Mapping will be at a scale of 1 inch = 20 feet, with a contour interval of one foot.

   Following compilation of the digital photogrammetry, a field crew will be mobilized to check the photogrammetric product, and provide a surface utility survey of the reservoir site and pipeline right of way. Planimetric features will be verified and added if necessary. Utilities to be located...
shall include but not be limited to storm and sanitary drainage structures, electric power and electronic transmission facilities, visible water pipelines and structures, and other visible indicators of utility structures. Utilities gathered will be added to the mapping product.

4. Conduct a utility conflict survey to develop potential route(s) for the discharge pipelines at both sites. Review available as-built drawings to identify potential conflicts with existing utilities. Prepare recommended pipeline routes including whether existing utilities should be relocated.

5. Conduct a preliminary design meeting at the CITY’s offices where the CONSULTANT will present the preliminary design. The CITY will prepare an invitation list for the meeting consisting of representatives from operations and engineering. CONSULTANT will document the decisions in the meeting minutes.

6. Prepare a basis of design document for the two new reservoir and pump station projects. This document will provide the final facility configuration and design criteria to initiate final design efforts. The intent is for the CITY to accept the basis of design in this task so that changes in concept, configuration, and design criteria are avoided once the detailed design is in progress. This document will include a brief summary of the selected configuration, the final design criteria, and a summary of the meeting where the alternatives were selected.

**Deliverables:**

1. Conceptual design of the improvement projects.

2. Geotechnical report of the reservoir site.

3. A technical memorandum covering the utility conflict survey and recommendations to avoid/address identified conflicts.

4. Minutes of the reservoir project selection meeting.

5. Basis of design of the selected alternative.
INTRODUCTION

In December 1999, the CITY completed the Water Wells, Regional Storage, and Distribution System Study (1999 Study). The purpose of the 1999 Study was threefold:

- Analyze the water distribution system’s ability to supply the water demands of the City when it is built-out according to the Comprehensive Plan dated 1998 – 2010.
- Evaluate the City’s ability to meet water demands (maximum day plus fire flow) when the SFPUC supply is shut down for eight hours. This is the water supply emergency defined by the California Department of Health Services (DHS) in a letter to the City dated April 2, 1997.
- Assess how the SFPUC’s planned conversion to chloramine disinfection will impact water quality in the City’s water distribution system.

The 1999 Study recommended constructing a new reservoir largely to supply water for fire suppression efforts in pressure areas 1 and 3. Since the completion of that study, the CITY has developed additional alternatives for implementing these improvements. One of the alternatives the CITY is now considering is to build a new reservoir and pump station under the proposed Roth Park site. This site was not available for consideration at the time the 1999 Study was written. This Exhibit covers preliminary efforts for a new reservoir and pump station project at the proposed Roth Park site.

The work described in this Exhibit will only be performed if the City issues a notice to proceed for these services.

This Exhibit R consists of the following tasks:

**Task R1 – Preliminary Design**

This task entails performing preliminary design efforts for the new Roth Park reservoir and pump station that consist of the following:

- Prepare conceptual design alternatives for the new reservoir and pump station for the CITY to select projects for implementation.
- Conduct the geotechnical investigation necessary for final structural design.
- Conduct the photogrammetric topographical survey to support final design efforts.
- Route the inlet/outlet pipeline to avoid existing utilities.
- Conduct a preliminary design meeting to finalize the design criteria.
- Prepare a basis of design (preliminary design) report to document the final design criteria of the new reservoir and pump station.

SCOPE OF SERVICES

The following sections describe the detailed scope of services covered in this exhibit.

**Task R1 Pre-Design.** Under this task, CONSULTANT shall perform the preliminary design work to
develop the basis for the final design efforts.

CONSULTANT shall:

1. Prepare conceptual designs of a maximum of three improvement alternatives for the new reservoir and pump station project. A description, capital construction cost estimate, 8.5x11 inch graphic, and a listing of the pros and cons will be prepared for each of the improvement alternatives.

   This effort will include an assessment of whether the existing Lytton pump station can be used to deliver the water from the Roth Park reservoir site into Area 3, or if a new pump station and supply pipeline is required.

2. Prepare the final geotechnical design criteria. Obtain the field data necessary to provide recommendations for design. Key activities are as follows:

   a. Review the available geotechnical data for Roth Park site.
   b. Review published maps and geologic reports pertinent to the site and develop a summary of geologic and seismic conditions and considerations.
   c. Visit the site, document, and mark boring locations with white paint. Notify Underground Service Alert at least 72 hours in advance of the planned explorations to mark the known utilities within the exploration areas for possible conflicts with our borings.
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