



Utilities Department
Engineering Division

**REQUEST FOR PROPOSAL (RFP) NUMBER 131396
FOR PROFESSIONAL SERVICES**

**TITLE:
ENGINEERING SERVICES FOR DESIGN AND
CONSTRUCTION MANAGEMENT SERVICES FOR THE
RESERVOIR, PUMP STATION, AND WELL AT EL CAMINO
PARK AND MAYFIELD PUMP STATION AUGMENTATION**

Mandatory Pre-proposal Meeting: 10:30 a.m.
Thursday, August 13, 2009

RFP submittal deadline: 3:00 P.M.
Tuesday, August 25, 2009

Contract Administrator: Carolyn Bissett
Carolynn.bissett@cityofpaloalto.org

CITY OF PALO ALTO
PURCHASING/CONTRACT ADMINISTRATION
250 HAMILTON AVENUE
PALO ALTO, CA 94301
(650) 329-2271

**REQUEST FOR PROPOSAL (RFP) NO. 131396
FOR PROFESSIONAL SERVICES**

TITLE:

Engineering Services for Design and Construction Management Services for the
reservoir, pump station, and well at El Camino Park and Mayfield Pump Station
Augmentation

The City of Palo Alto is seeking proposals from qualified firms to provide professional services for all services for the design and construction management of a new underground reservoir, well and pump station in El Camino Park, and for upgrades to the existing Mayfield Pump Station. The Consultant will also assist the Purchasing Division with preparing bid documents, analyzing the bids, and assisting the City during bidding and award. The improvements at El Camino Park and at the Mayfield Pump Station will be bid separately under two separate construction contracts; Mayfield construction shall be substantially complete prior to commencement of El Camino Park construction.

1. ATTACHMENTS

The attachments below are included with this Request for Proposals (RFP) for your review and submittal (see asterisk):

- Attachment A – Proposer's Information Form*
- Attachment B – Certification of Non-discrimination*
- Attachment C – Scope of Work
- Attachment D – Sample Agreement for Professional Services
- Attachment E – Sample Table, Qualifications of Firm Relative to City's Needs
- Attachment F – Sample Cost Proposal Format
- Attachment G – Insurance Requirements*

The items identified with an asterisk (*) shall be filled out, signed by the appropriate representative of the company and returned with submittal.

2. INSTRUCTIONS TO PROPOSERS

3.1 Pre-proposal Conference - Mandatory

A mandatory pre-proposal conference will be held Thursday, August 13, 2009 at 10:30 a.m. in the Utilities Department Conference Room 3, 1007 Elwell Court, Palo Alto, CA, 94303. **All prospective Proposers are required to attend.**

3.2 Examination of Proposal Documents

The submission of a proposal shall be deemed a representation and certification by the Proposer that they:

- 3.2.1 Have carefully read and fully understand the information that was provided by the City to serve as the basis for submission of this proposal.
- 3.2.2 Have the capability to successfully undertake and complete the responsibilities and obligations of the proposal being submitted.
- 3.2.3 Represent that all information contained in the proposal is true and correct.
- 3.2.4 Did not, in any way, collude, conspire to agree, directly or indirectly, with any person, firm, corporation or other Proposer in regard to the amount, terms or conditions of this proposal.
- 3.2.5 Acknowledge that the City has the right to make any inquiry it deems appropriate to substantiate or supplement information supplied by Proposer, and Proposer hereby grants the City permission to make these inquiries, and to provide any and all related documentation in a timely manner.

No request for modification of the proposal shall be considered after its submission on grounds that Proposer was not fully informed to any fact or condition.

3.3 Addenda/Clarifications

Should discrepancies or omissions be found in this RFP or should there be a need to clarify this RFP, questions or comments regarding this RFP must be put in writing and received by the City no later than 1:00 p.m., Wednesday, August 19, 2009. Correspondence shall be e-mailed to Carolynn.bissett@cityofpaloalto.org. Responses from the City will be communicated in writing to all recipients of this RFP. Inquiries received after the date and time stated will not be accepted and will be returned to senders without response. All addenda shall become a part of this RFP and shall be acknowledged on the Proposer's Form.

The City shall not be responsible for nor be bound by any oral instructions, interpretations or explanations issued by the City or its representatives.

3.4 Submission of Proposals

All proposals shall be submitted to:

City of Palo Alto
Purchasing and Contract Administration
250 Hamilton Avenue, Mail Stop MB
Palo Alto, CA 94301

Proposals must be delivered no later than 3:00 p.m. on Tuesday, August 25, 2009. All proposals received after that time will be returned to the Proposer unopened.

The Proposer shall submit five copies plus one original of its proposal in a sealed envelope, addressed as noted above, bearing the Proposer's name and address clearly marked, "**RFP No. 131396 Engineering Services for Design and Construction Management Services for the reservoir, pump station, and well at El Camino Park and Mayfield Pump Station augmentation**". The use of double-sided paper with a minimum 30% post-consumer recycled content is strongly encouraged.

3.4 Withdrawal of Proposals

A Proposer may withdraw its proposal at any time before the expiration of the time for submission of proposals as provided in the RFP by delivering a written request for withdrawal signed by, or on behalf of, the Proposer.

3.5 Rights of the City of Palo Alto

This RFP does not commit the City to enter into a contract, nor does it obligate the City to pay for any costs incurred in preparation and submission of proposals or in anticipation of a contract. The City reserves the right to:

- Make the selection based on its sole discretion;
- Reject any and all proposals;
- Issue subsequent Requests for Proposals;
- Postpone opening for its own convenience;
- Remedy technical errors in the Request for Proposals process;
- Approve or disapprove the use of particular subconsultants;
- Negotiate with any, all or none of the Proposers;
- Accept other than the lowest offer;
- Waive informalities and irregularities in the Proposals and/or
- Enter into an agreement with another Proposer in the event the originally selected Proposer defaults or fails to execute an agreement with the City.

An agreement shall not be binding or valid with the City unless and until it is executed by authorized representatives of the City and of the Proposer.

3. Proposed tentative RFP Timeline:

RFP Issued	Aug. 5, 2009
Mandatory Pre-Proposal Meeting	Aug. 13, 2009
Deadline for questions, clarifications	Aug. 19, 2009
Proposals Due	Aug. 25, 2009
Finalist Identified	Sept. 3, 2009
Consultant Interviews	Sept. 10, 2009
Consultant selection and contract preparation	Sept. 14, 2009
Contract awarded	Sept. 28, 2009
Work commences	Nov. 9, 2009

4. Information to be Submitted (to be submitted in this order only)

These instructions outline the guidelines governing the format and content of the proposal and the approach to be used in its development and presentation. The intent of the RFP is to encourage responses that clearly communicate the Proposer's understanding of the City's requirements and its approach to successfully provide the products and/or services on time and within budget. Only that information which is essential to an understanding and evaluation of the proposal should be submitted. Items not specifically and explicitly related to the RFP and proposal, e.g. brochures, marketing material, etc. will not be considered in the evaluation.

All proposals shall address the following items in the order listed below and shall be numbered 1 through 8 in the proposal document.

5.1 Chapter 1 – Proposal Summary

This Chapter shall discuss the highlights, key features and distinguishing points of the Proposal. A separate sheet shall include a list of individuals and contacts for this Proposal and how to communicate with them. Limit this Chapter to a total of three (3) pages including the separate sheet.

5.2 Chapter 2 – Profile on the Proposing Firm(s)

This Chapter shall include a brief description of the Prime Proposer's firm size as well as the proposed local organization structure. Include a discussion of the Prime Proposer firm's financial stability, capacity and resources. Include all other firms participating in the Proposal, including similar information about the firms.

Additionally, this section shall include a listing of any lawsuit or litigation and the result of that action resulting from (a) any public project undertaken by the Proposer or by its subcontractors where litigation is still pending or has

occurred within the last five years or (b) any type of project where claims or settlements were paid by the consultant or its insurers within the last five years.

5.3 Chapter 3 – Qualifications of the Firm

This Chapter shall include a brief description of the Proposer's and sub-Proposer's qualifications and previous experience on similar or related projects. Provide a list of recent projects with direct experience where Design and Construction Management projects were utilized. Provide in a table format (see Sample Table, Attachment E) descriptions of pertinent project experience with other public municipalities and private sector that includes a summary of the work performed, the total project cost, the percentage of work the firm was responsible for, the period over which the work was completed, and the name, title, and phone number of client's to be contacted for references. Give a brief statement of the firm's adherence to the schedule and budget for the project.

This chapter shall include information regarding any relationships with firms and/or individuals who **may** submit proposals in response to the RFPs being developed.

5.4 Chapter 4 – Work Plan or Proposal

This Chapter shall present a well-conceived work plan where Design and CM services are well defined, include the approach and methodology to be used. Include a full description of major tasks and subtasks. This section of the proposal shall establish that the Proposer understands the City's objectives and work requirements and Proposer's ability to satisfy those objectives and requirements. Succinctly describe the proposed approach for addressing the required services and the firm's ability to meet the City's schedule, outlining the approach that would be undertaken in providing the requested services.

5.5 Chapter 5 – Proposed Innovations (*Optional*)

The Proposer may also suggest technical or procedural innovations that have been used successfully on other engagements and which may provide the City with better service delivery. In this Chapter discuss any ideas, innovative approaches, or specific new concepts included in the Proposal that would provide benefit to the City.

5.6 Chapter 6 – Project Staffing

This Chapter shall discuss how the Proposer would propose to staff this project. Key project team members shall be identified by name, title and specific responsibilities on the project. An organizational chart for the project

team and resumes for key Proposer personnel shall be included. Key personnel will be an important factor considered by the review committee. Changes in key personnel may be cause for rejection of the proposal.

The proposal shall provide sufficient information on the proposer's experience, knowledge, ability, approach, and understanding of the project. Proposer shall include a statement of qualification and project references with names and phone numbers of the contacts.

The proposal shall identify the key members of the project team. The role and the resume of each key member shall be included in the proposal. The proposal shall state the amount of involvement and availability of each key member.

5.7 Chapter 7 – Proposal Exceptions

This Chapter shall discuss any exceptions or requested changes that Proposer has to the City's RFP conditions, requirements and sample contract. If there are no exceptions noted, it is assumed the Proposer will accept all conditions and requirements identified in the Attachment D – "Sample Agreement for Services." **Items not excepted will not be open to later negotiation.**

Proposers shall be prepared to accept the terms and conditions of the Agreement, including Insurance Requirements in Attachment G. If a Proposer desires to take exception to the Agreement, Proposer shall provide the following information in Chapter 7 of their submittal package. Please include the following:

- Proposer shall clearly identify each proposed change to the Agreement, including all relevant Attachments.
- Proposer shall furnish the reasons for, as well as specific recommendations, for alternative language.

The above factors will be taken into account in evaluating proposals. Proposals that take substantial exceptions to the proposed Agreement may be determined by the City, at its sole discretion, to be unacceptable and no longer considered for award.

5.8 Chapter 8 – Proposal Costs Sheet and Rates (One hard copy to be received under separate sealed envelope and one electronic copy in Excel on a CD-Rom). The proposer shall provide one copy of the fee information for the basic services and the schedule of charges for the additional services.

The fee information is relevant to a determination of whether the fee is fair and reasonable in light of the services to be provided. Provision of this information assists the City in determining the firm's understanding of the project, and provides staff with tools to negotiate the cost, provide in a table (See Sample Table, Attachment F).

Consultant shall provide the following information

- Direct labor rates for proposed staff;
- Overhead rate and breakdown of overhead elements;
- Subconsultant billing rates and mark-up percentage for ODC's (other direct costs); and identify all reimbursable expenses.
- Most recent complete financial instrument that would establish Proposer's ability to complete the obligations of the contract resulting from this solicitation. (optional)

This Chapter shall include the proposed costs to provide the services desired. Include any other cost and price information, **plus a not-to-exceed amount**, that would be contained in a potential agreement with the City. The hourly rates may be used for pricing the cost of additional services outlined in the Scope of Work.

PLEASE NOTE: The City of Palo Alto does not pay for services before it receives them. Therefore, do not propose contract terms that call for upfront payments or deposits.

5. Contract Type and Method of Payment

It is anticipated that the agreement resulting from this solicitation, if awarded, will be a **not-to-exceed budget per task** form of contract. A Sample Agreement of Services is provided as Attachment D. The method of payment to the successful Proposer shall be on a **per task** basis with a maximum "not to exceed" fee as set by the Proposer in the proposal or as negotiated between the Proposer and the City as being the maximum cost to perform all work. This figure shall include direct costs and overhead, such as, but limited to, transportation, communications, subsistence and materials and any subcontracted items of work. Progress payments will be based on a percentage of project completed.

Insurance Requirements

The selected Proposer(s), at Proposer's sole cost and expense and for the full term of the Agreement or any extension thereof, shall obtain and maintain, at a minimum, all of the insurance requirements outlined in Attachment G.

All policies, endorsements, certificates and/or binders shall be subject to the approval of the Risk Manager of the City of Palo Alto as to form and content. These

requirements are subject to amendment or waiver if so approved in writing by the Risk Manager. The selected Proposer agrees to provide the City with a copy of said policies, certificates and/or endorsement upon award of contract.

6. Review and Selection Process

City staff will evaluate the proposals provided in response to this RFP based on the following criteria:

- 7.1 Ability to enforce design and construction schedule and constraints;
- 7.2 Experience and qualifications of key staff; experience in design and construction management projects, including references and change order histories
- 7.3 Cost;
- 7.4 Complete proposal, ability to meet the terms and conditions of City's agreement;
- 7.5 Proposal's clarity;
- 7.6 Proposer's work plan; demonstrated ability in design thoroughness and design constructability;
- 7.7 Understanding of project scope and schedule.

The selection committee will make a recommendation to the awarding authority. The acceptance of the proposal will be evidenced by written Notice of Award from the City's Purchasing/Contract Administration Division to the successful Proposer.

7. Oral Interviews

Proposers may be required to participate in an oral interview. The oral interview will be a panel comprised of members of the selection committee.

Proposers may only ask questions that are intended to clarify the questions that they are being asked to respond.

Each Proposer's time slot for oral interviews will be determined randomly. Proposers who are selected shall make every effort to attend. If representatives of the City experience difficulty on the part of any Proposer in scheduling a time for the oral interview, it may result in disqualification from further consideration.

8. Public Nature of Proposal Material

Responses to this RFP become the exclusive property of the City of Palo Alto. At such time as the Administrative Services Department recommends to form to the City Manager or to the City Council, as applicable, all proposals received in response to this RFP becomes a matter of public record and shall be regarded as public records, with the exception of those elements in each proposal which are

defined by the Proposer as business or trade secrets and plainly marked as "Confidential," "Trade Secret," or "Proprietary". The City shall not in any way be liable or responsible for the disclosure of any such proposal or portions thereof, if they are not plainly marked as "Confidential," "Trade Secret," or "Proprietary" or if disclosure is required under the Public Records Act. Any proposal which contains language purporting to render all or significant portions of the proposal "Confidential," "Trade Secret," or "Proprietary" shall be regarded as non-responsive.

Although the California Public Records Act recognizes that certain confidential trade secret information may be protected from disclosure, the City of Palo Alto may not accept or approve that the information that a Proposer submits is a trade secret. If a request is made for information marked "Confidential," "Trade Secret," or "Proprietary," the City shall provide the Proposer who submitted the information with reasonable notice to allow the Proposer to seek protection from disclosure by a court of competent jurisdiction.

9. Collusion

By submitting a proposal, each Proposer represents and warrants that its proposal is genuine and not a sham or collusive or made in the interest of or on behalf of any person not named therein; that the Proposer has not directly induced or solicited any other person to submit a sham proposal or any other person to refrain from submitting a proposal; and that the Proposer has not in any manner sought collusion to secure any improper advantage over any other person submitting a proposal.

10. Disqualification

Factors such as, but not limited to, any of the following may be considered just cause to disqualify a proposal without further consideration:

- 12.1 Evidence of collusion, directly or indirectly, among Proposers in regard to the amount, terms or conditions of this proposal;
- 12.2 Any attempt to improperly influence any member of the evaluation team;
- 12.3 Existence of any lawsuit, unresolved contractual claim or dispute between Proposer and the City;
- 12.4 Evidence of incorrect information submitted as part of the proposal;
- 12.5 Evidence of Proposer's inability to successfully complete the responsibilities and obligation of the proposal; and
- 12.6 Proposer's default under any previous agreement with the City, which results in termination of the Agreement.

11. Non-Conforming Proposal

A proposal shall be prepared and submitted in accordance with the provisions of these RFP instructions and specifications. Any alteration, omission, addition,

variance, or limitation of, from or to a proposal may be sufficient grounds for non-acceptance of the proposal, at the sole discretion of the City.

12. Gratuities

No person shall offer, give or agree to give any City employee any gratuity, discount or offer of employment in connection with the award of contract by the city. No city employee shall solicit, demand, accept or agree to accept from any other person a gratuity, discount or offer of employment in connection with a city contract.

13. Firms or persons not eligible to submit a proposal

In order to avoid any conflict of interest or perception of a conflict of interest, Proposer(s) selected to provide professional services under this RFP will be subject to the following requirements:

- 14.1 The Proposer(s) who works on the procurement will be precluded from submitting proposals or bids as a prime contractor or subcontractor of the ultimate procurement.
- 14.2 The Proposer(s) may not have interest in any potential Proposer for the ultimate procurement.

End of Section

Attachment A
Proposer's Information Form

PROPOSER (please print):

Name: _____

Address: _____

Telephone: _____ Fax: _____

Contact person, title, telephone and fax number: _____

Taxpayer Identification No. _____
(or Social Security Number if Sole Proprietorship)

Proposer, if selected, intends to carry on the business as (check one):

☐ Individual ☐ Joint Venture

☐ Partnership

☐ Corporation

When incorporated? _____

In what state? _____

When authorized to do business in California? _____

☐ Other (explain): _____

ADDENDA

To assure that all Proposers have received each addendum, check the appropriate box(es) below. Failure to acknowledge receipt of an addendum/addenda may be considered an irregularity in the Proposal:

Addendum number(s) received: ☐ 1; ☐ 2; ☐ 3; ☐ 4; ☐ 5; ☐ 6;

Or, ☐ _____ No Addendum/Addenda Were Received (**check and initial**).

PROPOSER'S SIGNATURE

No proposal shall be accepted which has not been signed in ink in the appropriate space below:

By signing below, the submission of a proposal shall be deemed a representation and certification by the Proposer that they have investigated all aspects of the RFP, that they are aware of the applicable facts pertaining to the RFP process, its procedures and requirements, and they have read and understand the RFP. No request for modification of the proposal shall be considered after its submission on the grounds that the Proposer was not fully informed as to any fact or condition.

1. If Proposer is **INDIVIDUAL**, sign here

Date: _____

Proposer's Signature

Proposer's typed name and title

2. If Proposer is **PARTNERSHIP** or **JOINT VENTURE**; at least two (2) Partners shall sign here:

Partnership or Joint Venture Name (type or print)

Date: _____

Member of the Partnership or Joint Venture signature

Date: _____

Member of the Partnership or Joint Venture signature

3. If Proposer is a **CORPORATION**, the duly authorized officer shall sign as follows:

The undersigned certify that he/she is respectively:

Signature and _____
Title

Of the corporation named below; that they are designated to sign the Proposal Cost Form by resolution (attach a certified copy, with corporate seal, if applicable, notarized as to its authenticity or Secretary's certificate of authorization) for and on behalf of the below named CORPORATION, and that they are authorized to execute same for and on behalf of said CORPORATION.

Corporation Name (type or print)

By: _____ Date: _____

Title: _____

Attachment B Certification of Nondiscrimination

As suppliers of goods or services to the City of Palo Alto, the firm and individuals listed below certify that they do not discriminate in employment of any person because of race, skin color, gender, age, religion, disability, national origin, ancestry, sexual orientation, housing status, marital status, familial status, weight or height of such person; that they are in compliance with all Federal, State and local directives and executive orders regarding nondiscrimination in employment.

1. If Proposer is **INDIVIDUAL**, sign here:

Date: _____
Proposer's Signature _____
Proposer's typed name and title _____

2. If Proposer is **PARTNERSHIP** or **JOINT VENTURE**, at least (2) Partners or each of the Joint Venturers shall sign here:

Partnership or Joint Venture Name (type or print) _____
Date: _____ Member of the Partnership or Joint Venture signature _____
Date: _____ Member of the Partnership or Joint Venture signature _____

3. If Proposer is a **CORPORATION**, the duly authorized officer(s) shall sign as follows:

The undersigned certify that they are respectively:

_____ and _____
Title Title

Of the corporation named below; that they are designated to sign the Proposal Cost Form by resolution (attach a certified copy, with corporate seal, if applicable, notarized as to its authenticity or Secretary's certificate of authorization) for and on behalf of the below named CORPORATION, and that they are authorized to execute same for and on behalf of said CORPORATION.

Corporation Name (type or print) _____
By: _____ Date: _____
Title: _____

ATTACHMENT C

SCOPE OF SERVICES

City of Palo Alto (Public Water System No. 431009) Engineering Services for Design and Construction Management Services for the Reservoir, Pump Station, and Well at El Camino Park and Mayfield Pump Station Augmentation (RFP #131396)

I. INTRODUCTION

The Consultant will provide all services for the design and construction management of a new underground reservoir, well and pump station in El Camino Park, and for upgrades to the existing Mayfield Pump Station. The Consultant will also assist the Purchasing Division in preparing the bid documents and analyzing the bids. The improvements at El Camino Park and at the Mayfield Pump Station will be bid separately under two separate construction contracts; Mayfield construction shall be substantially complete prior to commencement of El Camino Park construction.

II. LIST OF ATTACHMENTS

- C-1 List of Reference Materials
- C-2 Figure 1.1, Existing Distribution System Schematic (Carollo 1999 Study)
- C-3 Figure 4.1, Existing Water System Supply Schematic
- C-4 El Camino Park Reservoir, Pump Station and Well (Conceptual Renderings).
- C-5 Figure 9.16, Schematic of Mayfield Reservoir and Pump Station (Carollo 1999 Study)
- C-6 Supply sources for pressure areas, normal and emergency operations
- C-7 Chapter 2 from the project Environmental Impact Report

III. BACKGROUND

A. CITY OF PALO ALTO WATER SUPPLY

The City of Palo maintains a water system consisting of 5 turnouts from the SFPUC's Hetch Hetchy aqueduct system, 6 reservoirs, 5 booster pumping stations in foothills areas, Mayfield Pump Station, 5 wells, and approximately 214 miles of water transmission and distribution mains and approximately 19,500 metered connections in 9 pressure areas (zones). The City's primary source of potable water, since 1962, has been the Hetch Hetchy aqueduct system, which has five connection points in various parts of the City. The 1999 Water Wells, Regional Storage, and Distribution System Study analyzed the impact of a severe emergency on Palo Alto's water distribution system. A large earthquake, for instance, could result in shutdown of the City's main water supply, the San Francisco Public Utilities Commission (SFPUC) Hetch-Hetchy water system, for as long as 60 days. Coupled with the need to extinguish multiple fires in the hours immediately following such an earthquake, the City's water system would not be able to supply sufficient water to meet demands, even if extensive water conservation measures were implemented during the disaster. The study concluded that the best way to provide for basic water needs would be to implement a multifaceted approach to augmenting the City's existing emergency water supply by constructing an underground 2.5 million gallon reservoir with pump station; rehabilitating up to 5 existing water wells, constructing 3 new wells, and upgrading the existing Mayfield Pump Station. The water system is graphically represented in Attachments C-2 and C-3.

ATTACHMENT C

B. EMERGENCY WATER SUPPLY PROJECT

In 1997 the California Department of Public Health (CDPH), in a letter to the City, recommended that the City have sufficient storage capacity to supply 8 hours of the maximum day demand, not including fire reserves, in event that the Hetch Hetchy supply is interrupted, such as during a severe earthquake. The City hired a consultant in 1997 to conduct a comprehensive study of its water distribution system. A key element of the study was to develop a plan for having a standalone water supply capable of meeting CDPH's recommendation. In December of 1999 a report titled the "Water Wells, Regional Storage, and Distribution System Study" (1999 Study) was issued, documenting the results of the study. To meet the CDPH emergency supply recommendation, the study recommended construction of an additional 2.5 MG storage reservoir and pump station, 3 new wells, rehabilitation of up to five existing standby wells, and expansion of the Mayfield Pump Station. The City Council authorized the Emergency Water Supply Project to implement these recommendations.¹ A project environmental impact report (EIR) was completed in March of 2007. Design and construction are in progress for 2 of the new wells, at Eleanor Pardee Park and at the Community Gardens behind the Main Library on Newell Road.

C. PROJECT DESCRIPTION

The project is to construct a new 2.5 million gallon underground reservoir, a new well and a new pump station in El Camino Park, and upgrade the existing Mayfield Pump Station, which is at a different location in the City. The new pump station in El Camino Park will replace an existing water turnout station (existing Lytton Station) which has booster pumping and pressure regulating equipment. The new pump station (new Lytton Station, (hereafter called Lytton Station) will be constructed at the location currently occupied by the existing station, and will be mostly underground. Lytton Station will receive Hetch Hetchy water and distribute it to Pressure Area 1 and Pressure Area 3. In addition to pumping and pressure regulating equipment, Lytton Station will contain the new well, a permanent standby emergency generator, and will have equipment and piping for handling the well discharge, reservoir inflow and outflow, and the reservoir venting system if possible. Most of Lytton Station will be below ground, with on above ground floor matching the footprint and approximate height of the existing station. The new well will be a standby well for use only in emergencies. The well should be designed to provide at least 1,000 gpm, and it is expected to be at least 500 feet deep. The well facility will include equipment for chloramination and chemical storage.

Underground Reservoir

The underground reservoir will consist of an underground reinforced concrete water storage tank with connecting pipelines and other necessary appurtenances. The reservoir will connect to the existing water distribution system providing additional maximum flow rates through a new pipeline connection. Located in the central portion of the park, the finished height of the tank will be about three to four feet below surface level. The reservoir tank will include approximately a 50-square foot area for an access hatch and vent located on top of the reservoir, at the surface level. The hatch and vent could be buried or designed to blend in with existing uses. The easement required for the reservoir is a sub-surface rectangular easement measuring 38,602 square feet. Rights included in the easement are the right to maintain the tank, including surface access to it. The reservoir and its easement will be located under the baseball sports fields, so field use (or parking or landscaping) can

¹ For additional information on the Emergency Water Supply Project, visit website <http://www.cityofpaloalto.org>, under Utilities Department, under Utility News Updates click "more" then Emergency Water Supply, also references in Attachment C-1 and figures in C-2 to C-6.

ATTACHMENT C

continue after construction. Buildings or permanent structures will not be permitted on the surface level. Upon completion of construction, El Camino Park will be restored and available for park and field use.

Pump Station and Well

The reservoir pump station is an above-ground structure approximately 26' by 44' and will include an underground well, pumps, ventilation for the reservoir, and other appurtenances. The new facilities will replace an existing pump station and will be constructed within the existing fence line of that pump station. The station will be enclosed with secured, steel chain link fencing similar to the existing chain link security fence surrounding Lytton Station. Operation of the reservoir, pump station and well will be affected by the extent of emergency conditions. During non-emergency daily operations, the reservoir pump station will be operated on a daily basis to cycle approximately 25 percent of the water in the reservoir to keep the water fresh. Inspection of the facilities and maintenance will occur at intervals, probably twice a year. Access to the pump station will be required on a daily basis. The easement for the pump station and well includes both surface and subsurface rights. The easements required for the pump station and well easement measures approximately 5,741 square feet.

Connecting Pipeline

The pipeline will provide for connections between the reservoir, well and the pump station. The easement is sub-surface. Located under the ball field, the easement will permit sports activities to continue as well as landscaping and parking. No buildings or other permanent structure will be allowed on the surface. The easement required for the connecting pipeline easement measures approximately 5,662 square feet.

Overflow Pipeline

The overflow pipeline will provide for overflow from the reservoir to an existing drain to the south. The easement is sub-surface, 20 feet wide and totals 4,875 square feet. Located under the ball field, the easement will permit sports activities to continue as well as landscaping and parking. No buildings or other permanent structure will be allowed on the surface.

Water Supply Line

The water supply line easement allows an underground water pipeline connecting the Hetch-Hetchy main water line to the pump station and well. It is 15-feet wide and totals 6,253 square feet. Easement rights are similar to the other pipeline easements.

The new facilities in El Camino Park are to have minimal impact to the existing park. In so far as possible, all facilities projecting above ground shall be confined within the existing fence line of Lytton Station. Any structures which cannot be located within the confines of the fence (such as reservoir access hatch and/or vent structure) shall be either buried (covered at grade) or shall blend in with existing park uses. The park will be available for the contractor's use during construction as the soccer and baseball field activities will be temporarily relocated to another location. See Chapter 2 of the project EIR (copy on Purchasing's website) for additional information about the reservoir, pump station and well.

Following construction it is anticipated that the contractor will operate and test the El Camino Park facilities for a year to verify operation and train City Operators on its use.

ATTACHMENT C

The objective of the Mayfield Pump Station Augmentation is to increase capacity from 8,000 gpm to 14,700 gpm and increase discharge pressure pump water from existing Mayfield Reservoir to pressure area 2. Attachment C-5 shows the concept of the Mayfield Pump Station Augmentation. Additional descriptions are on pages 9-28 and 9-74 of the 1999 Study.

D. AVAILABLE DATA AND INFORMATION

Items with a † sign are available on the City's Purchasing Solicitations web site:

http://www.cityofpaloalto.org/depts/asd/current_solicitations.asp.

- †Water Wells, Regional Storage, and Distribution System Study (1999 Study) Carollo Engineers, December 1999. This document is the master planning document for the City's water distribution system, including the Emergency Water Supply project.
- †EIR for the Emergency Water Supply and Storage Project, ESA, in two volumes 1) November 2006 (draft EIR), 2) February 2007 (final EIR – responses to comments).
- † Mitigation Monitoring and Reporting Plan (MMRP) for the EIR.
- †Report "Exploratory Drilling/Preliminary Basis-of-Design", Martin B. Feeney, Consulting Hydrogeologist, May 24, 2004. This report contains hydrogeologic data from drilling an exploratory (test) well in 2003 in El Camino Park, to determine the feasibility and potential discharge flow rate of a new well. The hole was drilled to a depth of 800 feet.
- †Groundwater level monitoring data for El Camino Park (include the monitoring well location map).

Ground water depth and soils data for the two well sites is limited. A test well was drilled by the USGS for the Santa Clara Valley Water District in close proximity to the Eleanor Pardee Park well site.² Additional geologic and well data for the City of Palo Alto is contained in Chapters 6 and 7, and Appendix G, of the 1999 Study.

IV. SCOPE OF WORK

A. GENERAL DESCRIPTION OF CONSULTANT'S WORK

The consultant shall be familiar with existing documents and studies listed, conduct any necessary investigations and provide the City with services to assist in furnishing a bid-ready design package with a verified list of qualified contractors for the reservoir, pump station and well improvements in El Camino Park, and the upgrade of the existing Mayfield Pump Station. The improvements in El Camino Park and at Mayfield Pump Station will be bid as two separate projects, with the expectation that the Mayfield Pump Station project will be bid before the El Camino Park improvements project. Design deliverables include a Preliminary Design Report (which includes both projects), and two sets of 65%, 90% and 100% design documents and bid documents, one set for each project. Additionally the Consultant will provide engineering services during the bidding and award phases, and construction management services for both projects.

² See Attachment C-1, List of Reference Materials, "Report on Exploratory Drilling/Preliminary Basis-of-Design", Martin B. Feeney Consulting Hydrogeologist, 2004.

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B. PROJECT MANAGEMENT

1. Invoicing

- a. The monthly invoice shall be itemized by task, by employee/classification hours worked and reimbursable expenses by type of expense. Subcontractor costs shall be similarly itemized by task, and the subcontractor's invoice (with any backup data) shall be attached to the consultant's invoice.
- b. Progress Report: Along with its monthly billing, the consultant shall provide a summary of the work done, and milestone accomplishments attained, during the corresponding billing period.

2. Work Plan and Project Schedule

- a. Project Schedule. Prepare and submit with the monthly invoice:
 - i. A Work Breakdown Structure (WBS) chart identifying the required tasks and deliverables for the Project,
 - ii. A Program Evaluation and Review Technique (PERT) chart scheduling logic, sequences, and duration of the tasks and deliverables including identifying the critical path of the schedule,
 - iii. A Gantt chart in MS Project representing the duration of the Project tasks, deliverables and milestones against the progression of time and identifying critical path tasks along with respective task WBS task cost allocations with columns showing budget dollars expended, % of budget, and projected expenditures for the next billing period.

C. DESIGN

1. Meetings and Coordination during the design phase.

For all meetings with the City, the consultant will establish the meeting agenda beforehand (coordinating with engineering staff) and prepare and distribute meeting minutes.

- a. Project Kickoff Meeting
This will be the first formal meeting with City (e.g. Utilities Engineering and Operations, Planning, Parks, Public Works Engineering, etc.), outside agency and/or public stakeholders, to orient them on the project and exchange information. The meeting agenda should be prepared and distributed at least 5 work days before the kickoff meeting. The consultant shall distribute the itemized breakdown work plan with budget breakdown and a baseline project schedule before or during the meeting.
- b. Regular project meetings with engineering staff
The Consultant and City staff will meet regularly during design, on an as-needed basis, generally every 2 weeks and no less frequently than monthly, to discuss project progress (from an updated schedule), project issues, needs and new developments, upcoming activities, and open and new action items. For the proposal, assume meetings will be bi-weekly. On-site project meetings are preferred, but, at the City's discretion, the consultant may teleconference in to the meeting.
- c. Review of Draft Preliminary Design Report

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Soon after submitting the draft Preliminary Design Report, the Consultant shall meet with City staff to present the design concept, using visual aids to facilitate understanding. It is anticipated that 2 meetings will be required, one with Utilities Operations staff, and the other with staff from other departments such as the Parks and Recreation and Planning departments.

- i. Meeting with Operations
Meet with Utilities Operations and Engineering staff to present the project concept and obtain their input into the design. The consultant shall be prepared to describe the proposed facilities, equipment and operating schemes, and to elicit input from Operations staff regarding their requirements and preferences. The consultant should make a strong effort to ensure staff members have a good understanding of the how the proposed facilities are to be operated and how it will affect other parts of the distribution system. The discussion shall include a brief description of operation and maintenance requirements, and of the proposed control and instrumentation scheme. The consultant shall document the concerns and needs expressed by City personnel, and the design team's responses.
 - ii. Meeting with staff from various City departments
Meet with City staff from various departments to present the project concept and obtain their input into the design. The design concept should be presented in sufficient detail that staff has a clear understanding of the design concept and how it will affect their area of responsibility. The objective of this very important meeting is for stakeholders critique and "buy into" the design, and to minimize surprises during or after construction. The major construction activities and environmental mitigative impacts, as well as public outreach and stakeholder involvement will also be discussed at this meeting. The agenda should be distributed at least one week before the meeting is held.
 - d. 65% design meeting
The consultant will conduct a meeting with Engineering and Operations staff to explain the progress and pertinent issues, and to take verbal comments from staff.
 - e. 90% design meeting
The consultant will conduct a meeting with Engineering and Operations staff to explain the progress and pertinent issues, and to take verbal comments from staff.
2. Preliminary Design Analysis (Basis of Design)
- The design will be based on an analysis of all factors that could affect the design and operation of the reservoir, pumping and well systems. The design analysis shall be documented in a Preliminary Design Report. The consultant shall not substantially advance the design into the 65% design phase until the Preliminary Design Report is accepted by the City. The factors to be analyzed include, but are not limited to,
- a. Geotechnical (structural design) and hydrogeologic (well design) conditions.
 - b. Environmental factors and mitigations, and, as applicable, potential impacts of construction activities on neighboring businesses and residences (confirmation and/or extension of analysis in EIR).
 - c. Permit requirements.
 - d. Impacts to existing utilities during construction, and post-construction utility requirements and/or modifications.

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- e. Construction staging plan, factoring site constraints as well as public outreach.
 - f. Water quality considerations and on-site sampling equipment.
 - g. Control and instrumentation strategies with SCADA block diagrams.
 - h. Major equipment and materials of construction.
 - i. Operating factors, including,
 - Operation of facilities during normal conditions, and the affects on operation of the existing water distribution facilities, with set points identified for each scenario.
 - Operation under emergency scenarios.
 - Maintenance requirements.
 - j. Plan for temporary pressure regulating and/or booster by-pass pumping during construction.
 - k. For the new well:
 - i. Estimated well yield (flow) capacity.
 - ii. Chloramine dosing and chemical storage.
 - l. Estimated cost of construction including the construction contract, temporary facilities and construction management costs. Estimates are to be based on the current market and on recent bids (escalated per ENR indices) for similar, successful projects (at least 3 projects). Document cost sources.
 - m. Estimated annual O&M costs for the facilities, with a benefit-cost analysis for key alternatives (equipment, operation, etc.).
 - n. Thorough constructability review.
 - o. Bid-ready documents for Mayfield and El Camino conforming to City Purchasing guidelines including a verified list of qualified contractors.
3. Architectural Review and Approval
- The Consultant shall prepare drawings, including architectural renderings in perspective, of the above ground structures and landscaping at the El Camino Park and Mayfield sites for presentation to the Architectural Review Board (ARB). For more information on the architectural review process visit the Board's website: <http://www.cityofpaloalto.org/knowzone/news/details.asp?NewsID=201&TargetID=115,206>
- a. Preliminary Design Concept
 - Prepare building exterior and landscaping conceptual plans, sketches and architectural renderings, and present the proposed architectural concepts to the Architectural Review Board (ARB) to hear their suggestions for the design, and for preliminary endorsement of the concept. Prepare 3 conceptual alternatives for buildings and 3 for landscaping. Expect two meetings: One to introduce the design concepts to the ARB and take their suggestions and a second presentation confirm Consultant's incorporation of suggestions and hear any new suggestions. The design shall not proceed beyond the Preliminary Design/Report stage until the ARB has given the design concept a favorable review.
 - b. ARB design approval

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Present the final design to the ARB for approval. Expect at least two presentations before the Board, incorporating revisions as necessary to obtain formal approval by the ARB, Planning Director and/or City Council.

4. Deliverables

Provide hardcopies and electronic (Word and/or Autocad) copies of each submittal.

a. Preliminary Design Report (draft and final)

The Preliminary Design Report shall include design criteria and assumptions (design basis), conceptual drawings (sketches), outline specifications, and written descriptions of the projects. The text should be inclusive of the main factors of the design, and concise. The conceptual drawings can be 11" x 17" or 8½" x 11" as applicable. More specifically the report shall include,

i. Descriptions of,

- The projects to be built.
- The work performed in the preliminary design phase.
- The assumptions on which the design is based, such as existing distribution system characteristics and requirements, geotechnical & hydrogeologic conditions, environmental setting and requirements, ground water quality considerations, facility operation considerations/factors (normal and emergency), etc.
- The design criteria/basis of design, including anticipated well discharge flow rate.
- The design alternatives considered, including explanatory text and drawings/diagrams as applicable. (e.g. equipment, piping and structure layout, landscaping)
- The evaluation of alternatives and the reasons for selection of the preferred alternative.
- Permitting requirements and timeframe.
- The construction phase activities and their impact on City, commercial and residential activities and local transportation and environment corridors, as well as specific mitigating measures, including a water facility shutdown plan.
- Plans for temporary facilities and operating schemes for temporary pumping and pressure regulating to replace Lytton Station, and at Mayfield Pumping Station.

ii. Conceptual drawings (ACAD renderings)

- Site plan showing the relationship of the proposed facilities to the site. The site plan will show existing and proposed utilities and structures. Include connection points to nearby storm or sanitary sewers for reservoir overflow and drainage piping, and for discharging during well testing, development, flushing and periodic exercising.
- Conceptual design (approx. 35%) drawings of the above and below ground structures, in plan and section, and the proposed landscaping. Structure plan and sections shall show the location and scale of equipment.
- Control and instrumentation block diagrams (including logic scheme) detailing the control and monitoring of the systems.
- Proposed landscaping and park restoration.

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- Architectural colored renderings, in perspective, of the above ground facilities showing the environmental setting. These are meant to be conceptual renderings suitable for presentation to the Architectural Review Board (ARB) or the City Council.
 - Operational by-pass plan with site layout of temporary pumping and pressure regulating to be used during construction.
- iii. Outline specifications (not necessarily in bid format) of materials and major equipment.
 - iv. An estimation of construction costs: construction, temporary facilities and construction management.
 - v. Estimated annual O&M costs for the facilities, with a simple benefit-cost analysis for key alternatives (equipment, operation, etc.).
 - vi. Preliminary schedule of design and construction
 - vii. Submit 10 copies with electronic files on CD each of the draft and final preliminary design reports.
5. Design Plans and Specifications
- The City has a set of standard “boiler plate” plans and IFB specifications. The City standard is a sample of the agreement “Sample Formal Contract” and related front end requirements and conditions. It is anticipated that the Consultant will prepare General Conditions which extend, as needed for this project, but do not conflict with, the City's existing front end formal requirements. Prepare separate submittals for the El Camino Park and Mayfield improvements.
- a. 65% submittal: In progress drawings and specifications for the projects (El Camino Park and Mayfield). The drawings should include layout drawings for each discipline. Provide 10 copies of this submittal for City review, one set of 10 for each project (20 copies total).
 - b. 90% submittal: This is to be essentially the complete draft we of the bid plans and specifications. Provide 10 copies of this submittal for City review, each project.
 - c. 100% submittal: This is essentially a proof set prior to printing the bid packages. Provide 10 copies of this submittal to the City for final review, each project.
6. Bid documents. Provide 30 sets of the bid package for each project. Also, for each project, provide electronic copies of the plans and specifications.
7. Bid and Contract Award Services
- Services during bidding and award include;
- Printing and mailing of the bid documents, in coordination with Purchasing.

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- Preparation of addenda for distribution through Purchasing
- The printing and mailing of bid documents and addenda shall be coordinated by the City's Purchasing Department, which has responsibility to prepare portions of the Information for Bidders (IFB) bid package.
- Bid analysis compilation prepared in Excel on line item basis.
- Miscellaneous items which would be typical during bidding and/or award.
- Prepare a construction set of Plans and Specifications incorporating the addenda. Provide 25 sets.

The El Camino Park Reservoir, Pump Station and Well project and the Mayfield Pump Station Augmentation will be bid separately.

D. CONSTRUCTION MANAGEMENT AND SUPPORT

General

This project is of high public visibility and criticality to the City's water system. The consultant's Construction Management team (CM) shall apply professional knowledge, skills and expertise in the fields of project management, construction management, quality management and verification, field inspections, project controls, change control, claims prevention, contracting, materials testing, survey, and contract administration for all aspects of the scope of work described below in order to facilitate completion of the Project, within budget, on schedule, and in compliance with all regulatory / permitting project requirements. The CM shall assign only personnel whose qualifications, background and experience are commensurate with the expertise required to accomplish the assigned work. The CM shall execute its work in a manner that minimizes unnecessary change orders, administrative or construction delays, or involvement of legal counsel.

The CM will have responsibility for overall administration of construction. The consultant's design team shall be an integral part of the CM team and is expected to have specific roles during construction to provide engineering support. The design team will also have a role in quality assurance. It will be the responsibility of the CM to develop a team approach to the construction that places the CM in overall responsibility for contract administration, resident engineering and quality control, but that allows their design team to undertake engineering and design support services to a level to ensure responsibility for the completed project. Specific tasks to be undertaken include:

- Submittal reviews;
- RFI responses;
- Contract clarifications;
- Change order documentation support;
- Site visits; and
- Attendance at selected construction meetings.

The consultant will also have the responsibility of preparation of record drawings, inclusive.

The tasks listed below are intended to describe the services to be provided by the CM. The services listed are not all-inclusive, but rather represent those normally expected during performance of the project.

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Pre-construction Administration Services

Review existing documents - Perform a thorough review of project planning, design, Environmental mitigation requirements, permitting, and contractor contract documents to become familiar with the Project work and the Project documentation requirements. Become familiar with site access, staging, logistics, and transportation issues and constraints.

Construction Management Procedures – Establish an effective and efficient communication protocol with project team and stakeholders (internal and external to the City). Meet with the project team and stakeholders as needed. The construction management procedures shall address at a minimum the following requirements:

- Organizational structure for the project
- Communication management/document control system and procedures
- Project forms
- Schedule management (development, maintenance, control, reporting)
- Quality control and quality assurance, including inspections
- Construction contract management and administration
- Payment invoice / schedule of values monitoring and tracking with allotted budget
- Change order and claims procedures
- Approval thresholds
- Disputes avoidance and resolution
- Safety administration
- Regulatory agency interface / permitting
- Community relations and outreach participation, including coordination with property owners and occupants within the project vicinity
- Coordination and outreach for park re-dedication ceremony at El Camino Park which includes brochures / pamphlets, and City-hosted website content / information

Construction Phase Services

The CM shall take responsible charge of the construction management of the project immediately following Notice to Proceed to the construction contractor. The CM will have the following primary responsibilities during the construction phase:

- Mobilization
- Project Controls
- Documentation and Document Control
- Contract Administration
- Construction Management / Coordination
- Claims analysis
- QA/QC, Inspection and Testing
- Start-up, Closeout and Acceptance
- Accounting and Administration

A general description of the scope of work for each item is presented below.

Mobilization – Arrange, set-up, and coordinate a sufficient field office / trailer with contractor at or near the project site. Furnish additional furniture, all vehicles, inspection and testing equipment, computers and ancillary hardware and software, radios, phones,

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materials, tools, cameras and film, paper, office supplies, other machines, equipment, utilities, courier service, and all other items as needed / required.

Project Controls - implement a computer-based cost and schedule control system to detect potential deficiencies early, and to facilitate effective reporting to City's project manager. Maintain the project master schedule in CPM format. Continuously update the schedule to show progress / status and all potential schedule changes. Review contractor's schedules and monthly schedule updates and incorporate into project master schedule. Include schedule updates in bi-monthly progress report.

Document Control – implement a document control system that manages the receipt, logging, control, tracking, and timely processing of all correspondence, relevant verbal communications, technical documents, shop drawings, submittals, manuals and samples received as part of construction. The CM is responsible for receiving and addressing all correspondence with the contractor. Implement a system for the enforcement and documentation of the enforcement of regulatory permitting requirements including compliance with the EIR. Maintain project records at the CM field office. Furnish all original project documents and final reports to the City's project manager within 30 days upon receipt of a copy of the City's Utilities Department filing of the Notice of Completion.

Shop Drawings and Submittals - Prepare a log of anticipated submittals, including a designated submittal numbering system. Receive submittals from the contractor and check for general conformity with the contract requirements. If obvious deficiencies are apparent in the submittal, return the submittal back to the Contractor for correction. Forward complete technical submittals to the design team for review. Coordinate with the design team as required on submittals. Review and transfer comments, including the design team's comments, to the appropriate number of copies of the submittals. Return reviewed submittals and comments to contractor in accordance with the construction contract documents. Forward a copy of submittals and comments back to the design team, the City's project manager, and the project engineer. Reviews shall state one of the following: 1) No Exceptions Taken; 2) Make Corrections Noted; 3) Revise & Resubmit; 4) Rejected. CM shall ensure that the comments are addressed properly as needed and that the construction is in accordance / compliance with approved submittals. CM shall ensure that no scope change is made through submittal process. Where appropriate, initiate potential change order file.

AS-BUILT Drawings – Confirm on a monthly basis that the Contractor is maintaining up-to-date marked up prints of construction drawings and documents showing all field changes and as-built conditions. Maintain the same drawings and documents in the construction field office. Coordinate with the design team and review the as-built mark-ups for completeness and forward reviewed and complete as-built drawings back to the design team for the preparation of record drawings (in ACAD format).

Video and Photographic Documentation - Take detailed digital photographs and videotape of site conditions prior to any construction operation, adjacent areas, and along haul and access roads to document and clearly document pre-existing conditions. Take and maintain daily photographic and video documentation throughout the construction of the entire project including adjacent areas. Label photographs and videos with project name, time and date, subject, and other pertinent information. A camera /

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video with the capability of taking time-lapse photography and streaming video shall also be utilized and placed at the El Camino Park location, temporarily mounted (with the capability to be permanently mounted in the future) at an inconspicuous location, inaccessible to vandalism, high in elevation that can view the entire site, tracking and monitoring both construction progress and security. EarthCam (http://www.earthcam.net/aespecs/ConstructionCam_SF.doc) or equal.

Contract Administration - Identify, prepare, log, monitor, and negotiate all correspondence, claims, changes, extra work, change orders, and other construction-related documents. Advise the contractor of Project Manager's schedule for processing progress payments. Verify quantity and completeness of work. Verify quantity and acceptability of stored materials. Review progress payment requests submitted by the contractor and make a recommendation for payment. Handle administration, preparation and processing of the monthly progress payments. Submit all monthly progress payment requests to Project Manager with a recommendation stating the proper amount for payment. Review contractor insurance documentation for compliance with contract requirements.

Construction Management / Coordination - General - Provide coordination as required among the Project Manager, city project engineers, contractor, subcontractors, environmental monitors, regulatory permitting agencies, other internal and external City stakeholders such as developers working on adjacent sites, and the community.

Public Outreach - The CM shall be responsible for day-to-day interaction with the public, including receiving and responding to questions and concerns, and implementing ongoing public outreach efforts. Significant coordination and outreach will be required with the Parks Dept. and property owners contained within the project envelope. The project partners will post and update construction activities and schedule in the cities' websites, and mail project information and schedule to the property owners and occupants. Project information kiosk shall be provided at both the El Camino and Mayfield sites. The CM's outreach effort includes:

- Coordinate and collaborate with the project stakeholders in establishing and maintaining communications beyond web posting and mailing;
- Provide appropriate notice in advance of construction near their property;
- Receive, document, and track all complaints, address complaints as quickly as possible; and
- Assist in the resolution of major complaints/issues that arise as a result of construction.

Preconstruction Meeting - Prepare and distribute the agenda for the Preconstruction Meeting with contractor. Facilitate meeting. Address administrative and non-design issues, including overall project objectives, responsibilities of key personnel and agencies, schedules, procedures for handling submittals, correspondence, utility relocations, permit requirements, public outreach issues, safety plans, requests for information, progress payments, change orders, and other pertinent project information. Prepare minutes of the meeting for distribution.

Project Meetings - Schedule and conduct weekly construction progress meetings and other meetings as required during the project. Meetings shall include the contractor, CM, Project Manager, sub-consultant as needed, and all other participants who require or

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request regular updates, or are project decision makers. Prepare and issue agendas and summaries of discussions with clearly identified action items, noting who's responsible and turnaround time needed.

Monthly progress report - Prepare and submit to the Project Manager a monthly progress report that includes the following elements for the previous period:

- Brief summary of construction activities completed, and activities projected for the following period.
- Updated construction schedule and summary of changes to previous submittal.
- Identification of key problems, action items, and issues.
- Summary of issues resolved.
- Summary of change orders executed, new and ongoing potential change orders, submittals and RFIs in process, and Notices of Non-compliance.
- Summary of interactions with regulatory permitting agencies, private citizens, and business owners; stakeholders relevant to the project.

Construction Schedules - Review and evaluate contractor work plans, baseline schedule and schedule updates. Provide written comments to the contractor on the baseline schedule and schedule updates. Evaluate schedule activities, logic, durations, critical path, incorporation of constraints and requirements, progress shown as percent complete, and overall progress of the construction.

Requests for Information (RFI) and Requests for Clarification (RFC) -

Receive all RFIs and RFCs from the contractor. Make a determination as to whether the request is complete. If the request is not complete, return the RFI or RFC to the Contractor. If the request is valid and the RFI or RFC is of an administrative or general nature, provide a response back to the contractor. Where appropriate and where affecting the design and its intent, route the RFI or RFC back to the design team and a copy to the Project Manager. Receive response from the design team and verify its acceptability. If the response materially affects the design, review the response and its consequences with the Project Manager. Return an appropriate response to the contractor with a copy to the project files and the Project Manager.

Change Orders - Keep Project Manager apprised of all potential change orders. Coordinate with your design team, prepare cost estimates and change order justification. Negotiate change orders with the contractor. Prepare and submit change order request with supporting information / backup documentation to Project Manager for execution. All change orders must be approved in accordance with the contract requirements. Where required, issue field orders. All work completed under a field order must be completed on a time and material basis. All field orders shall be within the cost limit in accordance with the pre-established project rate sheet, and be approved by either the CM or the Project Manager before being issued to the contractor.

System Outage Request - Provide information to the contractor as needed for the contractor to develop proper system outage requests. Coordinate all shutdowns and other construction activities with the city project engineer or city operational staff, to ensure that operations of existing facilities are not compromised.

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Environmental Monitoring - Assist the environmental monitor assigned by your firm with tasks required for successful environmental monitoring and reporting, training of construction personnel and conflict resolution. The CM will be responsible for communicating recommendations of the environmental monitor to the contractor, and for daily monitoring and enforcing of environmental protections. Comply with the EIR and permitting requirements for the project. Attend meetings with regulatory agencies as requested.

Safety - CM shall be responsible for enforcing and administering site-specific safety program. Review contractor job safety reports and monitor the development and implementation and performance of the Contractors' Site Safety Plan.

Claims Analysis - Perform a detailed analysis of all potential claims filed by the contractor resulting from this project. Collect all documentation regarding the contractor's assertion and perform an independent analysis of the technical issues, and schedule impacts in the potential claim. The purpose of this subtask is to assist in claims avoidance. Provide technical and documentation support to the Project Manager throughout the claims process.

QA/QC, Inspection and Testing – In accordance with the QA/QC plan, inspect, monitor, and document the activities of contractors, subcontractors, and suppliers to ensure compliance with the requirements of the contract documents. Key activities will require full-time, on-site inspection by qualified inspectors. Specific inspection and testing team members include those experienced in soils testing, concrete testing, electric, mechanical, and welding inspection. Inspection will require regular interface with the Construction Manager, the Project Manager, cities inspectors, and design team on technical issues and concerns as well as interpretation of the design documents. Maintain construction site daily records that document the major administrative issues of each day. Prepare daily field observation reports that document all field activities, field crews, contractor equipment, and field issues. Review all contractor reports and records, including shift reports, daily concrete placement and or specific start up and testing reports, daily progress reports, and job safety reports. Observe the development, implementation and performance of the Contractors' Site Traffic and Safety Plan. Issue deficiency notices to the contractor in the event of direct observation of non-compliant construction. Retain and manage testing and surveying services as approved. Schedule and coordinate testing and surveying service, and routing samples to testing labs as necessary. Review testing and surveying reports, and coordinate distribution of information.

Start-Up, Closeout and Acceptance Services

Assist the contractor with the development of his startup and testing plan to confirm that it meets requirements of the contract documents. Develop a startup schedule and coordinate startup activities with contractor, design team representative, operations staff, and the Project Manager. Implement procedures for the systematic, orderly and timely completion, acceptance, and transfer of all facilities constructed, as well as the closeout of all contracts. Submit test plan, schedule, and procedures to Project Manager for review and approval. Authorize testing or retesting to begin upon approval of the Project Manager.

Conduct the final inspection in conjunction with the Project Manager, operations staff and design team representative / engineer. The final inspection shall take into

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consideration all correspondence and contract documents including change orders and shop drawings, daily inspection reports, deficiency notices and record drawings, as well as visual inspection.

Prepare detailed list of outstanding deficiencies. Reach resolution with the contractor as to whether the outstanding deficiencies are disputed work, incomplete work, or warranty work. Classify deficiencies as those required to reach either substantial or final completion. Handle disputed work in accordance with contract requirements.

Prepare the punch list from the list of deficiencies with the Project Manager. Issue punch list to contractor. Verify that punch list work is complete. Upon correction of punch list items, schedule, coordinate, and conduct a final walk-through prior to the acceptance of work with the Project Manager and the design team. Provide letters of recommendation of acceptance to the Project Manager.

Coordinate the final submittal of as-built drawings and information. Verify that the Contractor has made all payments and that all required releases; including that Release of Claims have been obtained. Prepare and submit letter of recommendation to the Project Manager for project acceptance. Project Manager will prepare and file the Notice of Completion with the County. After the 40-day lien period has expired, recommend approval of final payment. Prepare and submit to the Project Manager, no later than 30 working days following the filing of the Notice of Completion, a final Construction Summary Report for the project including:

- Summary of the project history and overview of the contracts (e.g., RFIs, RFCs, CCOs, etc.).
- Problems encountered and resolutions made.
- Summary of major changes (including costs), reasons for the changes.
- Summary of preliminary and final project costs.

Within 90 calendar days of completion of all tasks, submit a Project Completion Report to the Project Manager. The report shall include a description of actual work done, a final schedule showing actual progress versus planned progress, copies of any final documents or report generated or utilized during the project, and certification by a California registered civil engineer / Engineer of Record that the project has been completed in accordance with the final plans and specifications and any modifications thereto.

Accounting and Administration - Provide clerical, filing, and all other administrative and office support services for CM staff support.

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SCHEDULE

Action/Milestone	Date
1. RFP issued	Aug. 5, 2009
2. Pre-proposal conference	Aug. 13, 2009
3. Proposals due	Aug. 25, 2009
4. Interviews	Sept. 10, 2009
5. Council award date	Sept. 28, 2009
6. Contract & insurance forms completed	Nov. 9, 2009
7. Notice to Proceed issued	Nov. 9, 2009
8. Kickoff meeting	Nov. 16, 2009
9. Mayfield 30% Design Submittal	Dec. 2010
10. Mayfield 60% Design Submittal	Feb. 2010
11. Mayfield 90% Design Submittal	April 2010
12. Mayfield Bid Package / Advertisement	May 2010
13. Council Award Mayfield Construction	July 2010
14. EC Park 30% Design Submittal	Feb. 2010
15. EC Park 60% Design Submittal	April 2010
16. EC Park 90% Design Submittal	June 2010
17. EC Park Bid Package / Advertisement	July 2010
18. Council Award EC Park Construction	Sept. 2010

- 1. ADDITIONAL SERVICES Additional Services (As Authorized) - Provide additional miscellaneous specialty services when requested by the Project Manager. Miscellaneous additional services, which may be required, include but are not limited to: specialized inspection and testing services, expert witness, additional but unforeseen and unanticipated project design and construction-related work.**

Working Hours

Construction within the City will be performed, as specified in the bid documents, during the hours of 8:00 a.m. to 5:00 p.m. Monday through Friday, unless otherwise specified in the bid document Supplementary Conditions or approved by the Engineer. Consultant's proposal shall account for and indicate overtime charges expected for its team members. The City holidays are identified below:

Every Saturday and Sunday

January 1 (New Year's day)

Third Monday in January (Martin Luther King Day)

Third Monday in February (Washington's Birthday)

Last Monday in May (Memorial Day)

July 4 (Independence Day)

First Monday in September (Labor Day)

Second Monday in October (Columbus Day)

November 11 (Veteran's Day)

Fourth Thursday in November (Thanksgiving Day)

Day after Thanksgiving

December 25 (Christmas Day)

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Payment

Progress payments for consultant services shall reflect the amount of effort and percent completion. The cumulative payment shall not exceed the completed percent of the total project fee based on the completed tasks or deliverables. Submit monthly invoice to the Project Manager showing the individual's name, rate, hours, and charges, broken down by tasks. The following charges will not be allowed unless authorized by the City Project Manager:

- Unless identified and included in the consultant's proposal and accepted in the agreement, charges for commute of the resident and field personnel to and from the field office;
- Business meals;
- Overtime charges for normal 40-hour work week during the work hours listed in this request for proposal

City of Palo Alto (Public Water System No. 431009)
Engineering Services for Design and Construction Management
Services for the Reservoir, Pump Station, and Well at El Camino Park
and Mayfield Pump Station Augmentation (RFP #131396)

LIST OF REFERENCES

1. Water Wells, Regional Storage, and Distribution System Study, December 1999
2. Draft Environmental Impact Report
(<http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=8389>)
3. Final Environmental Impact Report
(<http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=8372>)
4. Report on Exploratory Drilling / Preliminary Basis of Design, M. Feeney, May 24, 2004
5. Groundwater Supply Feasibility Study, April 2003
(<http://www.cityofpaloalto.org/cityagenda/publish/uac-meetings/1930.pdf>)
6. City Manager Report Easement Acquisition, CMR:104:09
(<http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=14495>)

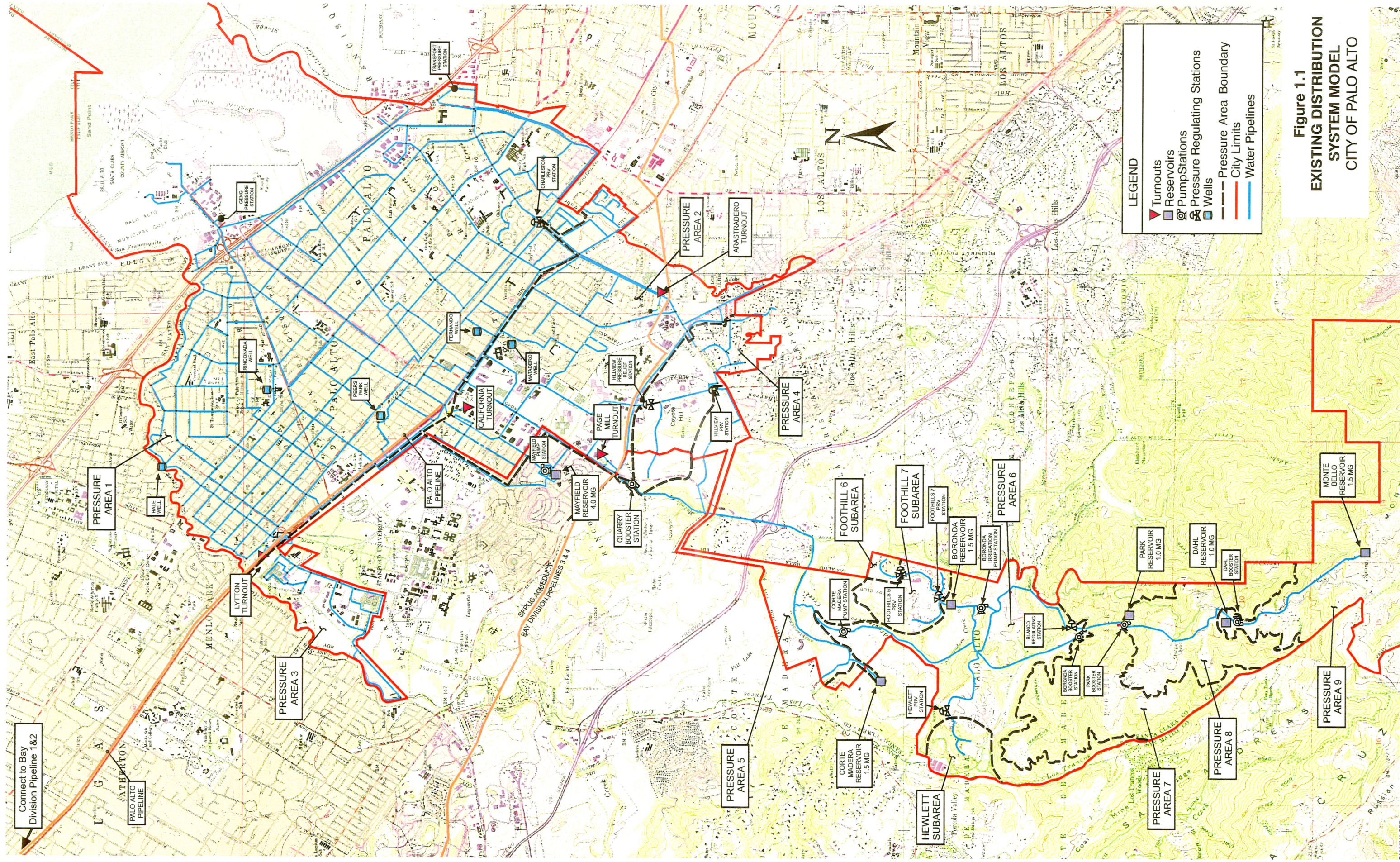
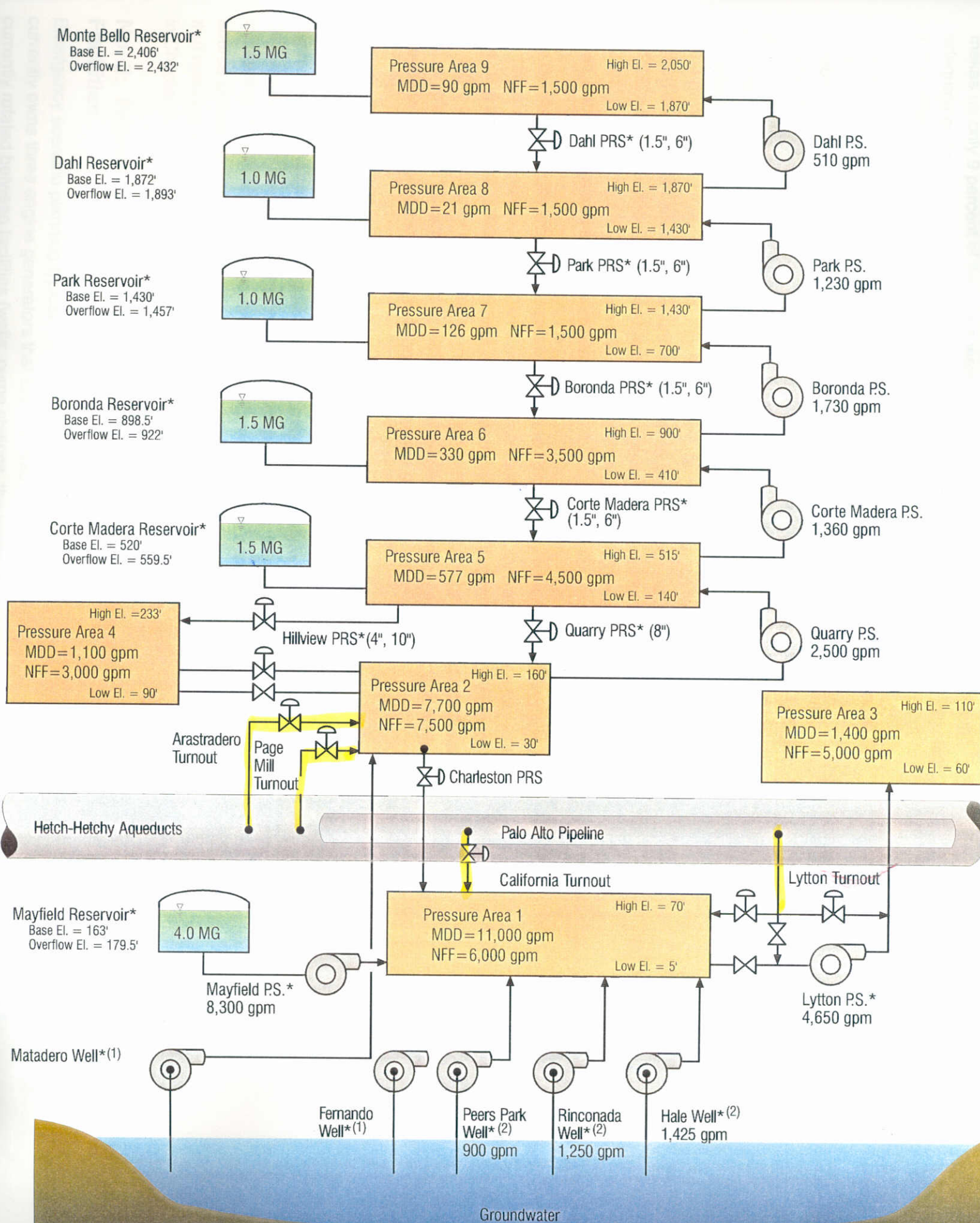


Figure 1.1
EXISTING DISTRIBUTION
SYSTEM MODEL
CITY OF PALO ALTO





Conceptual Rendering of Existing El Camino Park Surface With New Underground Reservoir, Pump Station, and Well

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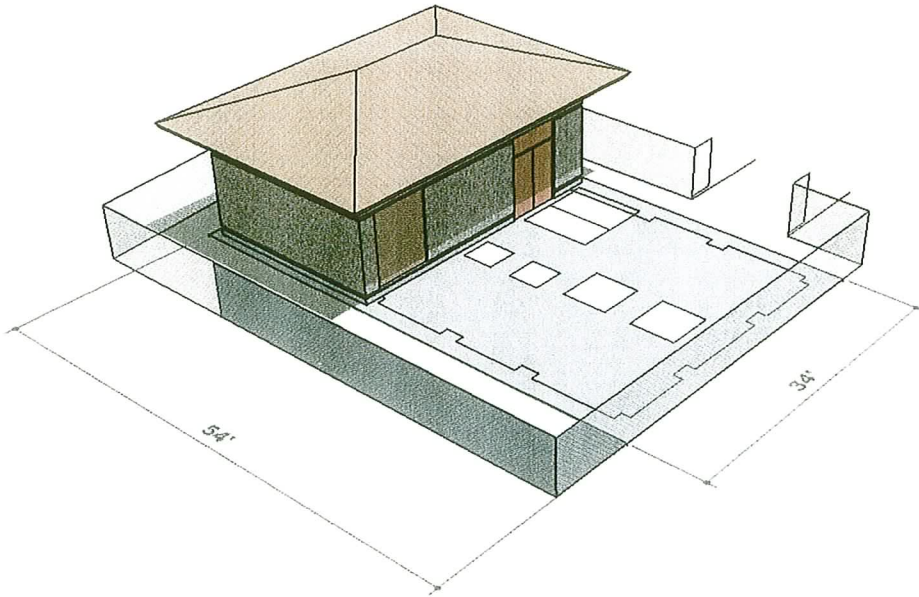


Figure 1
GROUND LEVEL VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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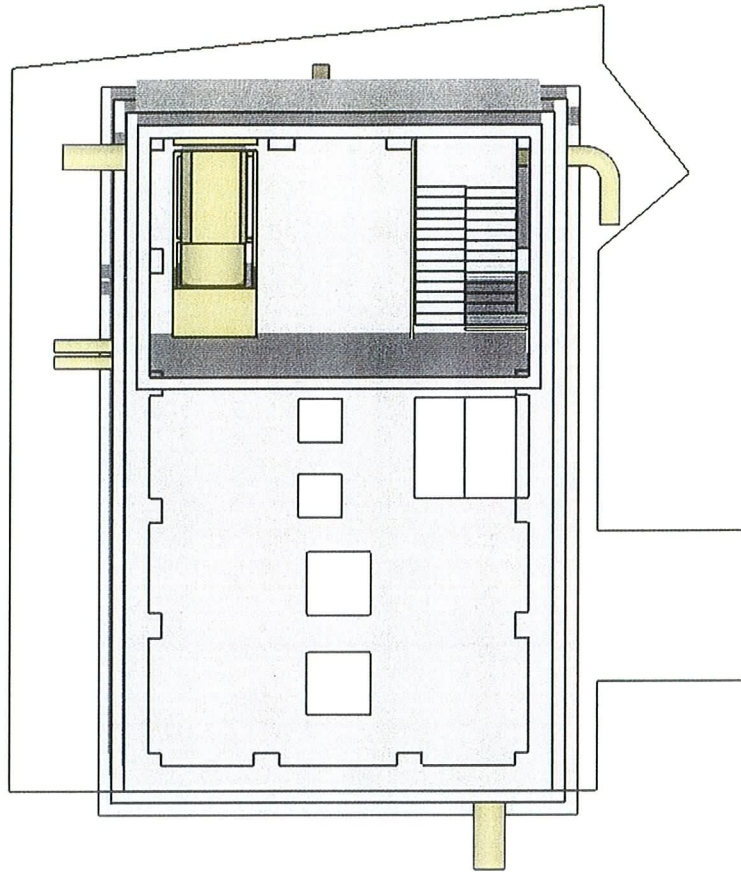


Figure 2
GROUND LEVEL PLAN VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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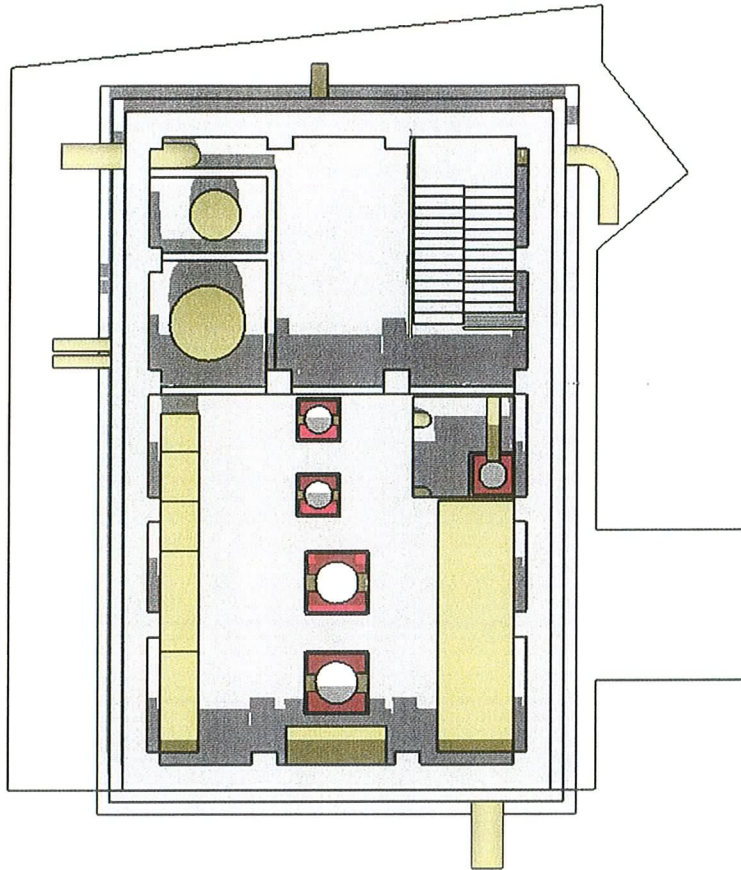


Figure 3
1ST FLOOR PLAN VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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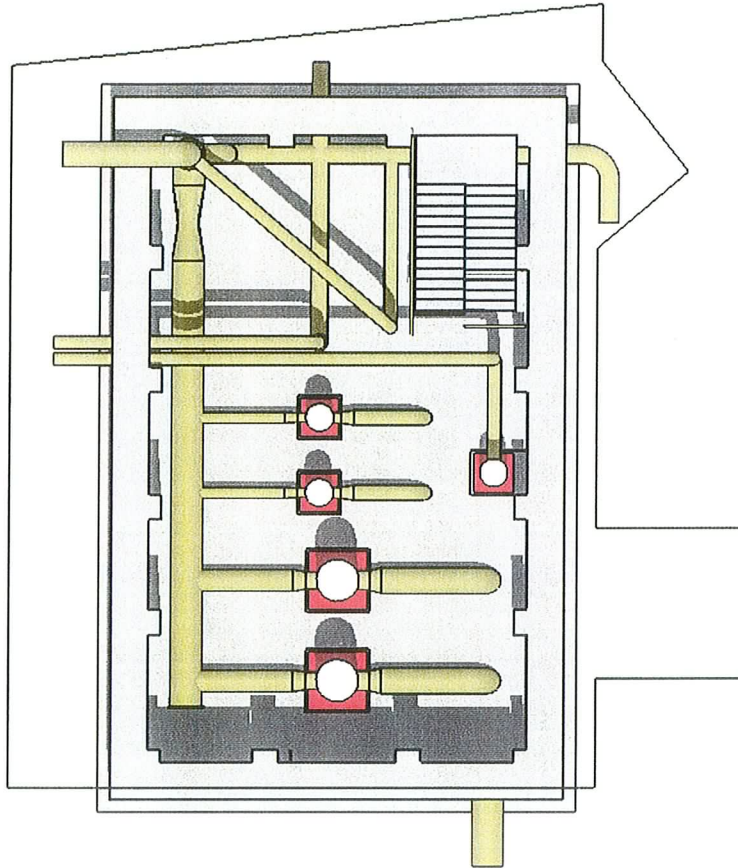


Figure 4
2ND LEVEL PLAN VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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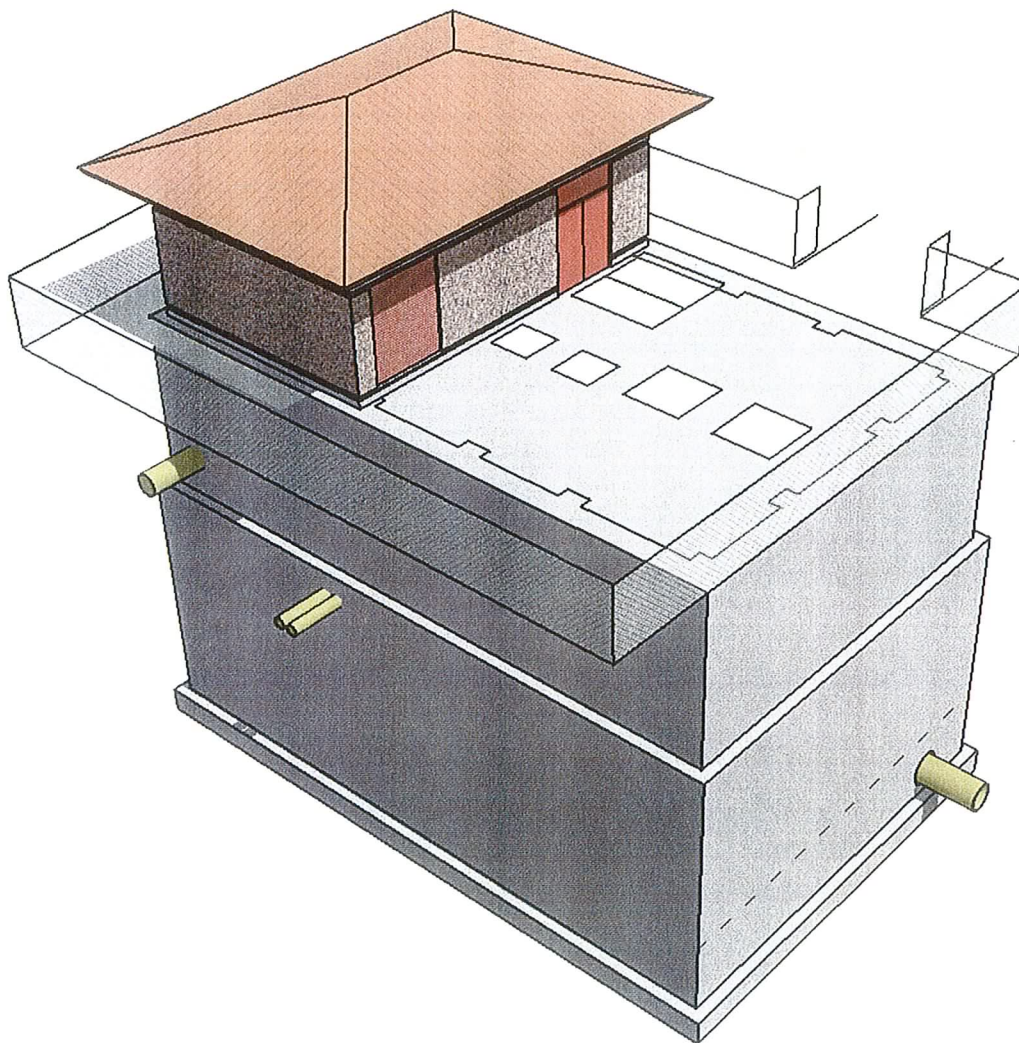


Figure 5
3D VIEW OF PUMP STATION
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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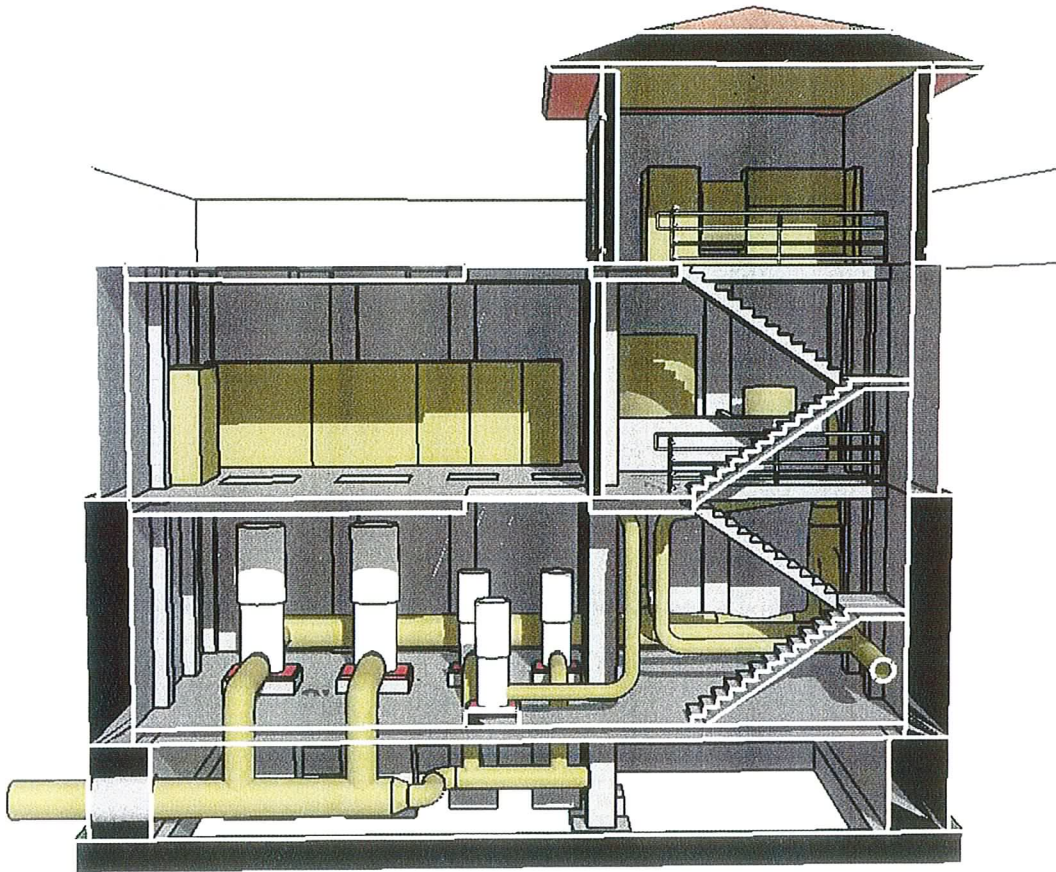


Figure 6
SECTION VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO

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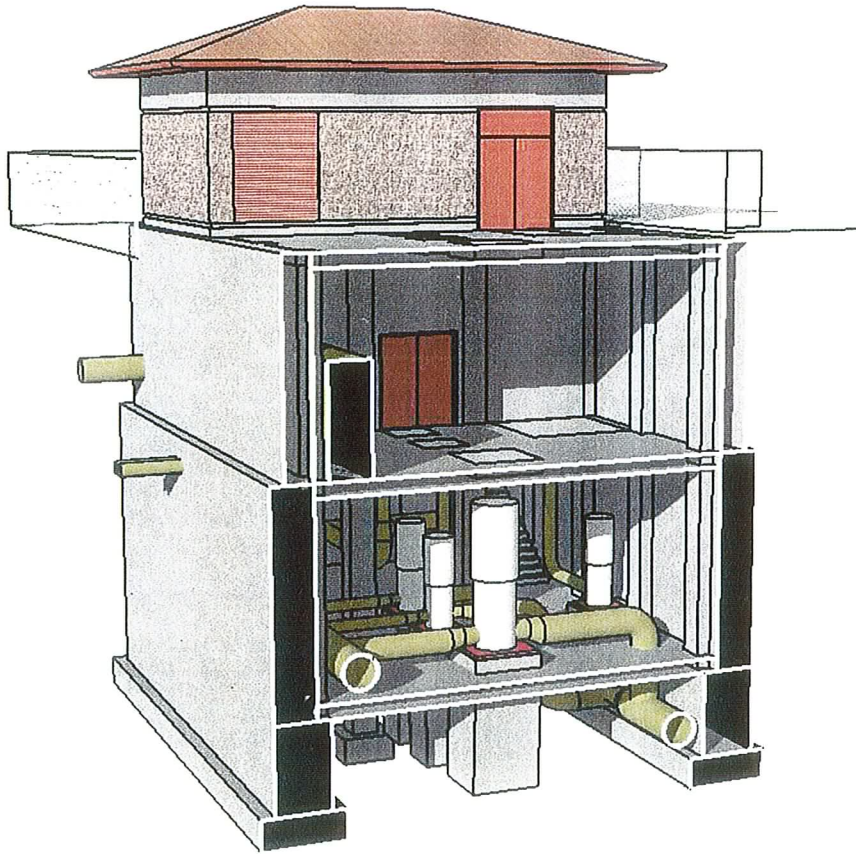
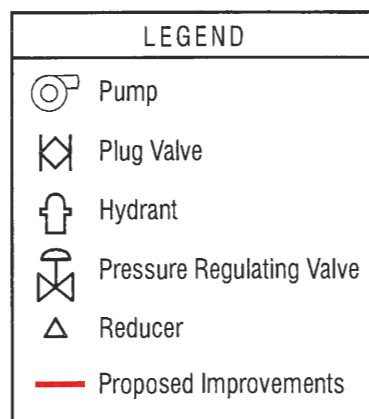
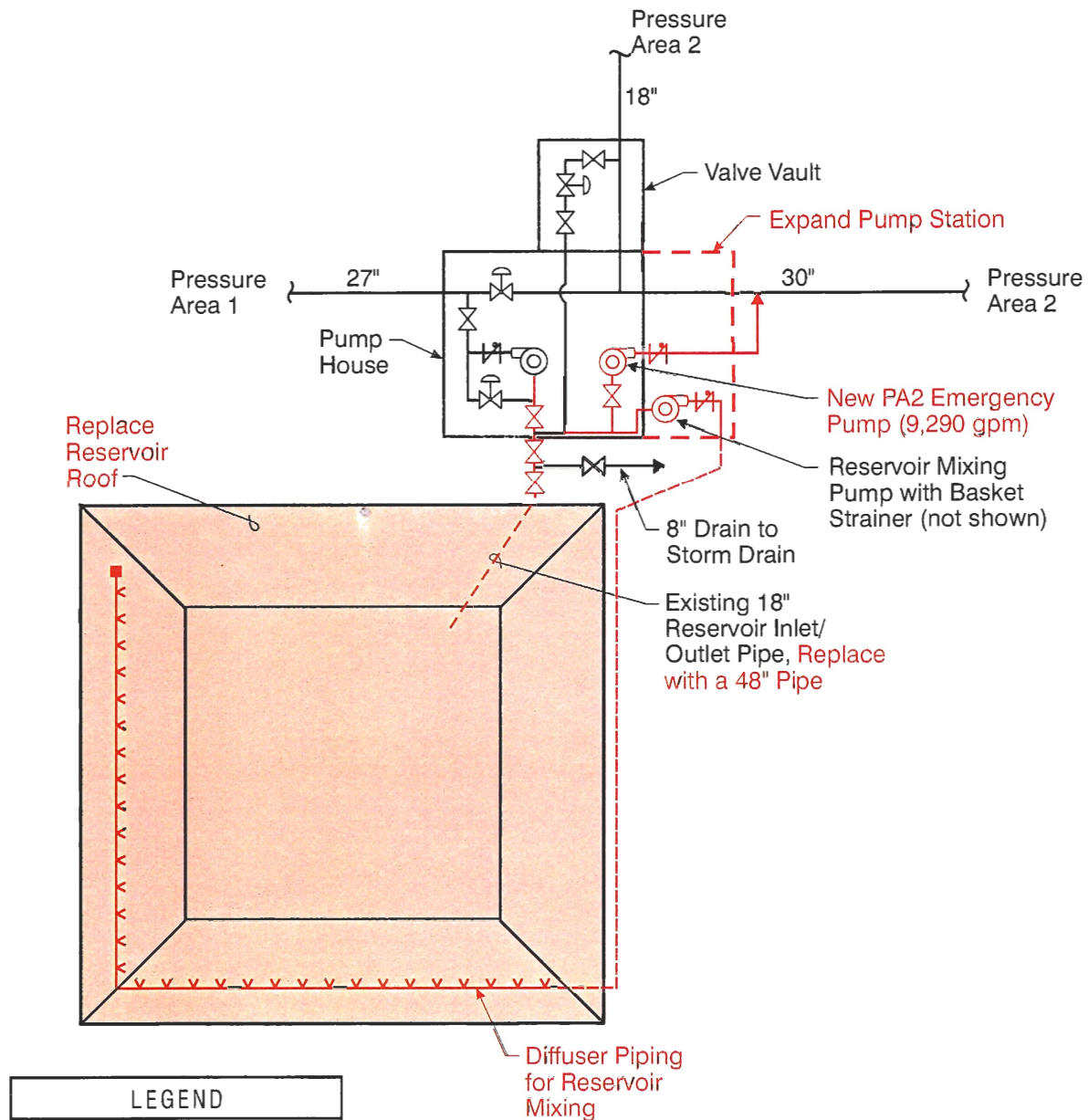


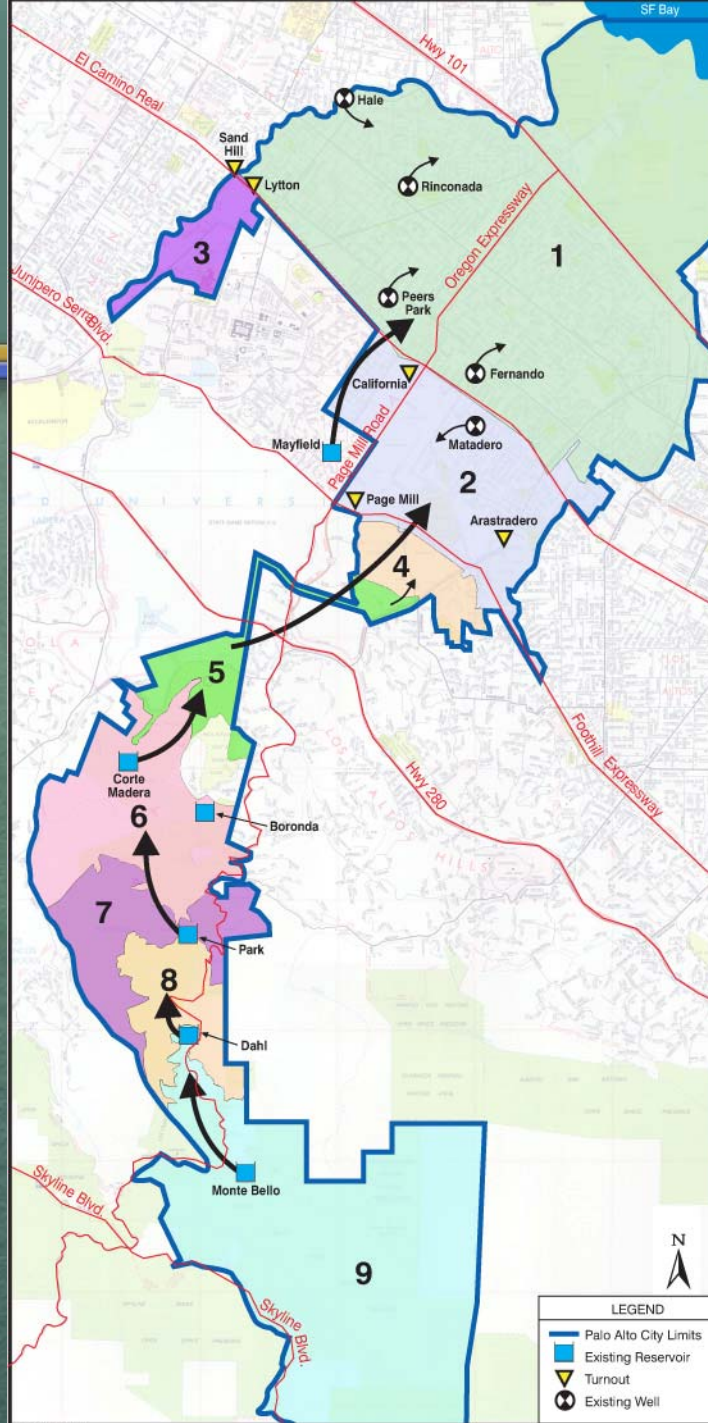
Figure 7
SECTION VIEW
DISTRIBUTION SYSTEMS IMPROVEMENT PROJECT
CITY OF PALO ALTO



Not to Scale

Figure 9.16
SCHEMATIC OF MAYFIELD
RESERVOIR AND
PUMP STATION
CITY OF PALO ALTO

Existing Emergency Operation



CHAPTER 2

Project Description

Introduction

The City of Palo Alto currently relies on the SFPUC water supply system for its water supply. The California DHS has directed the City to assess its ability to provide a short-term emergency water supply in the event of a temporary shutdown of the SFPUC water supply aqueducts. The DHS recommendations for this emergency water supply are three-fold: (1) a stand alone system; (2) that could supply eight hours of maximum day water demand; (3) while maintaining fire fighting reserves.

To respond to the DHS request, the City conducted the *Water Wells, Regional Storage, and Distribution System Study* (“1999 Study”) (Carollo, 1999; 2001) and determined that it cannot fully meet the minimum level of emergency water service recommended by DHS. The City of Palo Alto Utilities Department (CPAU) is responsible for purchasing and distributing water from the SFPUC to its service area. The CPAU service area is divided into nine pressure areas or zones (see Figure 2-1). The 1999 Study identified deficiencies in emergency water supply in three of the zones in the northern half of the City. To meet DHS recommendations, the City must provide a short-term emergency water supply of 20,100 gpm for eight hours for normal use and 18,500 gpm for four hours for fire suppression. Currently, in Pressure Areas 1, 2, and 3, the CPAU can provide an emergency water supply at a rate of only 16,975 gpm. To correct this deficiency, the 1999 Study recommends a suite of capital improvements, including new and refurbished wells, a new reservoir with an associated pump station, and upgrades to an existing pump station.

Project Background

The CPAU supplies electric, fiber optic, natural gas, sewer, and water services to approximately 61,200 customers in its 26 square mile service area that is demarcated by the City limits (see Figure 2-1). The City operates a number of water facilities, including receiving stations, reservoirs, pump stations, wells, and distribution and transmission pipelines. The distribution system provides potable water to meet the City’s three categories of water demand:

- Normal Use (residential, commercial, industrial, manufacturing, and park irrigation)
- Fire Suppression Use
- Emergency Use (earthquakes, extended power outages, water contamination, etc.)

The City’s metered average daily water usage is 12.1 million gallons of water per day (mgd). The City purchases this water from the SFPUC, which obtains 85 percent of its water from the Hetch

Hetchy system. The Hetch Hetchy system is located in Hetch Hetchy Valley on the upper Tuolumne River in Yosemite National Park. Water flows from Hetch Hetchy Valley to San Francisco and surrounding communities through over 280 miles of pipeline in an almost completely gravity-driven system.

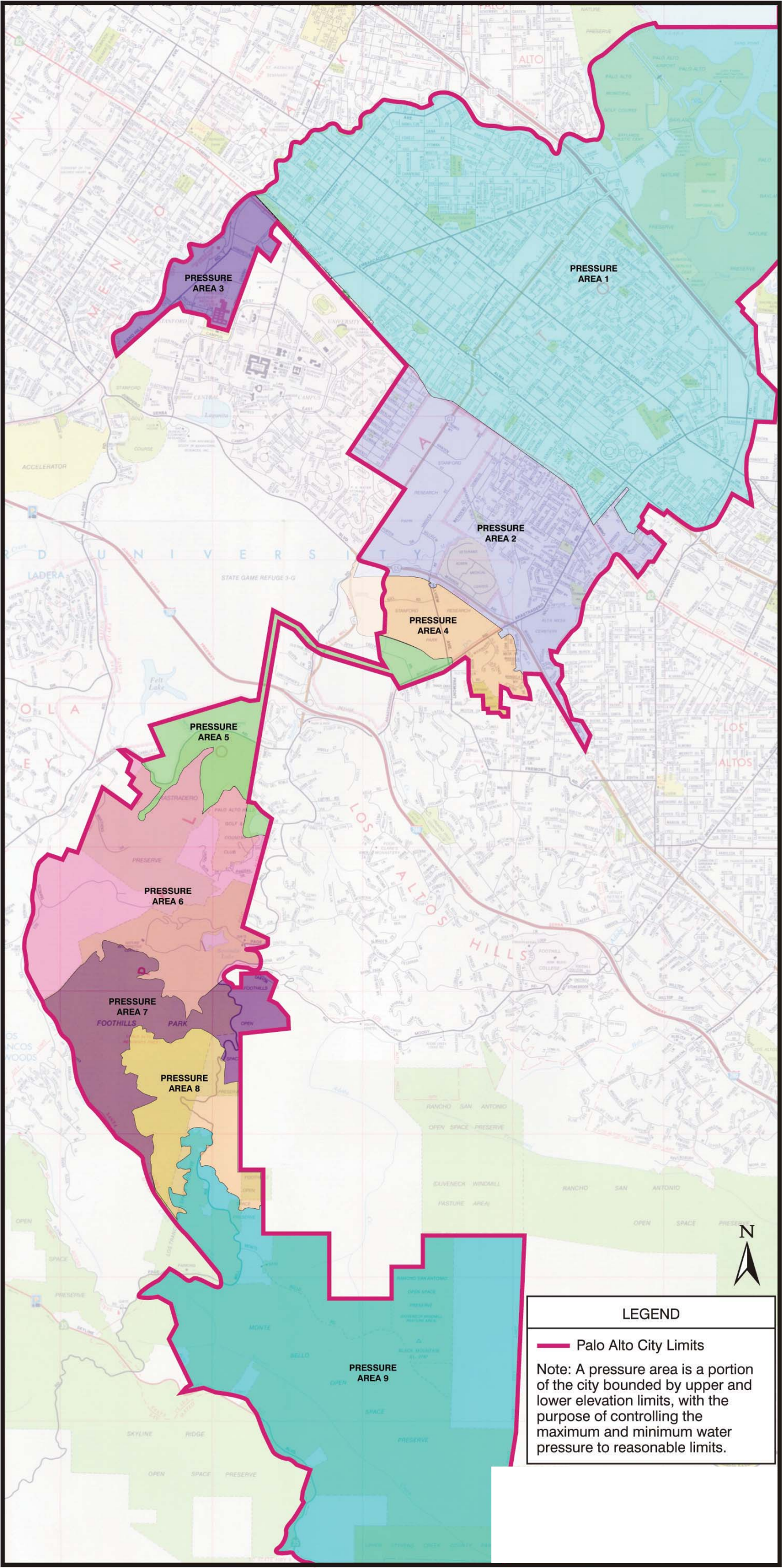
Currently, the City owns five groundwater wells, which are available for limited use during a drought or emergency. The City's well system dates back to 1896, when the entire water supply was derived from groundwater. In 1938, the City started to receive supplemental water from the City and County of San Francisco. In 1962, the imported water from San Francisco became the City's primary source of supply and the wells were maintained for emergency use only. The groundwater quality of the City's wells is considered fair to good quality, though significantly less desirable in comparison to the imported SFPUC supply. However, the water quality of the City's wells is adequate for emergency use, and thus they are considered a "standby source" by DHS.

The proposed Emergency Water Supply and Storage Project is intended to correct the deficiency in the City's emergency water supply, when compared to the emergency water supply standards recommended by the DHS. The proposed project would support normal water use at the maximum daily 8 hour demand level and four hours of fire suppression at the design fire duration level. The proposed groundwater system would also support a potential extended emergency of up to 30 days, with a groundwater extraction limit of up to 1,500 acre-feet per year (Carollo, 2003) for water supply during drought conditions or extended shutdowns of the SFPUC system. The proposed project is funded by and is part of the City's Water System Capital Improvement Plan.

Project Objectives

The City has developed the following objectives for the proposed Emergency Water Supply and Storage Project:

- Provide adequate supplies to meet DHS recommended eight-hour emergency supply to be provided in the event of a SFPUC water supply outage.
- Design facilities that enable the City to meet fire flow requirements in every pressure area under DHS recommended emergency water supply conditions.
- Implement capital improvements to meet above objectives in the most cost effective manner reasonably available.
- Reduce or minimize environmental effects to the degree feasible.
- Provide facilities that would allow for drought year supplemental production. This would include provision of future blending at one well site.



SOURCE: Carollo Engineers

City of Palo Alto Emergency Water Supply and Storage Project EIR . 201490

Figure 2-1

City Water System Pressure Area Boundaries

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Project Description

In order to meet the project objectives described above, implementation of the proposed project would provide 11,000 gpm of reliable well capacity and 2.5 MG of water storage for emergency use in Pressure Areas 1, 2, and 3 by:

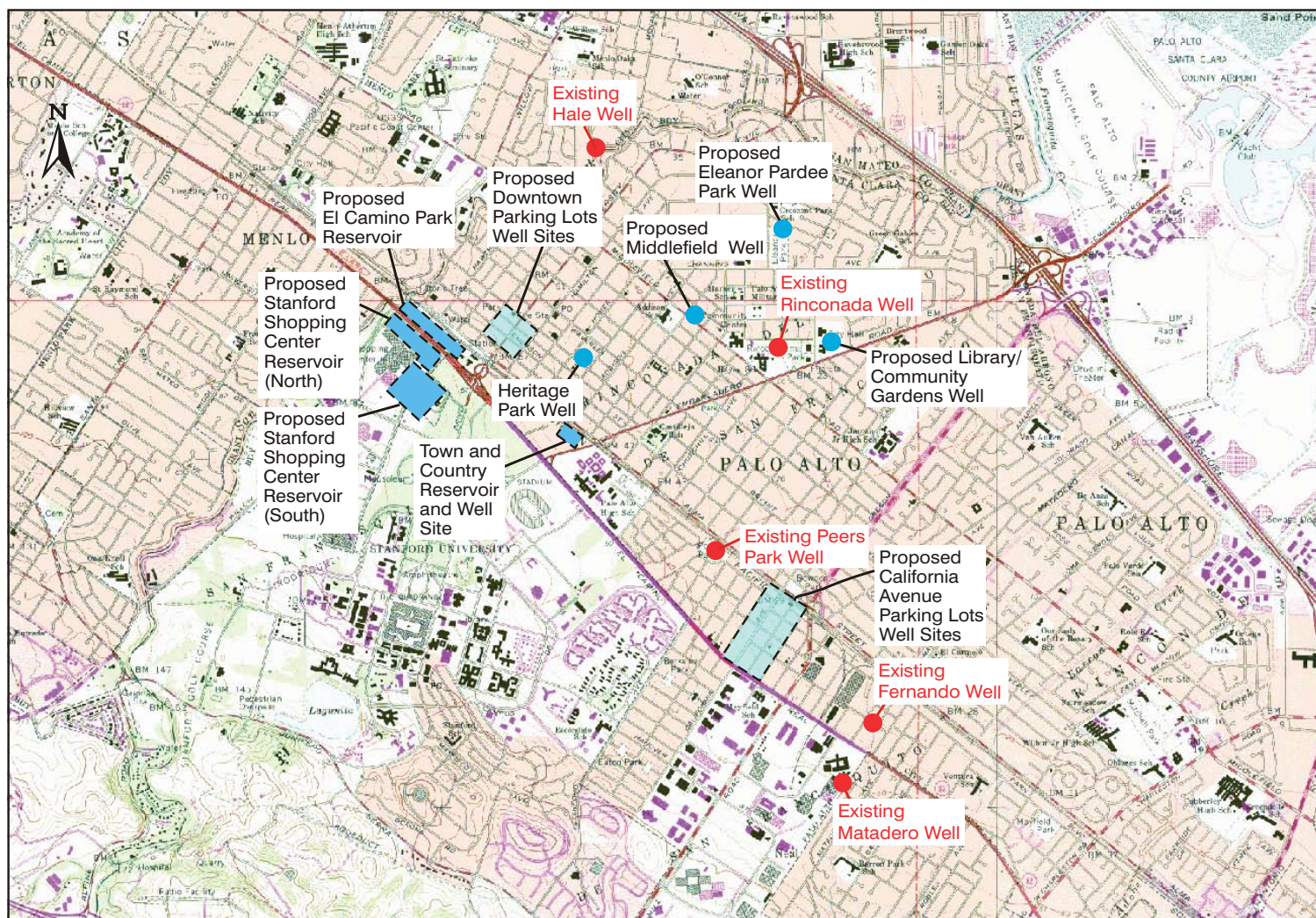
- Rehabilitating all five of the existing City wells;
- Constructing up to three new wells;
- Potentially equipping one well for use as a supplemental water supply;
- Constructing a new 2.5 MG storage reservoir and associated pump station;
- Upgrading an existing pump station; and
- Implementing a ballot measure for conceptual voter approval of a Park Improvement Ordinance for water storage and facility improvements on dedicated park land (should El Camino Park be selected as the reservoir site).

The locations of existing and proposed facilities are identified on Figure 2-2. The City has identified ten potential locations for new wells and has identified four potential locations for the 2.5 MG storage reservoir. The following sections describe project facility design, construction, and operations. The proposed project design is preliminary and the final project facility design would incorporate input from the public (including property owner and neighbors) received throughout the project planning and environmental review process. The proposed project will include a City of Palo Alto ballot measure for conceptual voter approval of a Park Improvement Ordinance for water storage and facility improvements at El Camino Park. In addition, the final project design will be subject to review by the City of Palo Alto Architectural Review Board to ensure that project design is consistent with that of the surrounding community. The proposed project would be subject to review by the City of Palo Alto Historic Resources Board, if any modification of the Hale Pump House is required.

Well Rehabilitation and New Well Installation

Water Quality and Water Treatment

As described in the Project Background, above, the groundwater quality of the City's wells is not recommended as an active source of drinking water. Although the groundwater is considered fair to good quality, it is significantly less desirable from an aesthetic (taste, hardness, and color) standpoint in comparison to the imported SFPUC supply. The groundwater is approximately 500% higher in total dissolved solids (TDS) and hardness than the SFPUC water. Also, the well water exceeds the secondary (aesthetic) drinking water standards for iron and manganese. The water quality of the City's wells is adequate for emergency use, and thus they are considered a "standby source" by DHS (Carollo, 2000). As such, the wells can be used for five consecutive days or less and a maximum of 15 calendar days per year without blending with SFPUC water or additional treatment (California Code of Regulations, Title 22, Section 64414).



LEGEND

- Existing Well Sites
- Proposed Well Sites
- Proposed Reservoir Sites

No Scale

SOURCE: Carollo Engineers

City of Palo Alto Emergency Water Supply and Storage Project EIR . 201490

Figure 2-2
Existing and Proposed City Wells and
Proposed Reservoir Sites

All of the groundwater extracted from the wells for emergency use would be chloraminated by adding both chlorine and ammonia to it. The sodium hypochlorite would first be blended with the well water then aqueous ammonia would be added to form the chloramines solution. Aqueous ammonia (29 percent concentration) and sodium hypochlorite (12.5 percent concentration) would be delivered to the well site during emergency operations. No chemicals would be stored at the well sites during normal operations. Water treatment chemicals would be stored off-site at a chemical supplier's facility. The chemical supplier would provide the required chemicals during emergencies on an as needed basis. The chemical supplier would transport the chemicals to the well sites and transfer into the storage tanks during water supply emergencies.

Facilities associated with aqueous ammonia would be similar to the sodium hypochlorite system including: storage tank, ammonia gas detection features, a pressure relief valve with a scrubber tank to prevent discharge of ammonia, metering pumps, secondary containment to prevent leaks (e.g. containment berms), instrumentation, and controls. The aqueous ammonia storage tank capacity would range from 100 to 400 gallons while the sodium hypochlorite tank capacity would range from 1,000 to 1,500 gallons, depending on the sizing of the well capacity and operational considerations. The chemical storage tanks would be empty under normal operating conditions.

To meet the City's objective to provide a supplemental water supply during "emergency" drought years, one well would be equipped for extended operation by constructing a pipeline connection to blend groundwater from the well with water from the proposed new reservoir. This would allow the quality of the well water to meet DHS Secondary Drinking Water Standards (California Code of Regulations, Title 22, Division 4, Chapter 15, Article 16, Section 64449).

Existing Well Locations

The five existing well sites—Hale, Rinconada Park, Fernando, Peers Park, and Matadero (see Figure 2-2) would be rehabilitated under the proposed project. The existing sites include black coated, chain link fencing that surrounds each of the sites and has a City padlocked entrance gate. The fencing is approximately 8 feet high. Each site, excluding the Fernando and Matadero well sites, can be connected to a portable generator (no generators are on site) to provide power to the facility. The existing groundwater wells are equipped with sodium hypochlorite systems to disinfect delivered water. An ammonia system would be added to each well to produce chloraminated water that is compatible with the water in the distribution system. The following describes the location of the existing wells. Upgrade of existing wells would include improvements within the existing well house at each site. However, upgrade or reconstruction of well buildings could be required depending on the condition of existing structures.

Existing Hale Well Site

The Hale Well site is located in Timothy Hopkins Creek Park (Hopkins Park), adjacent to San Francisquito Creek, at the intersection of Hale Street and Palo Alto Avenue. The existing well was drilled in 1955 to a depth of 935 feet, with a 14 inch diameter mild steel casing. The well is currently operational and recently collected data suggests a capacity of 1,425 gpm. The well and associated buildings are fenced from adjacent public areas. The Hale Well site consists

of an existing well, pump house, and old circular discharge reservoir. The Hale site has no external lighting. The existing pump house is a tile-roofed edifice and has been identified as an historic property eligible for the National Register (see Section 3.7, Cultural Resources).

Existing Rinconada Well Site

The Rinconada Park Well site is located in Rinconada Park, an urban city park/recreation area, located along Hopkins Street. The well was drilled in 1954 to a depth of 1,084 feet, with a 14 inch steel casing. The well is currently operational and recently collected data suggests a capacity of 1,250 gpm. The Rinconada site has no external lighting. The well would be rehabilitated.

Existing Fernando Well Site

The Fernando Well site is located in Boulware Park, on Fernando Avenue near Matadero Creek. The well was drilled in 1954 to a depth of 1,179 feet. The well is currently listed as non-operational due to an inoperable sand separator. The Fernando site has no power and has sensor exterior lights. The proposed project would include rehabilitation of the well and the addition of chloramine treatment.

Existing Peers Well Site

The Peers Park Well site is located in the south east corner of Peers Park, adjacent to the railroad right-of-way. The well was drilled in 1958 to a depth of 950 feet, with a 14 inch steel casing. The well is currently operational. Performance data collected since the time of construction suggests a current discharge rate of 900 gpm. The Peers Park site has sensor exterior lighting. The site currently has an existing well and operations building fenced off from public use areas. The proposed project would include rehabilitation of the well.

Existing Matadero Well Site

The Matadero Well site is located on Matadero Avenue, between El Camino Real and Matadero Creek. The well was drilled in 1957 to a depth of 1,193 feet. The well is currently listed as non-operational. The Matadero Well site currently has an existing well and a small operations building, with no external lighting. The proposed project would include rehabilitation of the well and the addition of chloramine treatment would not significantly expand the existing footprint.

New Wells Locations

The City is proposing to construct up to three new wells. One new well would be located proximate to the proposed reservoir, while the other two would be located at new sites discussed herein. While the proposed project would include three new wells, several potential well sites are evaluated in this EIR. Upon completion of the Draft EIR and evaluation of comments received on the Draft EIR, three well sites will be selected for project implementation; one at the planned reservoir site and two others at individual well sites. The well sites evaluated in this EIR include Eleanor Pardee Park, Library/Community Center, Heritage Park, Middlefield, Downtown Parking Lots, and California Avenue Parking Lots, El Camino Park, Stanford Shopping Center North, Stanford Shopping Center South, and Town and Country (see Figure 2-2). The El Camino Park, Stanford Shopping Center North and South, and Town and Country sites are being considered as

potential reservoir sites and are described in the section entitled “New Reservoir Construction.” The other sites are described below. Test holes have been constructed at El Camino Park, Heritage Park, and Pardee Park to confirm the hydrogeological conditions of the area. Each of the proposed well sites would include a well and well enclosure, pump and motor, controls, electrical equipment, chlorine and ammonia systems, standby generator and fuel storage tank, connections to the existing distribution system and site improvements (fencing, lighting, landscaping, etc).

Proposed Eleanor Pardee Park

Eleanor Pardee Park consists of demonstration gardens surrounded by areas of open space (see Figure 2-2). If selected as a new well site, the well would be located below-grade in the northeast area of the park, away from the existing park demonstration gardens. Figure 2-3 identifies the potential development area. An existing Modesto Ash, that is in poor condition, would be removed as it presents a safety hazard (Dockter, 2006). Given the size of this park, installation of a blending facility is not likely feasible at this potential well site due to the extensive distribution system piping requirements associated with such a facility.

Proposed Library/Community Center

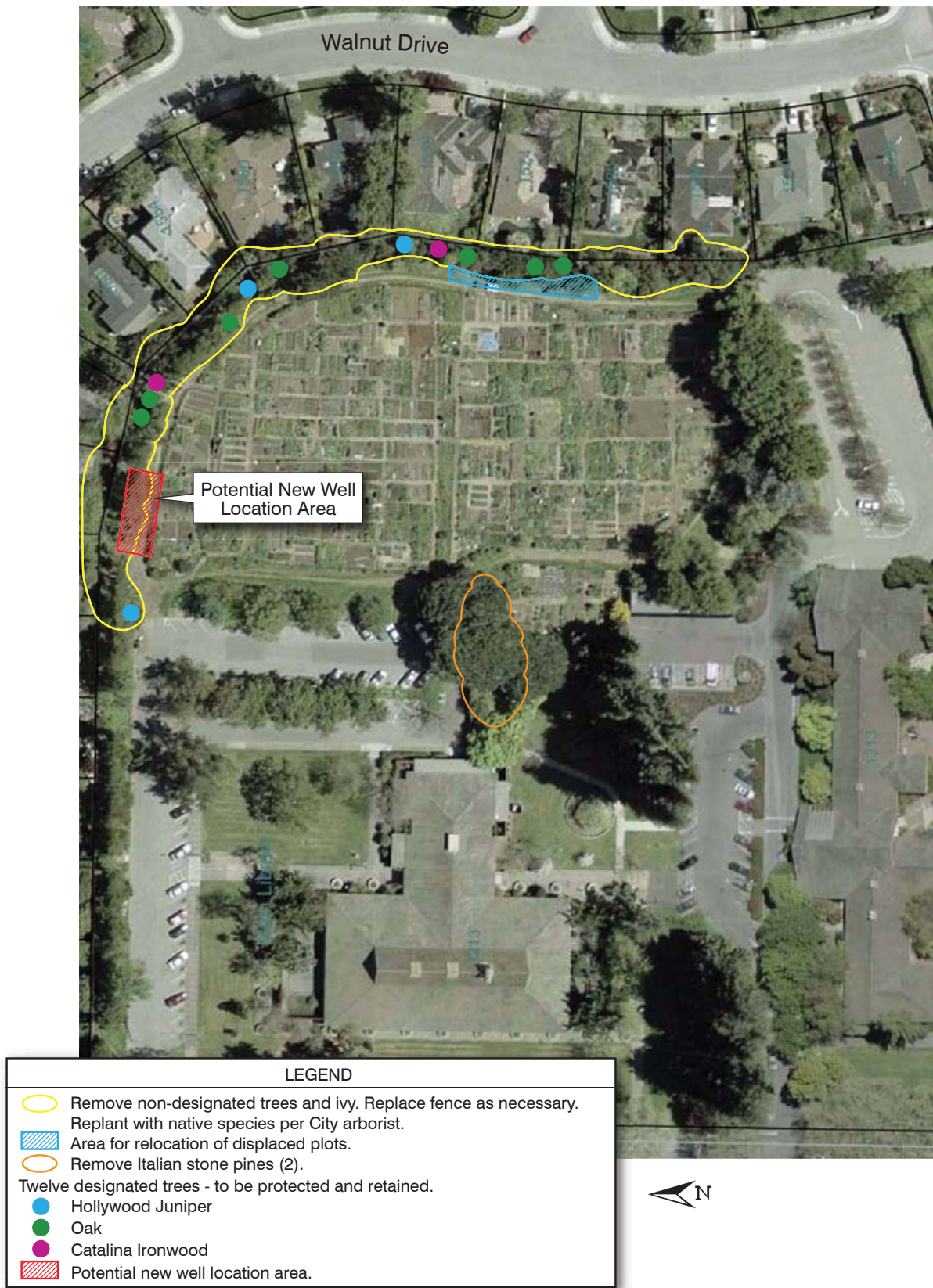
The potential well site at the Library/Community Center is located in the northwest corner of the community gardens, as shown in Figures 2-2 and 2-4. Approximately 10 garden plots in the vicinity of the proposed facility area would be relocated, requiring removal of two Italian stonepine trees and other trees and vegetation along the site fenceline. Installation of a blending facility is not likely feasible at this potential well site due to the extensive distribution system piping requirements associated with such a facility.

Proposed Heritage Park

The potential well site at Heritage Park is the former site of the Old Palo Alto Medical Foundation (see Figures 2-2 and 2-5) with Waverly Street to the north, Bryant Street to the south, Homer Street to the west, and Channing Street to the east. The site has been redeveloped into a public park that includes the historic Roth building. Given the location of this park, installation of a blending facility is not likely feasible at this potential well site due to the extensive distribution system piping requirements associated with such a facility. Installation of a new well facility at this location would be below grade, and sited such that existing buildings at the site would not be removed or altered to accommodate the new well facility. City of Palo Alto Ordinance No. 4815, dedicating Heritage Park, acknowledges that an “underground reservoir, well and pump station necessary for emergency water supply may be located at this site” subject to requirements outlined in the original text.

Proposed Middlefield

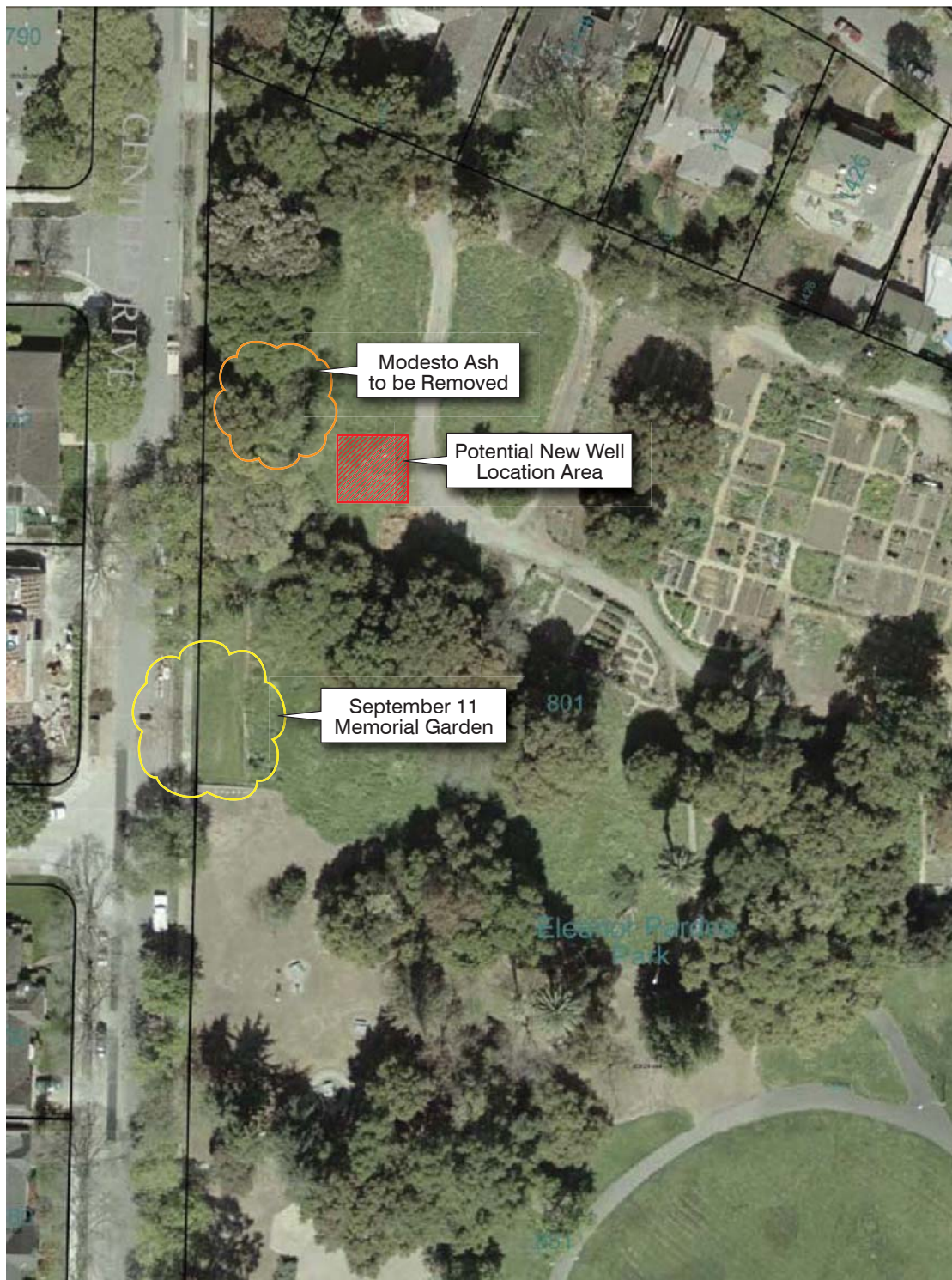
The Middlefield site is located on the south side of Middlefield Avenue, at a vacant lot between Lincoln and Kingsley Streets (see Figures 2-2 and 2-6). The facility site design would incorporate several large manna gum trees, deodar cedars, and a valley oak tree. Blending is not likely to be feasible at this potential well site due to the extensive distribution system piping requirements.



SOURCE: Carollo Engineers

City of Palo Alto Emergency Water Supply and Storage Project EIR . 201490

Figure 2-3
Proposed Eleanor Pardee Park
Well Site



SOURCE: Carollo Engineers

City of Palo Alto Emergency Water Supply and Storage Project EIR . 201490

Figure 2-4
Proposed Library/Community Center
Well Site



SOURCE: Carollo Engineers

City of Palo Alto Emergency Water Supply and Storage Project EIR . 201490

Figure 2-5
Proposed Heritage Park
Well Location

Installation of a blending facility is not likely feasible at this potential well site due to the extensive distribution system piping requirements associated with such a facility.

Proposed Downtown Parking Lots

The exact location for the Downtown Parking Lots potential well site has not yet been determined. The potential well locations include five City owned public parking lots that are bounded by Bryant Street to the north, High Street to the south, Lytton Avenue to the west, and Hamilton Avenue to the east, as shown in Figures 2-2 and 2-7. Installation of a well and related facilities at one of these lots would result in the loss of approximately three to five parking spaces at the selected site. Due to the limited space available for parking, the Downtown Parking Lots are being evaluated only for a well and chloramine treatment facilities.

Proposed California Avenue Parking Lots

The exact location for the California Avenue Parking Lots potential well site has not yet been determined. The possibilities include nine City owned public parking lots that are bound by Alma Street to the north, El Camino Real to the south, Cambridge Avenue to the west, and Grant Avenue to the east (see Figures 2-2 and 2-8). Installation of a well and related facilities would result in the loss of approximately three to five parking spaces at the selected site. Due to the limited space available for parking, the California Avenue Parking Lots are being evaluated only for a well and associated chloramines facilities.

Well Construction and Rehabilitation Activities

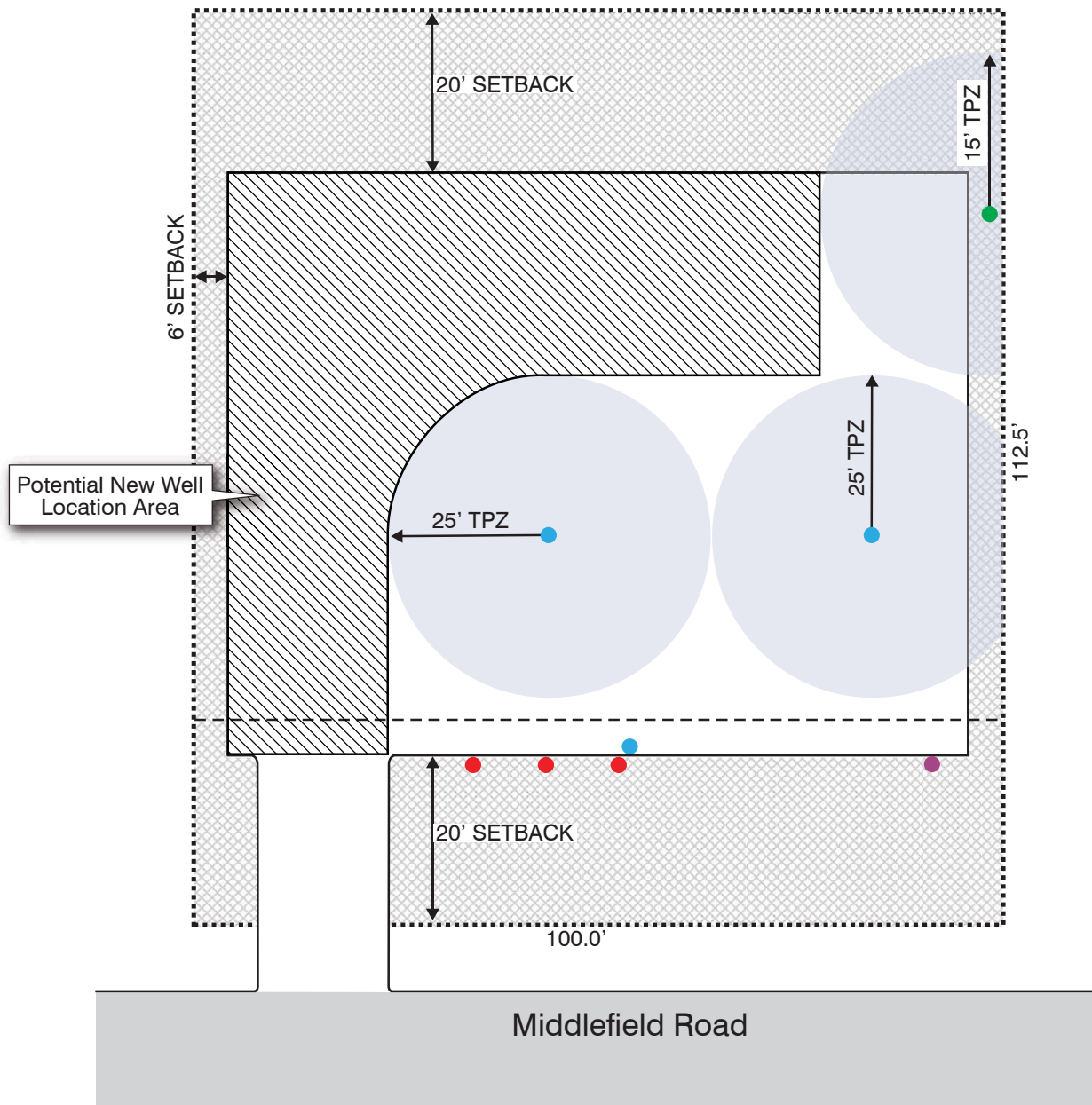
Project siting would avoid existing sensitive resources, regulated trees, and existing utilities and facilities to the extent feasible. Following construction activities, the sites would be restored and preconstruction use would continue, with the exception of areas associated with above ground structures, as described below.

New Well Construction

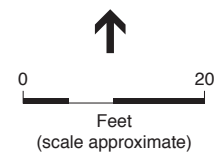
The following sections describe well drilling methods that would likely be used for construction of the proposed project; however, final construction methodology would be determined during final project design. Figure 2-9 displays the typical, schematic cross section of a new well, while Figure 2-10 displays the typical, schematic plan view of a new well site. The construction area required for the proposed well sites would be approximately 100 feet by 100 feet and the proposed project siting would avoid riparian areas or other areas with identified sensitive resources to the extent possible. All areas disturbed by construction activities would be restored to conditions similar to those present prior to construction activities, with the exception of above ground structures (i.e., well house and security, fencing). Following construction of the new wells, the existing wells would be inspected and rehabilitated.

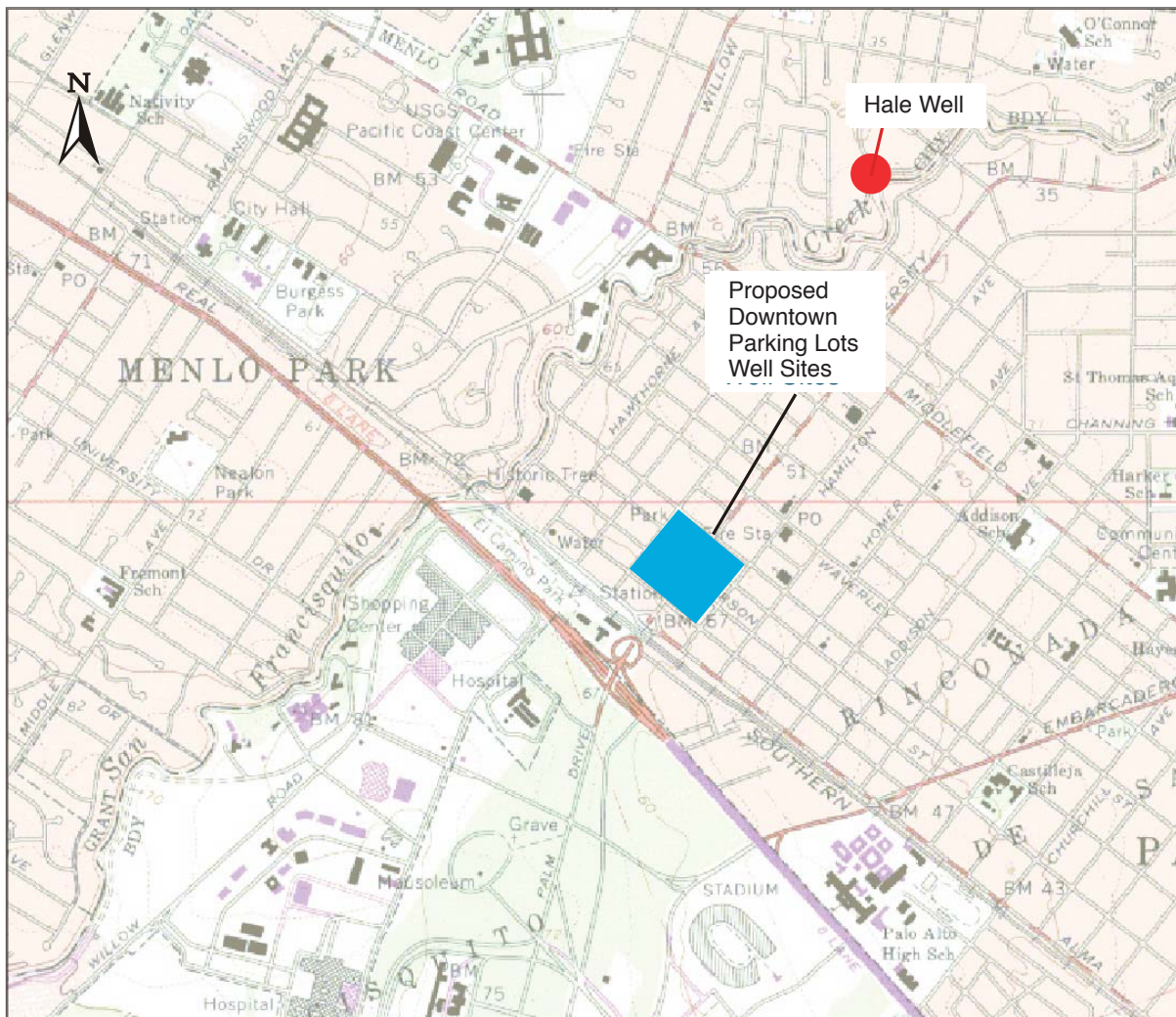
Site Grading

Well construction at any of the potential well sites would require initial site clearing and grading of up to one-quarter acre at each site. The well site would accommodate the proposed structures (well house, pump station, well, and discharge structure), pipeline connections and access



LEGEND	
.....	Well Site Boundary
----	Fence
Designated trees - to be protected and retained	
●	Manna Gum
●	Monterey Pine
●	Deodar Cedar
●	Valley Oak
TPZ	Tree Protection Zone



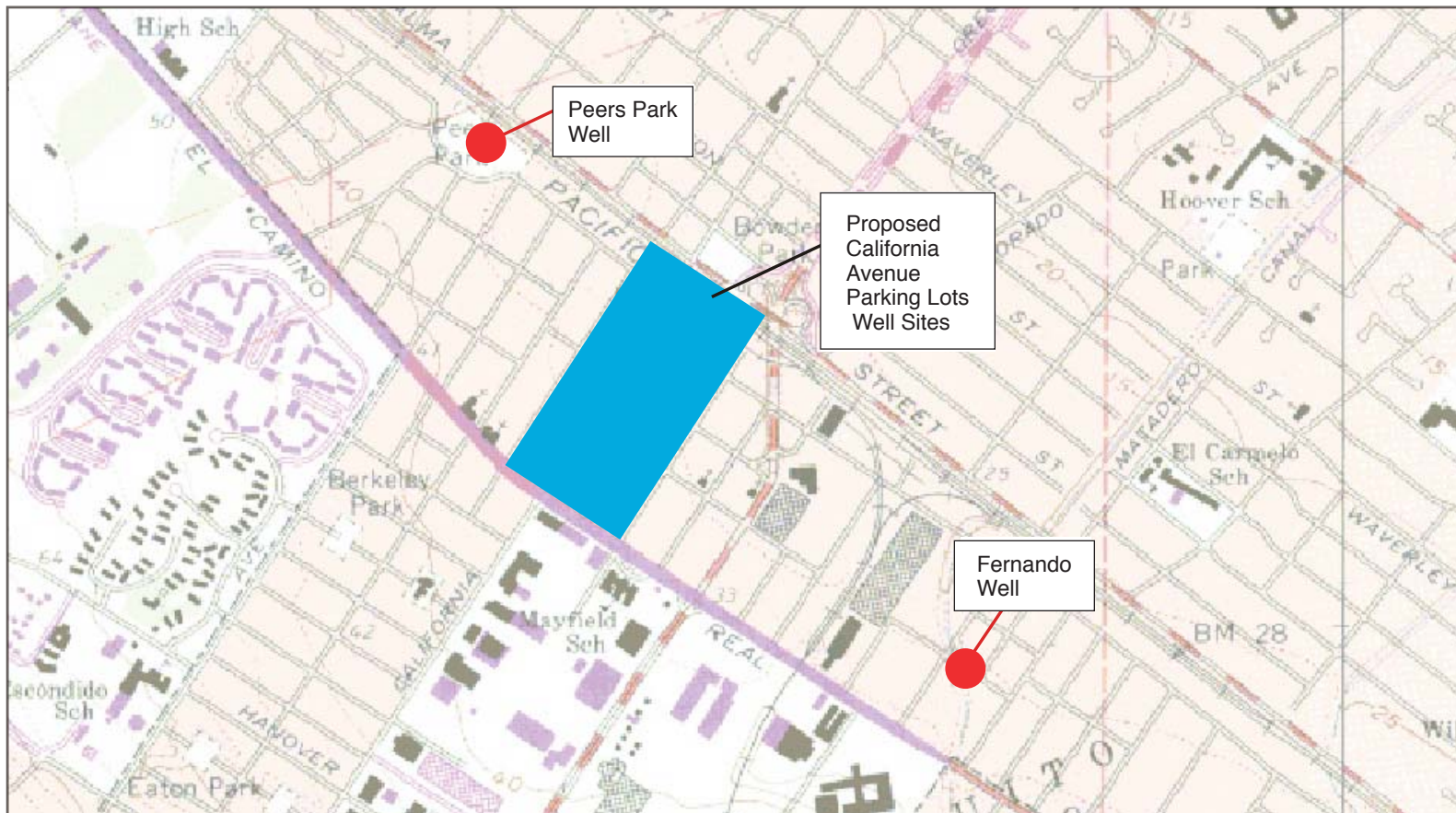


Note:

1) Sites are zoned as Public Facilities District.

LEGEND	
●	Existing Well Sites
■	Proposed Well Sites

No Scale

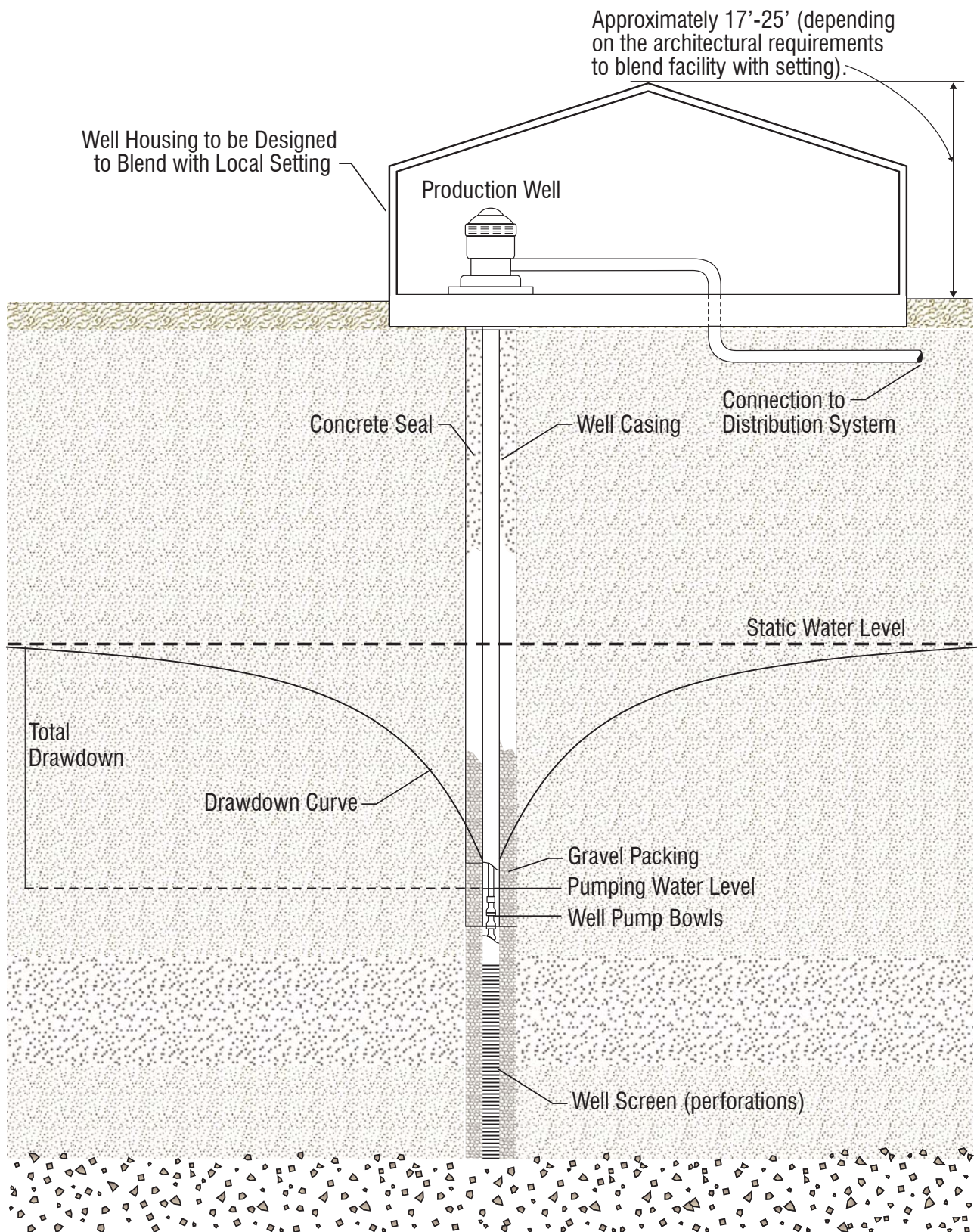


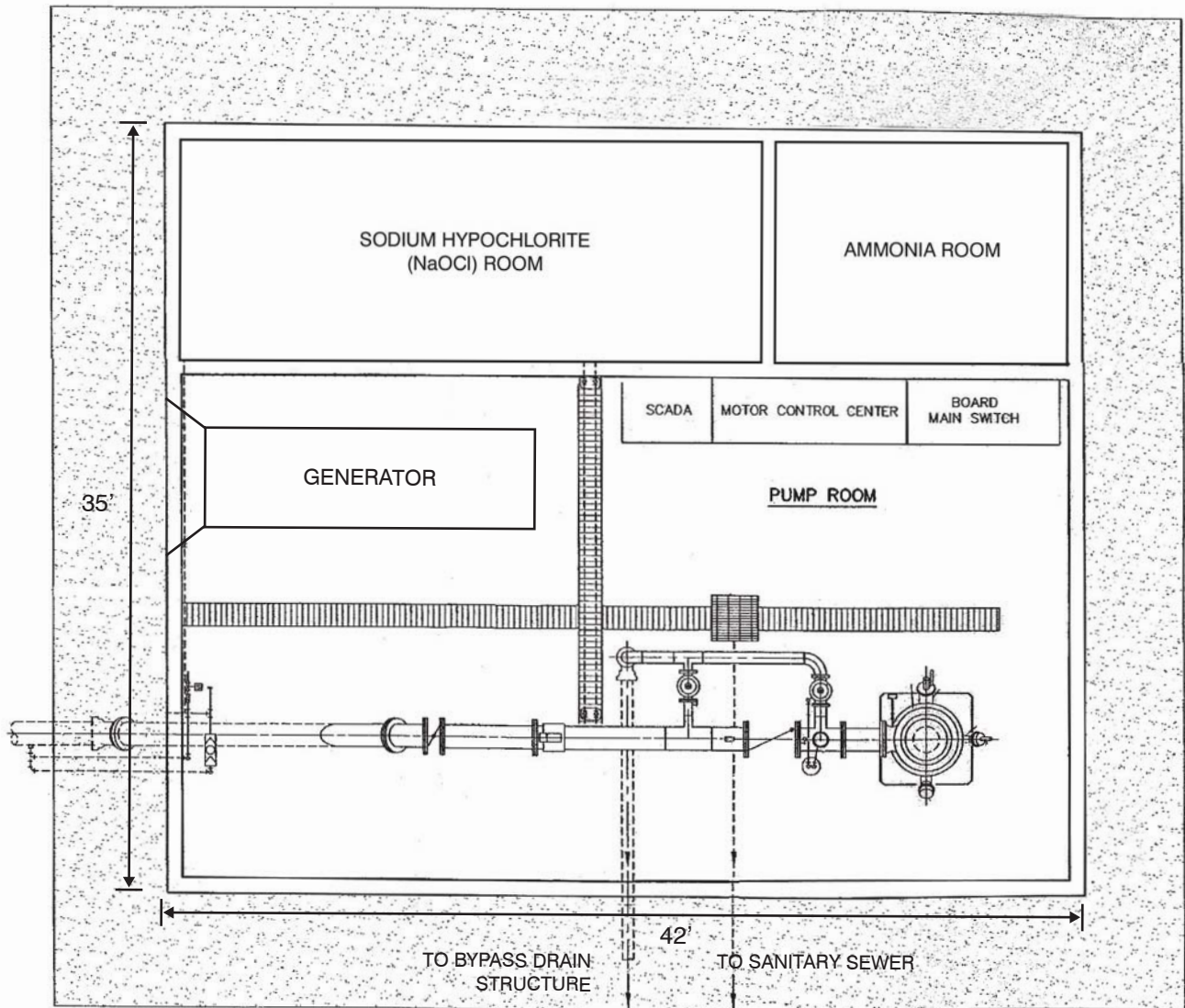
Note:
1) Sites are zoned as Public Facilities District.

LEGEND	
●	Existing Well Sites
■	Proposed Well Sites

No Scale







NOTE:

1. Typical plan of proposed new well house square configuration. Rectangular configuration dimensions approximately 65' x 25'. Final configuration to be determined during design, depending on site conditions.
2. Dimensions are for an above ground structure (applicable to all sites but Eleanor Pardee Park).

driveway, and staging areas required during construction activities. Excavation dimensions for installation of production well facilities would vary depending on the site, but would likely require excavation to a depth of 12 to 15 feet. The top of the slab for above grade well structures, or the top of the roof for below grade well structures, shall be above the 100 year flood elevation, as needed.

Drilling

24-hour construction would likely be required for activities associated with drilling the production well borehole and subsequent well construction, well development, and pump testing. 24-hour well drilling would require portable flood lighting for night time construction activities. Rotary drilling methods, such as reverse circulation rotary drilling, would likely be implemented for well construction, including a truck-mounted drill rig consisting of a derrick, power unit, pump, and double hole assembly with a drill bit (used to cut soil), drill pipe, and discharge pipe (where cuttings are entrained and suctioned through). This drilling technique is typically preferable for construction of production wells in unconsolidated soil formations. This methodology includes use of fluids piped into the borehole during drilling operations to cool the drill head and transport the cuttings to the surface. The cut material (cuttings) from the drilling process would be entrained through holes of the drill bit, and suctioned into the drill pipe by rising air bubbles and then discharged through the discharge piping into a mud tank. The cuttings would then settle out and the fluid would be reused for the drilling process. The borehole size would be approximately 28 inches in diameter. Mud tanks or basins would be used on site to control drilling mud and fluids for development. The actual amount of soil cuttings would be dependent on the depth of the well and geologic conditions. It is assumed that the soil cuttings could be stored in open top bins prior to being hauled away for disposal per applicable City and County requirements.

Installation

Following well drilling, a well casing and well screens would be installed. The casing serves as a housing for the pumping equipment and as a vertical conduit for water flowing upward from the aquifer to the pump intake. The well screens allow water to enter the casing. A sorted gravel envelope would be placed around the screen in the screen/borehole annulus to prevent sediment from entering with the water during pumping operations. The casing size would be selected based on the capacity of the well. Well screens would be placed opposite favorable aquifer zone, but blank casing would be placed to prevent cross-communication of water between aquifer units. The well casing annulus would be grouted to near the top of the well screen. In addition, a conductor casing would be installed to a depth of around 100 feet below ground surface, to provide a concrete seal, in accordance with DHS requirements for potable water wells.

Pump Testing

Following installation of the production well, testing would occur. The pumping test would consist of a step test lasting eight hours, followed by a 24-hour constant rate test. The step test would be conducted to establish the performance of the well (e.g. production capacity) and to provide the required information to design the pump station facilities. The step test involves the temporary installation of a portable variable speed pump and a flow meter to monitor the yield

and drawdown in the well. A step test involves increasing the pumping rate from the well in successive equal steps. Pumping will begin at a low rate and then will be increased over an 8 hour period. At each step, the pumping rate would be held constant for 1 hour to allow for the water levels to stabilize. The goal is to identify the highest pumping rate that can be achieved from that well. Upon collection of the data and establishment of the well yield, the groundwater well and well casing would be capped to maintain its integrity. This test would be conducted at each of the new proposed groundwater well sites. Following completion of the step tests, the engineer would then complete the final design activities for the groundwater pump station facilities, including the design of the groundwater pump(s).

A 24-hour constant rate test would be performed to develop the well and to establish the production capacity. A temporary pump would be installed in the well and operated at the maximum pumping rate, as determined by the 8 hour step test, for 24 hours to develop the well. The well would be developed by pumping at high rates which would allow for the removal of very small soil particles from the soil and rock adjacent to the well screen. This increases the yield of the well and results in the formation of a filter around the well screen.

The pumped water derived during testing activities would be conveyed to a water tank for desiltation prior to discharge to the local storm drains. All discharges would be in accordance with required erosion control measures.

Well Facilities and Connections

Upon establishment of a proposed well, the engineer would complete design of the well facilities including sizing the pumps, designing the well enclosure, and connection to the distribution and storm drain systems.

Well House, Pumps, and Chloramine Facility. Some of the new well equipment will require housing to protect sensitive equipment, to attenuate noise, to improve safety and for aesthetics. The housing may be designed as an above grade or below-grade facility, depending on the site. Above ground structures are proposed for implementation for all sites except Eleanor Pardee Park. A below ground structure, with above grade features of less than 50 square feet, is proposed for Eleanor Pardee Park. If the housing were an above grade facility, it would likely be constructed with a concrete floor and foundation, concrete masonry or timber walls, and a timber or metal deck roof. If the housing is designed to be below-grade, the foundation, walls, and roof deck would be constructed of poured in place concrete. The housing structure would house the production well (including piping), pumping facilities (including pumps), electrical/instrumentation, standby generator, as well as the chloramine system components. The remaining mechanical equipment in the structure would include pumps, valves, flow meters, piping and other appurtenances.

Construction activities for the above ground structure include site clearing and grading, pouring of the concrete foundation and flooring, construction of the housing walls and roof in place (using standard techniques for either concrete masonry or timber construction) and the construction of a wooden or metal deck roof. Above ground facilities would be approximately 42 feet by 35 feet or 65 feet by 25 feet, depending on site area availability. The exterior height would be

approximately 17 to 25 feet high, depending on the architectural treatments required to blend the facility into the surrounding area. Construction activities for the below ground structure include site clearing and grading, excavation and shoring for the below grade features, construction of poured in place elements (including forming, reinforcing, concrete placement and curing), and construction of above ground elements including the roof. The below ground facilities at Eleanor Pardee Park would be approximately 58 feet by 42 feet, with above grade features of less than 50 square feet. The above grade features, including at grade access hatches and ventilation, would be designed to blend in to the park setting and preserve public access to the park lands.

As with the existing wells, sodium hypochlorite would first be blended with the well water then aqueous ammonia would be added to create a chloramine residual compatible with the water in the distribution system. System components include: prefabricated storage tanks, ammonia and chlorine gas detection features, pressure relief valves with a scrubber tank to prevent discharge of ammonia and chlorine gasses, metering pumps, secondary containment to prevent any leaks (e.g. concrete containment berms), instrumentation, and controls. The aqueous ammonia storage tank capacity would range from 100 to 400 gallons while the sodium hypochlorite tank capacity would range from 1,000 to 1,500 gallons, depending on the sizing of the well and operational considerations.

Connection to Distribution System. Groundwater would be pumped from the well to the existing City of Palo Alto potable water distribution system for distribution to the service area. Stagnant water in the well would be flushed out to the storm drain system. After the initial flushing of the well, groundwater would be pumped to the City's existing water distribution system.

New 12 inch piping would be installed below ground from the new groundwater well to the existing distribution system pipes. During project design, the engineer would design the piping to minimize the distance required to connect to the distribution system, accounting for site and system restrictions. The connection to the existing distribution system would likely occur at one location. However, additional piping connection locations could be required to ensure pipe velocities do not exceed 10 feet per second per the City's Water Well Master Plan (Carollo Engineers, 1999). The final pipeline design would be determined upon the well capacity and on the results of the distribution system modeling. It is anticipated that 500 to 2,000 linear feet of pipe would be installed at each site, requiring disturbance of up to approximately 1.2 acres. The piping would be installed via open trenching, however other technologies may be used pending site conditions. Pipeline design and construction for new wells would be similar to the pipeline connections described for the new reservoir. Following pipeline construction, disturbed areas would be restored to conditions similar to those prior to construction. Connections to the existing distribution system would involve the temporary shutdown of the water distribution line for up to approximately 48 hours in order to connect the new pipe.

The design and construction of the pipeline connecting to the storm drain system would be similar to that of the connection to the existing distribution system. Where possible, the pipeline would be constructed in the same trench as the distribution system piping.

Lighting

Lighting at new well sites would be similar to existing wells, and would be dependent on the location of the facility, security requirements, and public input. Facility lighting requirements would be per City Planning, DHS, and other requirements. If external lighting is required, motion sensor lighting would be installed.

Fencing

The City's standard fencing requirements include 8 foot high minimum, PVC black coated, special security type chain link steel fencing, with a locked entrance gate.

Site Restoration

Following completion of well construction activities, construction work areas and staging areas would be regarded, contoured, and returned to conditions and uses similar to conditions prior to construction activities. Bare ground would be seeded with native plant species or plantings.

Power

Depending on the well site selected, power would primarily be supplied to the well pump station via an electrical line off of an existing transformer. In addition, a standby generator and associated diesel tank would be provided at each site to provide for backup power (see the description of Electrical Demand, below). Design requirements for these facilities (e.g. pump flow rate, horse power, etc) will be developed after the pump testing is completed.

Access

Based on initial field reconnaissance, access to the selected well sites would be via existing roads and it is not anticipated that new access routes would be required.

Well Rehabilitation Activities

Prior to well rehabilitation, each well would be inspected and the scope of the well rehabilitation effort required would depend on the condition of the well casing and mechanical and electrical equipment present at each well, in addition to the water supply capacity that could be generated by the three new wells proposed. Rehabilitation of the existing wells could include clearing of vegetation and trees, repairing or installing a new well casing, pumps, motors, and controls, upgrading the electrical service, architectural/landscaping/sound proofing treatments, moving the existing fence line, and installation of new standby power facilities. Construction activities would be similar to that described above for the new wells. Because the rehabilitation activities would increase the volume of water produced at each well, modification to the existing water distribution system could be required. Potential modifications include moving the existing groundwater well piping connection point to the distribution system to a different location or increasing the number of pipes connecting the groundwater system to the distribution system in order to dissipate the pipe velocities. Pipeline design and construction for new wells would be similar to the pipeline connections described for the new reservoir. Following pipeline construction, disturbed areas would be restored to conditions similar to those prior to pipeline construction. Appurtenances required could include piping, valves, and meters. Permanent generators and associated fuel storage tanks would be installed at each of the

sites. Following rehabilitation, lighting, fencing, and adjacent uses at well sites would be restored to conditions similar to existing or as desired by the local community.

Table 2-1 summarizes the existing and potential capacity of each of the rehabilitated wells.

**TABLE 2-1
CAPACITY AVAILABLE FROM REHABILITATED WELLS**

Well	Pressure Area Served	Existing Capacity (gpm)	Potential Rehabilitated Capacity (gpm) ^a
Fernando	1	325	800
Hale	1	1,425	2,300
Peers Park	1	900	1,200
Rinconada	1	1,250	2,300
Matadero	2	400	800
Total	--	4,300	7,400

^a Actual capacity to be determined based on well performance tests following rehabilitation.

SOURCE: Carollo Engineers, 1999.

Construction Equipment

Construction equipment typically used for construction and rehabilitation of wells could include but is not limited to:

- Pump rig
- Rotary drill rig
- Excavator
- Backhoe/bulldozer
- Grader
- Compactor
- Settling tanks
- Front end loader/forklift
- Water truck
- Vacuum truck
- Dump truck
- Truck mounted crane
- Concrete truck
- Flat-bed equipment delivery truck
- Paving equipment
- Sand shaker
- Pick-up truck and other support vehicles
- Air compressor
- 10 kilowatt electrical generator
- Temporary lighting
- Welding machine/rig
- Pavement saw
- Jack hammer
- Geophysical logging truck

In addition to the use of an on-site generator, additional electricity could be required, from existing power sources. Equipment, materials, and vehicle staging would be accommodated at each specific well site for well development. This would increase the total area of disturbance required during project construction activities; however, the staging area would be restored following the completion of construction activities. Construction activities could require use of diesel fuel, paints, coatings, cleaners, and small amounts of chlorine in tablet form for clean up/disinfection of well facilities upon completion of construction activities.

Construction Schedule

Well drilling, construction, and testing activities would require approximately four to six weeks to complete at each well site. Actual installation time could vary depending on geologic and site conditions. Reasonable measures would be taken to reduce construction noise, where necessary, due to the proximity of residential land uses to proposed well sites.

It is assumed that wells would be constructed one at a time. Construction activities would require up to 12 people per construction crew, including inspectors. The City would phase well site development over an approximately three year period, with construction of each well facility requiring approximately six months per site. Continuous 24-hour construction activities could be required for a one to three week period for each well, during phases of well drilling and testing. 24-hour construction activity would not be expected continuously during that period and could be reduced depending on geologic material and site conditions. Construction, with the exception of the 24-hour drilling/well testing, would likely occur during weekdays from 8:00 a.m. to 5:00 p.m. However, depending on actual distances from nearby sensitive land uses, such as nearby schools, residences and library, the City could reduce construction hours. Construction in and around schools would be coordinated with any school affected. In these instances, construction could be scheduled during the summer or winter school breaks. Construction hours within public right-of-ways would be dictated by the encroachment permits of the City.

Rehabilitation activities would take place following the construction of new wells, and would occur over a period of approximately two and a half years. Rehabilitation activities would require relatively little electricity and it is assumed that existing power sources would be utilized.

New Reservoir Construction

The City proposes construction of a new 2.5 MG storage reservoir with a 11.5 mgd capacity pump station, a well, and pipelines connecting the reservoir facility to the City distribution system. The reservoir would be a below-grade reinforced concrete structure. In recent studies, the City evaluated nine possible sites for the proposed storage reservoir and selected four sites for study in this EIR. Upon completion of the Draft EIR and evaluation of comments received on the Draft EIR, the final reservoir site will be selected for project implementation. Construction activities would primarily require excavation for the reservoir and pipeline, well drilling, and construction of the facilities. Construction of the reservoir and associated components would require approximately twelve months. It is anticipated that construction would occur during the daylight hours; however, depending on the project needs construction hours may be extended. 24-hour construction is not anticipated, with the exception of well drilling.

Potential Reservoir Locations

The reservoir sites evaluated in this EIR include: El Camino Park, a parking lot near Stanford Shopping Center (within either the northern parking area bounded by El Camino Real, Sandhill Road, the businesses facing El Camino Real, and Quarry Road; or the southern parking area near the northeast corner of Arboretum Road and Quarry Road), and a Town and Country Shopping

Center parking lot (see Figure 2-2). Should one of these sites be proposed solely as an emergency well site prior to project implementation, any potential well site would be within the boundaries described below.

El Camino Park

El Camino Park consists of baseball fields, soccer fields, and unimproved land situated between El Camino Real, a major thoroughfare, and Alma Street (see Figure 2-2). The El Camino Park reservoir site is on land leased from Stanford University, with the CalTrain Station and University Avenue to the south. This project component would require a ballot measure for conceptual voter approval of a Park Improvement Ordinance for water storage and facility improvements in dedicated park lands. An above ground or below ground pump station could be accommodated at this site and a belowground pipeline would be required. Figure 2-11 identifies the potential development area at El Camino Park. The reservoir facility could be sited in most locations of the park, with a configuration similar to that shown conceptually in Figure 2-12. The proposed project siting would avoid existing mature trees located along the perimeter of the park and the northern end of the park to the extent feasible. The proposed project would include removal and replacement of the existing Lytton Station to include the proposed pump station. The proposed below grade reservoir would not be visible, with the exception of the associated pump station, if installed above ground. Further, the existing park uses would be restored following project construction.

A new reservoir facility at the El Camino Park site would connect to the existing water distribution system, providing a maximum flow rate of 2,600 gpm to Pressure Area 1 and a maximum flow rate of 5,400 gpm to Pressure Area 3 through the new pipeline connection to the existing or new Lytton or Alma Street station (see Figure 2-12). Pipeline connections could be located within the alignment of Alma Street. Selection of the El Camino Park site would require a construction work area of up to approximately 4 acres. The majority of the pump station structure would be below ground and the above grade portion of the pump station structure would be constructed within the existing Lytton Station fenceline. The construction work area would be restored to conditions similar to existing conditions.

Stanford Shopping Center North

The Stanford Shopping Center North site includes the northernmost parking lot of the Stanford Shopping Center (see Figure 2-2). The Stanford Shopping Center North site includes the northernmost parking lot of the Stanford Shopping Center. The extent of the site is defined by El Camino Real, Sand Hill Rd, the access road directly in front of the Macy's Men Store, and the northernmost access road from El Camino Real to Stanford Shopping Center (see Figure 2-13). Should this site be selected, a new parking lot would be constructed following installation of the reservoir below ground. A new reservoir at this site would include an adjacent pump/well station located in the corner of the parking lot. While the pump/well station would be buried, large hatches would remain accessible from the surface to allow the removal or replacement of equipment within the structure. As such, the area occupied by the hatches, as well as the aboveground ventilation/access structure for the pump/well station, would not be returned to a parking surface. This area would need to remain accessible to City staff at all times. Upon completion of the project, the net loss of parking spaces would be approximately 10 parking

spaces. The remainder of the construction work area would be restored to conditions similar to existing conditions. A new reservoir at this site would include approximately 2,000 feet of pipelines connecting the facility to Pressure Area 3 at Sand Hill Rd and to Pressure Area 1 at Lytton Pump Station. Selection of the Stanford Shopping Center North site would require a construction work area of up to approximately 4.6 acres, with all but approximately 0.03 acres restored following construction. Ancillary at grade features would be designed to blend in with the existing uses. The remainder of the construction work area would be restored to conditions similar to existing conditions.

Stanford Shopping Center South

The Stanford Shopping Center South site includes the parking lot accessed from Quarry Road, immediately north of Arboretum Road (see Figure 2-2). This parking lot once served a nearby hospital, which has since been abandoned. The Stanford Shopping Center South site is not located directly adjacent to existing streets or structures, allowing for a construction buffer from public use areas (see Figure 2-14). Like the Stanford Shopping Center North site, the reservoir and the adjacent pump/well station would be located more or less in the center of the parking lot and the pump/well station in a corner. Most of the site would be returned to a parking surface once the structures are in place, except for an area set aside for the aboveground structure and hatches associated with the pump/well station. Upon completion of the project, the net loss of parking spaces would be approximately 10 parking spaces. The remainder of the construction work area would be restored to conditions similar to existing conditions. Approximately 3,000 feet of pipelines would be installed to connect the pump station to the distribution system for Pressure Area 3 at Quarry Road and to Pressure Area 1 at Lytton Pump Station. Selection of the Stanford Shopping Center South site would require a construction work area of approximately 4.7 acres, with all but approximately 0.03 acre restored following construction. Ancillary at grade features would be designed to blend in with the existing uses. The remainder of the construction work area would be restored to conditions similar to existing conditions.

Town and Country Shopping Center

The Town and Country Shopping Center site refers to the triangular parking lot behind the Town and Country Shopping Center, where Embarcadero Road intersects Alma Road (see Figure 2-2). The reservoir and pump/well station would be located in the far corner of the parking lot (see Figure 2-15). Approximately 4,500 feet of pipelines would be installed to connect the pump station to the distribution system for Pressure Area 1 at Alma Road and to the Pressure Area 3 distribution system near the Stanford Shopping Center. If selected as the new reservoir site, the Town and Country Shopping Center site would be paved and returned to its original use, with a net loss of approximately 10 parking spaces. Selection of the Town and Country Shopping Center site would require a construction work area of approximately 4.8 acres, with all but approximately 0.03 acre restored following construction. Ancillary at grade features would be designed to blend in with the existing uses. The remainder of the construction work area would be restored to conditions similar to existing conditions.



- Development Area
- ⬮ Potential Utility Connection Locations
- ⬮ Regulated Tree Protection Zone (TPZ)

Notes:

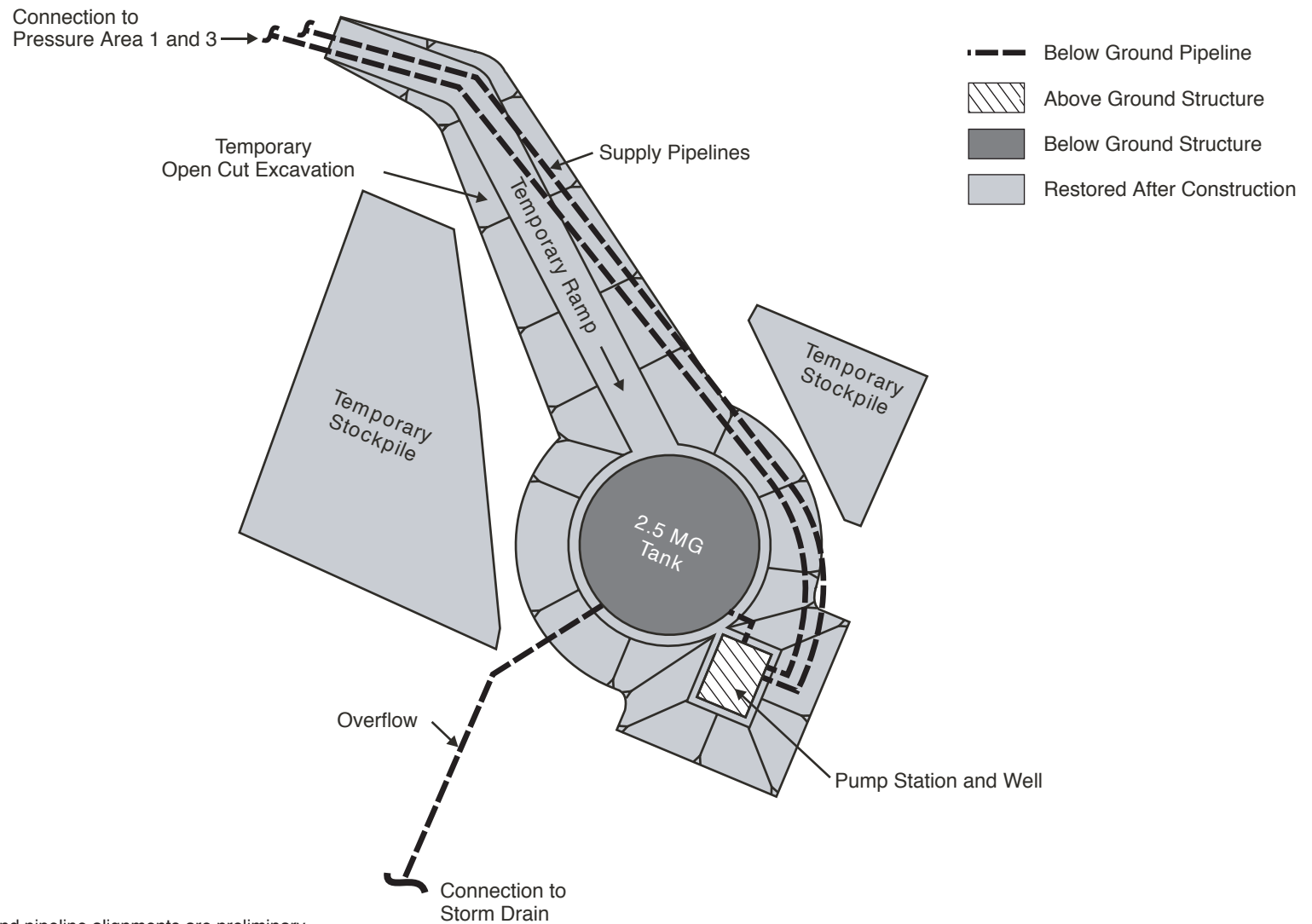
1. Underground utility routes and access routes to be finalized during preliminary design. Routes to be mitigated per Tree Protection Report and designed to avoid sensitive resources and existing facilities to the extent feasible.
2. Please refer to Figure 2.13 for a typical layout of the proposed reservoir facilities.
3. Regulated trees (including protected oaks and redwoods), street trees in the right-of-way and significant designated trees (Olympic Grove Redwoods, mature screening trees, etc.) are present.
4. Perimeter trees are regulated trees.

SOURCE: Carollo Engineers

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Figure 2-11
El Camino Park Reservoir
Development Area

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Note: Facility locations and pipeline alignments are preliminary. The actual locations and dimensions (including the portions above and below grade) would be confirmed during final site design.

New Reservoir and Associated Facilities

Construction of the proposed reservoir, pump station, well, and pipelines would be similar at each potential reservoir locations, as described below. Construction activities would restrict existing public use (i.e., park use or public parking), with the exception of the Town and Country Shopping Center site where part of the back parking lot could remain open to the public during construction, allowing public use of approximately 110 of the 350 parking spaces (approximately 28,900 square feet). Project siting would avoid existing sensitive resources, regulated trees, and existing utilities and facilities to the extent feasible. Following construction activities, the sites would be restored and preconstruction use would continue, with the exception of the small areas associated with above ground structures, as described above.

Reservoir

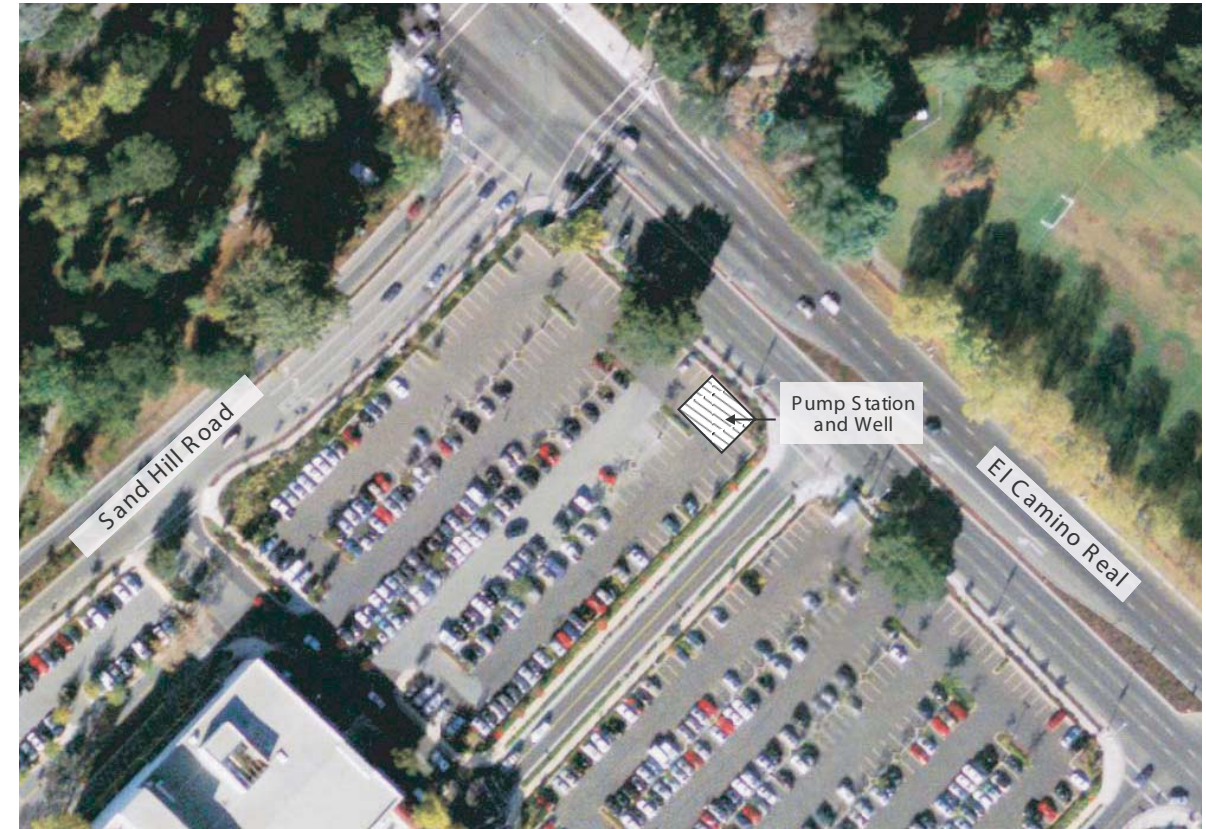
Table 2-2 summarizes the location, dimensions, and excavation requirements at each potential reservoir site. The design of the subsurface reservoir would conform with existing and proposed regulations, including the *Safe Drinking Water Act and Related Laws and Regulations Section 64600-64602* and the *proposed Waterworks Standards Section 64685*. Construction at any of the potential reservoir sites would require initial site clearing and grading of up to approximately 4 to 4.8 acres of land, depending on the site selected. Following site clearing, excavation of soils for installation of the reservoir would occur. Excavated soil would be stockpiled in the adjacent staging area, or could potentially be removed and stored at an off site area for use as backfill material (see Table 2-2). Though not likely, if offsite storage is necessary due to project site constraints, appropriate storage locations would be identified prior to construction. The remaining excavated soils would be off hauled for disposal per applicable City and Santa Clara County requirements. Assuming that the reservoir and pipeline excavation and site work portion of the construction project could take two months, between 25 cubic yards (CY) and 190 CY of material would be hauled away from the selected site per day. Using an average load of 10 CY per truck, the proposed project would generate a maximum of 3 to 19 daily truck haul round trips.

Sheet piles with soil nailing and soldier piles with lagging would provide support for the reservoir excavation walls during construction. Construction of a reservoir at the El Camino Park or the Stanford Shopping Center North site would require vertical shoring. A crane hauled skiploader would be utilized to remove excavated materials for stockpiling and then either backfilled or off hauled to a disposal site. A dewatering operation would be implemented to remove groundwater during construction activities (e.g. excavation, reservoir construction, etc). The bottom of the reservoir would be higher than the highest groundwater level to prevent seepage of groundwater into the treated water reservoir.

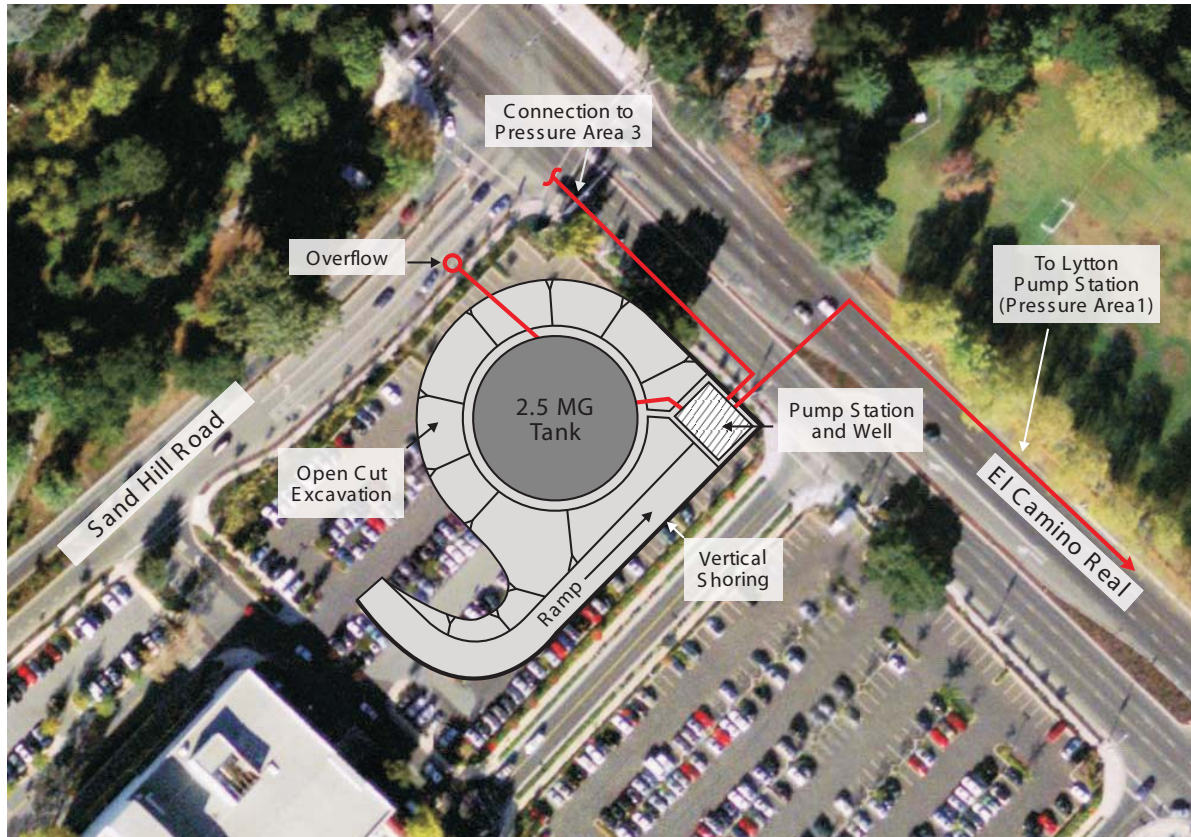
Following excavation activities, a highly reinforced, concrete floor would be installed with a slight upward slope to the center of the tank. Wall forms would be curved to the radius of the tank. The cast-in-place concrete corewall would be installed continuously to the full height and in equal circumferential sections, usually about 40 feet in width. A concrete, two-way flat slab roof with a slight upward slope to the tank's center would be cast, similar to the floor. A grid of



Pre Construction



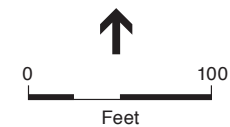
Post Construction



During Construction

- Below Ground Pipeline
- Below Ground Structure
- Restored After Construction
- Above Ground Structure

Note: Facility locations and pipeline alignments are preliminary. The actual locations and dimensions (including the portions above and below grade) would be confirmed during final site design.



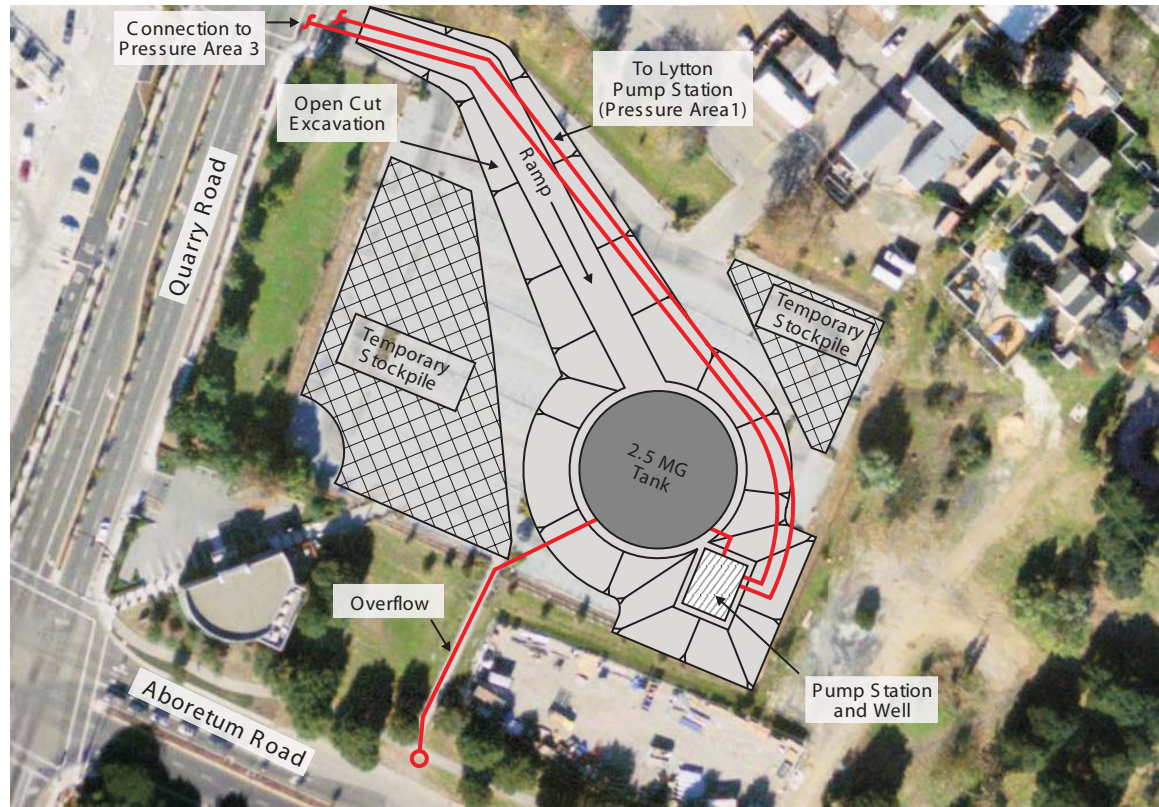
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Pre Construction



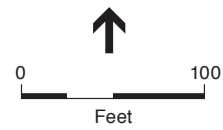
Post Construction



During Construction

- Below Ground Pipeline
- Below Ground Structure
- Restored After Construction
- Above Ground Structure

Note: Facility locations and pipeline alignments are preliminary. The actual locations and dimensions (including the portions above and below grade) would be confirmed during final site design.



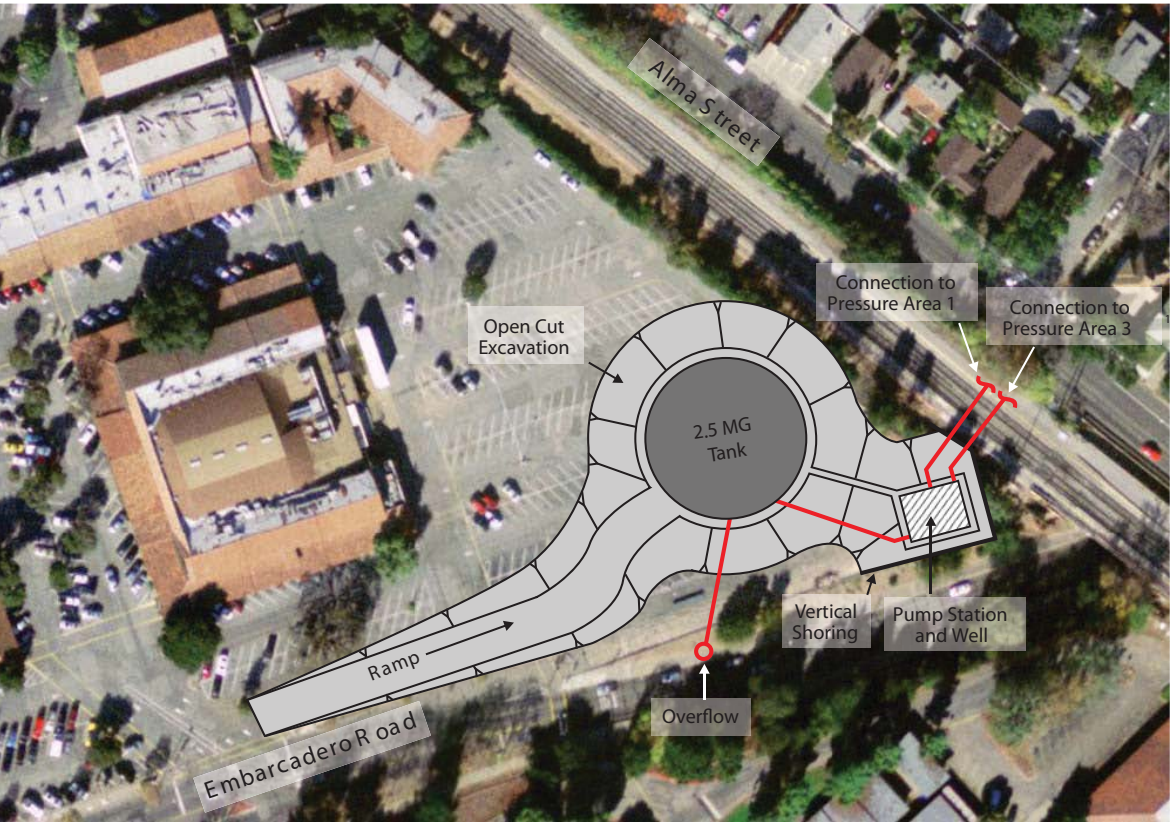
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Pre Construction



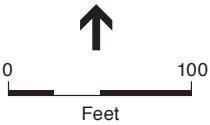
Post Construction



During Construction

- Below Ground Pipeline
- Below Ground Structure
- Restored After Construction
- Above Ground Structure

Note: Facility locations and pipeline alignments are preliminary. The actual locations and dimensions (including the portions above and below grade) would be confirmed during final site design.



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**TABLE 2-2
SUMMARY OF POTENTIAL RESERVOIR LOCATIONS**

Potential Reservoir Site	Reservoir Size	Estimated Soil Excavation	Estimated Backfill	Estimated Disposal	Estimated Import	Estimated Temporary Vertical Shoring
El Camino Park	- Construction work area: up to approximately 4 acres - Post-construction facility area: approximately 0.03 acre (within the existing Lytton Station fenceline) - Reservoir: circular footprint of approximately 152 feet diameter, at an excavation depth of approximately 32 feet	36,500 CY	15,000 CY (stored on or off-site)	21,500 CY	5,500 CY	37,000 ft ²
Stanford Shopping Center North	- Construction work area: approximately 4.6 acres - Post-construction facility area: up to approximately 0.03 acre (above ground ventilation, access structure and hatches designed to blend in with existing use) - Reservoir: circular footprint approximately 150 feet in diameter, at an excavation depth of approximately 40 feet	57,400 CY	46,000 CY (stored off-site)	27,500 CY	5,500 CY	14,100 ft ²
Stanford Shopping Center South	- Construction work area: up to approximately 4.7 acres - Post-construction facility area: approximately 0.03 acre (above ground ventilation, access structure and hatches designed to blend in with existing use) - Reservoir: circular footprint approximately 150 feet in diameter, at an excavation depth of approximately 40 feet	64,500 CY	55,400 CY (stored on-site)	27,500 CY	6,000 CY	NA
Town and Country Shopping Center	- Construction work area: up to approximately 4.8 acres - Post-construction facility area: approximately 0.03 acre (above ground ventilation, access structure and hatches designed to blend in with existing use) - Reservoir: circular footprint approximately 150 feet in diameter, at an excavation depth of approximately 40 feet	60,500 CY	50,100 CY (stored off-site)	27,500 CY	6,000 CY	12,300 ft ²

equally spaced round columns would support the roof. The contractor would then prestress the tank and apply a coat of grout using a strand wrapping machine. The reservoir would be backfilled, with approximately three feet of soil cover over the top of the structure. Following completion of the reservoir construction, the top surface of the reservoir would be restored to the current use (e.g. parking spaces, soccer fields, etc).

Reservoir Pump Station

The proposed pump station would include a well, pumps, flow meters, hoist, valves, piping, standby generator, and a diesel fuel tank. Proposed well design and construction would be similar to that described above for new well sites. If a below ground pump station is constructed, the facility would also include access hatches, stairwells, and ventilation. Above ground pump stations would require fencing similar to that at the existing well sites, including approximately 8 foot high black, steel chain link fencing surrounding the new well facilities, with a locked entrance gate. Above ground structures would be located in an approximately 26 foot by 44 foot building, with a below ground structure footprint of approximately 44 foot by 64 foot. The exterior height would be approximately 17 to 25 feet high. The actual configuration would depend on the architectural treatments required to blend proposed structure with surrounding area considered at each of the proposed locations.

The below ground pump station/wellhouse would be constructed of cast in place concrete walls. Construction would involve excavation of the pump station area, installation of shoring materials, pouring concrete for the pump station structure, and installation of the pumps, appurtenances, access stairwell and ventilation. For the Town and Country Shopping Center site, a limited amount of temporary vertical shoring would be required. Other ancillary features are described at the end of this chapter.

Reservoir Access Hatch and Vent

One 50 square foot reservoir access hatch and vent would be located on top of the reservoir. Project design would consider constructing the access hatch and vent to be either buried or blend in with the existing uses.

Reservoir Pipelines

The proposed reservoir would require installation of new pipelines to connect the new reservoir to the existing City distribution system. Reservoir pipelines would be 18-inches in diameter. The length of pipeline needed, and the proposed construction method would vary, based on the proposed location, as summarized in Table 2-3.

As noted in the table below, pipeline construction would either be by open cut trenching or trenchless technology (i.e., bore-and-jack, micro tunneling), depending on location. For open trench construction, estimated trench width and depth are up to 5 feet in width and up to 10 feet deep, depending upon final route and utility conflicts. The ideal temporary construction easement for pipeline installation would be 25 feet wide (12 feet for access by trucks and loaders, a 5-foot-wide trench, and additional width for maneuvering).

**TABLE 2-3
SUMMARY OF RESERVOIR PIPELINES CONSTRUCTION WORK AREA**

Reservoir Location	Pipeline Location	Estimated Pipeline Length	Construction Work Area	Construction Method	Excavation Requirements
El Camino Park	Based on the reservoir location and feasibility, a pipeline will be constructed from the reservoir/pump station to connect to PA1 at Lytton Pump Station or via Alma Road.	150 feet to 1,500 feet	up to approximately 0.9 acre	Open Trench	<i>Excavation:</i> 175 to 1,600 CY <i>Waste:</i> 0 to 600 CY (approximately 60 Truck Trips)
	From reservoir/pump station to Pressure Area 3 distribution system	150 to 1,350 feet	up to approximately 0.8 acre	Open Trench	<i>Excavation:</i> 175 to 1,400 CY <i>Waste:</i> 0 to 450 CY (approximately 45 Truck Trips)
Stanford Shopping Center North	From reservoir/pump station, under El Camino Real, traversing El Camino Park, to PA1 at Lytton Pump Station	1,500 feet	up to approximately 0.9 acre	Trenchless technology would be required under El Camino Real, Open Trench otherwise	<i>Excavation:</i> 1,575 CY <i>Waste:</i> 450 CY (approximately 45 Truck Trips)
	From reservoir/pump station to PA3 at Sand Hill Road	250 feet	up to approximately 0.1 acre	Open Trench	<i>Excavation:</i> 275 CY <i>Waste:</i> 75 CY (approximately 8 Truck Trips)
Stanford Shopping Center South	From reservoir/pump station, along Quarry Road, under El Camino Real, traversing El Camino Park, to PA1 at Lytton Pump Station	2,250 feet	up to approximately 1.3 acre	Trenchless technology would be required under El Camino Real, Open Trench otherwise	<i>Excavation:</i> 2,350 CY <i>Waste:</i> 650 CY (approximately 65 Truck Trips)
	From reservoir/pump station to PA3 at Quarry Road	650 feet	up to approximately 0.4 acre	Open Trench	<i>Excavation:</i> 675 CY <i>Waste:</i> 200 CY (approximately 20 Truck Trips)
Town and County Shopping Center	From reservoir/pump station to PA2 at Alma Road	130 feet	up to approximately .07 acre	Trenchless technology may be required under railroad tracks	<i>Excavation:</i> 140 CY <i>Waste:</i> 40 CY (approximately 4 Truck Trips)
	From reservoir/pump station, along Alma Road, under El Camino Real, to PA3 pump station near Stanford Shopping Center	4,300	up to approximately 2.5 acres	Trenchless technology may be required under railroad tracks and would be required under El Camino Real. Open trench otherwise.	<i>Excavation:</i> 4,475 CY <i>Waste:</i> 1,300 CY (approximately 130 Truck Trips)

In difficult conditions or at sensitive crossings (i.e., busy intersections, creeks), bore-and-jack or similar technology would be used. A jacking pit and receiving pit would be excavated at the two ends of the crossings to facilitate the use of a horizontal boring machine (or auger) and a hydraulic jack to, respectively, drill and hole and push a casing through the hole. As the boring proceeds, a steel casing pipe is jacked into the hole; the pipeline is then installed in the casing. The casing is jacked using a hydraulic jack in a pit located at one end of the crossing. The jacking pit is excavated (and shored) with typical dimensions of 12 to 15 feet wide, and 30 to 35 long, with depth depending on the crossing but not less than 8 to 10 feet deep. The receiving pit is typically smaller, approximately 10 feet wide and 10 feet long. Pipeline construction would proceed in the following order:

- Clearing and grading the right-of-way;
- Trenching and hauling of excess spoils;
- Relocation of utilities, if required;
- Delivery of the pipe;
- Installation of the pipe;
- Backfilling of the trench;
- Filling and flushing, hydrostatic and disinfection/bacterial testing (24 hours minimum); and
- Restoration of the right-of-way.

Pipeline construction would proceed at approximately 300 feet per day in standard conditions and less in more difficult conditions. Pipeline installation would generally occur within public right-of-way and existing roadways. Pipeline installation could require temporary closure of one-lane of traffic during pipeline installation. Fencing or flagging, and appropriate signage would be installed to minimize potential safety hazards for vehicular and pedestrian traffic. There are no above ground structures associated with proposed pipelines and following the completion of construction, excavation areas and work areas would be restored to conditions similar to that present prior to construction. The City would retain a 20 foot wide permanent pipeline access easement along the pipeline route.

Construction Schedule and Equipment

Construction of the proposed reservoir and associated facilities would require approximately eight to twelve months. Construction activities would require up to 30 people per construction crew, including inspectors. Construction would typically occur during weekdays from 8:00 a.m. to 5:00 p.m. Monday through Friday (holidays excepted). The hours of construction activities may be extended under special circumstances (e.g. to comply with permit timelines, or construction constraints). However, depending on actual distances from nearby sensitive land uses, such as nearby schools, residences and library, the City could reduce construction hours. Twenty-four-hour construction for the proposed reservoir, pump station and pipeline is not anticipated, but would be required for installation of the well associated with each reservoir facility. Construction hours within public right-of-ways would be dictated by the encroachment permits of the City. Construction in and around schools would be coordinated with the school affected. In these instances, construction may occur during the summer or winter school breaks.

Heavy equipment and machinery that could be required for construction of the new reservoir and associated facilities includes, but is not limited too:

- Excavator
- Backhoe
- Bulldozer
- Scraper
- Concrete Prestressing Equipment
- Paver
- Grader
- Sheepsfoot or Tamping Foot Roller
- Water Truck
- Front End Loader/Gradall
- Dump Truck
- Track Mounted Crane
- Concrete Truck
- Concrete Pump Truck
- Flat-bed Equipment Delivery Truck
- Pickup Trucks
- Generators
- Augurs, Hydraulic Jacks or Microtunnel bore machines
- Power & Control Container
- Traffic Control Equipment

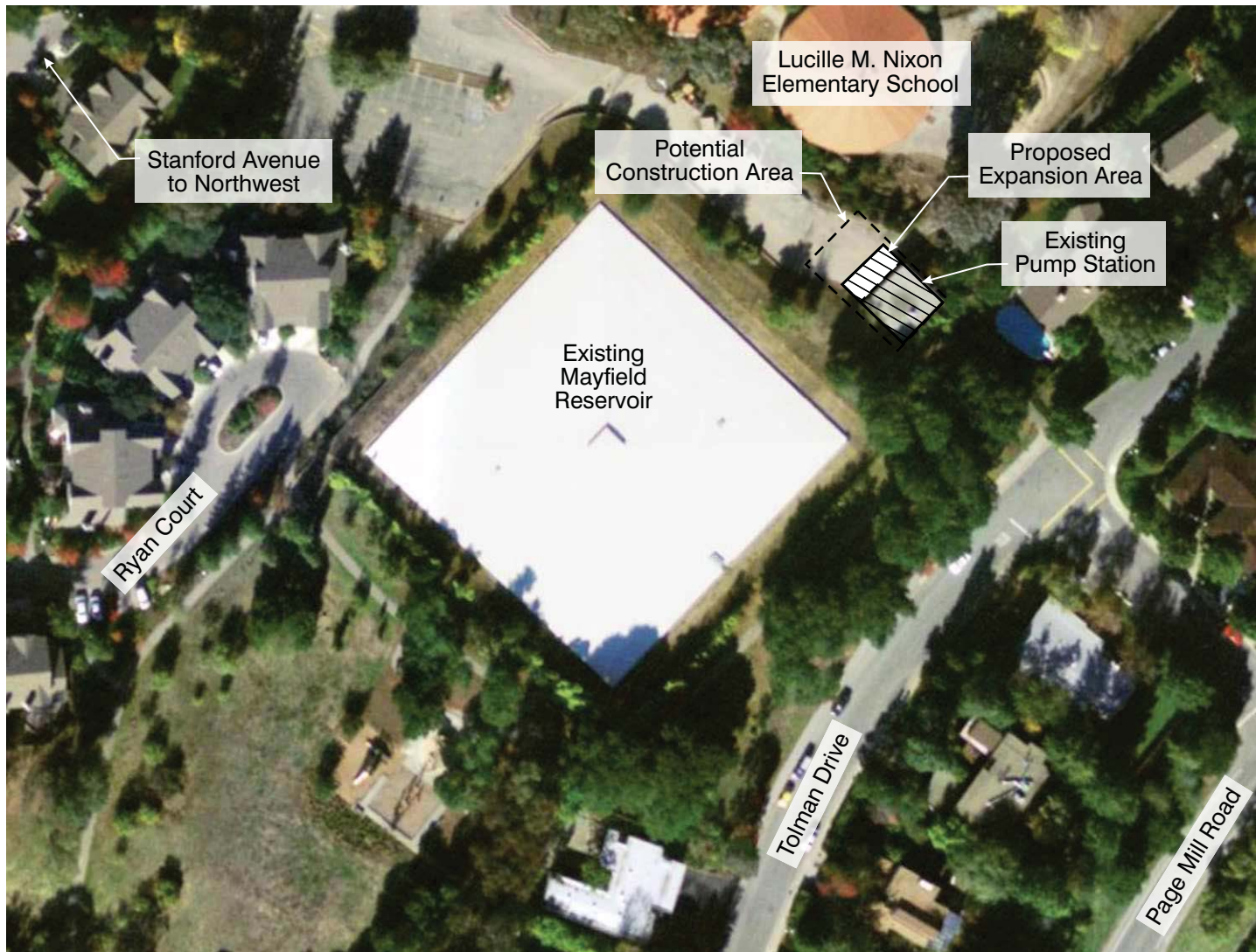
Construction activities could require use of diesel fuel, paints, coatings, cleaners, and small amounts of chlorine in tablet form for clean up/disinfection of facilities upon completion of construction activities.

Electrical needs for construction activities have not been determined but could include use of existing power sources, on-site temporary generators, and installation of new power lines, etc. Lighting at the new reservoir pump station would be dependent on the location of the facility, security requirements, and public input. If external lighting is required, motion sensor lighting would be installed.

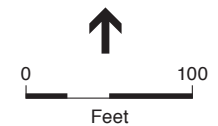
Following completion of construction activities, the reservoir site would be restored to conditions similar to pre-construction use. However, as noted above, some loss of existing use would occur (i.e., loss of available parking spaces or park area.).

Mayfield Pump Station Upgrades

The Mayfield Pump Station is located off of Stanford Avenue, between Ryan Court and Tolman Drive, near the intersection of Page Mill Road and Junipero Serra (see Figure 2-16). The existing Mayfield Pump Station currently provides Pressure Area 1 with water stored from the existing Mayfield Reservoir. Upgrade of the Mayfield Pump Station would also allow the facility to provide water to Pressure Area 2, which is currently served with water from the SFPUC aqueduct at the Arastradero and Page Mill turnouts. During a SFPUC supply outage, stored water from higher pressure areas could serve Pressure Area 2, but there is insufficient volume and pressure to



Note:
 Facility locations and pipeline are preliminary.
 The actual locations and dimensions (including portions
 above and below grade) would be confirmed during final
 site design.



meet either maximum day demands or water flows to fight fires throughout Pressure Area 2. Upgrade of the Mayfield Pump Station is needed to meet the majority of Pressure Area 2 demand when the SFPUC aqueducts are out of service by increasing the existing pump station capacity from 8,000 gpm to approximately 14,700 gpm and would allow the reservoir to serve both Pressure Areas 1 and 2.

The Mayfield Reservoir is a trapezoid bottom, underground reservoir with a 4 million gallon capacity. There is one inlet and outlet pipeline connecting the reservoir and pump station. The pump station consists of a building and an underground vault, which houses one 150 horsepower pump and other equipment. The existing pump station building is approximately 26 feet by 27 feet. The building construction consists of stacked concrete blocks.

The proposed project would either expand the existing building facilities or demolish and rebuild the existing building to install up to two new centrifugal pumps at the Mayfield Pump Station. The footprint would be approximately 30 feet by 30 feet. If expanded, the existing building would likely be expanded as shown on Figure 2-16. If expanded, the building construction would match the existing structure. If a new building enclosure is constructed, it would likely be constructed with a concrete floor and foundation, concrete masonry or timber walls, and a timber or metal deck roof. A new discharge pipeline would be installed from the pump station, connecting to an existing 30-inch Pressure Area 2 pipeline on the Mayfield Reservoir site. Standby power facilities would be provided, housed in a 5 feet by 12 feet building, to serve the pump station. Other upgrades would include instrumentation and controls, ventilation, piping, and valves.

Mayfield Pump Station Upgrade Construction Activities

Construction activities would be located within the existing property boundary and would include site clearing, building demolition and expansion work, installation of new pumps and associated appurtenances (valves, meters, controls), piping, and replacing the roof of the building. Project siting would avoid existing sensitive resources, regulated trees, and existing utilities and facilities to the extent feasible. Prior to initiating construction activities, the site would be cleared of debris and any vegetation. The existing building east wall would be demolished and the walls of the building lengthened to house the new pumps. The existing vault would be moved further east and increased in size. The proposed building construction would match the existing construction and designed to meet current seismic standards. Upon construction of the building, the pumps would be installed within the building along with associated appurtenances (e.g. valves, piping, ventilation and instrumentation/controls). Approximately 250 feet of up to 18-inch diameter pipeline would be installed connecting the pumps station to an existing 30-inch pipeline via open trench construction methods. Pipeline design and construction would be similar to that for pipelines described for the proposed reservoir, above. Following completion of construction activities, the site would be restored to conditions similar to pre-construction use.

Pump station upgrades would not require substantial additional electrical demands and it is likely that existing power sources would be sufficient.

Construction Schedule and Equipment

Construction of the proposed Mayfield reservoir upgrades would require approximately six to eight months. Construction activities would require up to 10 people per construction crew. Construction would typically occur during weekdays from 8:00 a.m. to 5:00 p.m. Monday through Friday. The hours of construction activities may be extended under special circumstances (e.g. to comply with permit timelines, or construction constraints) and would be coordinated with the Palo Alto Unified School District and adjacent Lucille M. Nixon Elementary School staff.

Heavy equipment and machinery that could be required for construction of the reservoir upgrade includes, but is not limited to:

- Backhoe
- Bulldozer
- Paver
- Grader
- Sheepsfoot or Tamping Foot Roller
- Water Truck
- Front End Loader/Gradall
- Dump Truck
- Concrete Truck
- Concrete Pump Truck
- Flat-bed Equipment Delivery Truck
- Pickup Trucks
- Generators

Construction activities could require use of diesel fuel, paints, coatings, cleaners, and small amounts of chlorine in tablet form for clean up/disinfection of facilities upon completion of construction activities.

Park Improvement Ordinance

The City of Palo Alto Municipal Code contains the following applicable ordinances:

Ordinance 22.08.004 (Park Ordinance) of the Palo Alto Municipal Code states that City parks listed “...shall contain a statement that the lands listed thereon are reserved for park, playground, recreation or conservation purposes....” This ordinance requires that park lands be solely used as such, ordinances that follow requires that a referendum is required for any substantial building, construction, reconstruction, or development.”

Continuing, Ordinance 22.08.005 states that, “Before any substantial building, construction, reconstruction, or development is commenced or approved, upon it with respect to any land held by the City for park purposes, either by the City or by a lessee, licensee or permittee thereof, the council shall first cause to be prepared and by ordinance approve and adopt a plan therefore....the plan shall be prepared in such a manner and with sufficient detail and particularity to show, as applicable, the nature, function, size, extent and general appearance of the proposed project. Any change in the plan shall be prepared in the same manner and adopted by ordinance.”

“Whenever action is required to be taken as a result of the above ordinances, such action is subject to referendum, regardless of whether such action would be characterized as legislative, administrative or otherwise.”

Ordinance No. 4815, dedicating Heritage Park acknowledges that an “underground reservoir, well and pump station necessary for emergency water supply may be located at this site” subject to requirements outlined in the original text.

The proposed project includes construction and operation of emergency water supply and storage facilities at locations currently designated as dedicated park lands:

- Upgrade of the existing Hale Well (within Timothy Hopkins Creek Park)
- Upgrade of the existing Rinconada Well (within Rinconada Park)
- Upgrade of the existing Peers Park Well (within Peers Park)
- Construction and operation of the proposed Heritage Park Well (within Heritage Park)
- Construction and operation of the proposed Eleanor Pardee Park Well (within Eleanor Pardee Park)
- Construction and operation of the proposed El Camino Park Reservoir (within El Camino Park)

The City would implement a Park Improvement Ordinance for improvements on dedicated park lands only. The proposed project improvements on dedicated park lands would be either contained within existing structures and fences or buried below grade and with park uses restored following construction. Any ancillary features such as hatches or vents would be designed to complement park use (such as serving a park bench).

Should El Camino Park be selected as the new reservoir site, there would be no permanent parkland loss as the proposed above grade facilities would be constructed within the existing Lytton Station fenceline and ancillary facilities would be buried. However, construction activities would require disturbance of up to approximately 4 acres of parkland and would be considered substantial. Therefore, a ballot measure for conceptual voter approval of a Park Improvement Ordinance for El Camino Park would be required.

Operation of the Proposed Project

The intent of the proposed project is to provide an emergency water supply source for the City of Palo Alto. Under emergency conditions, the City would rely on both stored water and groundwater to meet service area demands. The volume of stored water and the capacity of the groundwater wells required to meet service area demands under emergency conditions are directly affected by the duration of emergency conditions and the water demands exerted on the water supply system. The proposed project would supply water to the City should the SFPUC supply shutdown for an extended period of time as described below.

Under normal conditions, the proposed project facilities would be on standby. The reservoir/pump station would be operated on a daily basis to cycle 25% of the water in the reservoir to keep the water fresh. The cycled water would be discharged into the distribution system. Regular maintenance activities of project facilities would be conducted in order maintain their upkeep. Activities include inspection of the facilities, inspection/checks of the standby power facilities, priming/maintenance of the pumps and appurtenances, and sampling/testing of the water supply, and conducting any required repairs. As such, diesel fuel would be stored with the engine generators located at each of the emergency water supply facilities (approximately 750 gallons at each well site and approximately 2,000 gallons at the reservoir pump station). In addition, approximately every three to five years the reservoir would be taken off line for cleaning and thorough inspection. This activity would likely occur during the winter when need for supplemental storage would be at a minimum.

Under an emergency scenario where the City is cutoff from its SFPUC water supply for an extended period, emergency water supply would make up the difference between the emergency water supply already available to the City (the potable water supply storage reservoirs in the Foothills feeding the lower elevation pressure zones) and the projected build out maximum day demand. The emergency water supply would also provide water required for fire protection in Pressure Areas 1, 2, and 3.

Upon notification that the SFPUC water supply was unavailable, the proposed project would operate as follows:

- **Fire Flows:** The reservoirs would provide the large volume to water that may be immediately needed to meet peak fire and operational demands. The high capacity pumps at the proposed reservoir would automatically start up in response to a low pressure signal from the distribution system. This low pressure signal would be triggered due to the high demand from the fire fighting efforts and the resulting low pressure in the distribution system. As the water in the reservoir is utilized under emergency conditions, the reservoir would be filled with the groundwater pumped from the groundwater wells.
- **Potable Water:** City crews would bring each emergency supply well on line. The City would contact their contracted chemical supplier, who would bring the required chloramine treatment chemicals to the well sites. At each well site, crews would flush each well for 3 to 5 minutes and discharge the stagnant water to the storm drain. After the wells are flushed, the crews would start the chloramine disinfection system and deliver the groundwater to the City distribution system for the duration of the emergency period.
- **Water Conservation.** In parallel to the above described activities, the City would implement water conservation measures, where possible, to reduce potable water demands. City crews would also inspect the distribution and reservoir systems to identify and repair any pipeline leaks or breaks.

Upon notification that the SFPUC source water was again available, City staff would shutdown each of the groundwater wells and associated chloramine systems. As the groundwater wells were taken offline, SFPUC water would flow back into the distribution system and the operation would return to normal.

If warranted to meet public safety, the City of Palo Alto could continue groundwater extraction for a duration that is longer than 8-hours. In order to operate the wells for longer than 5 days, the City of Palo Alto would work with the DHS to extend the use of “stand-by” water supplies for a duration of longer than 5 days. Under an extended emergency scenario, the proposed project would operate similar to the description above for up to 30 days, with an extraction limit of 1,500 acre feet per year.

The City of Palo Alto, in its update of the City’s Urban Water Management Plan (October 2005), addressed its resource management efforts to mitigate future droughts as well as catastrophic interruption of water supplies. The plan provides for an urban water shortage contingency analysis that includes the state of action to be taken in response to water supply shortages including up to a 50 percent reduction in water supply. The plan makes a distinction between a catastrophic interruption of water supplies (e.g., earthquake, regional power outage, water quality problems, sabotage/ terrorism, etc.) and a water shortage due to drought.

To address the condition of a water shortage due to drought, the plan includes an urban water shortage contingency analysis which is to be implemented by the City during droughts conditions. The actions to be taken in response to a water shortage depend on the severity of the shortage. Demand actions include additional mandatory prohibitions against specific water use practices during water shortages, interim reductions in water allocations to wholesale customers, implementation of water use restrictions, reduction of water consumption by users (ranging from informational outreach to mandatory water allocations), and penalties/charges for excessive use. The City has identified four stages with targeted water usage reduction rates as well as measures to be implemented to achieve these targets. Identified supply mitigation options include the use of recycled water, water purchases from other suppliers, and potentially the use of the City’s emergency wells to supplement the SFPUC supply.

Under this “emergency drought” scenario, the City Council would approve use of groundwater to supplement the SFPUC supply. As previously noted, the proposed project will include improvements to provide groundwater for potable supply. Groundwater withdrawal would be limited 1,500 acre feet, the same amount provided for under the 30-day extended emergency scenario.

Electrical Demands of the Proposed Project

Table 2-4 summarizes potential electrical needs for the proposed project. Operational electricity needs for rehabilitated facilities (wells and Mayfield Pump Station) would be similar to existing use. It is likely that rehabilitated and new wells, and the upgraded Mayfield Pump Station would use existing power sources. In addition, each well would have a backup generator for operation of pumps. Operation of the new reservoir could require installation of a new power line, to connect to existing power resources.

Utilities

It is anticipated that other utilities are present at the proposed sites, including storm drains water lines, gas lines, sewer lines, electrical utilities, communication lines, fiber optic cables, etc. Upon

**TABLE 2-4
OPERATIONAL ELECTRICAL NEEDS**

Project Component	Normal Operational Use^a	8 Hour	Drought Conditions^b
Rehabilitated Hale Well	NA ^c	1,500 kwh ^d /8 hours	NA
Rehabilitated Rinconada Well	NA	1,500 kwh/8 hours	NA
Rehabilitated Fernando Well	NA	500 kwh/8 hours	NA
Rehabilitated Peers Well	NA	1,100 kwh/8 hours	NA
Rehabilitated Matadero Well	NA	550 kwh/8 hours	NA
New Wells	NA	650 kwh/8 hours per well	660,500 kwh/year
New Reservoir	165,000 kwh/year	1,500 kwh/8 hours	NA
Mayfield Pump Station Upgrade	230,000 kwh/year	6,600 kwh/8hours	NA

^a Normal operational use is annual energy consumption required.

^b Emergency operation use is energy consumed only when a facility is operated. For the proposed project, this use is expected to occur under emergency conditions including an 8-hour emergency and drought conditions.

^c NA = not applicable

^d kwh = kilowatt hours

selection of the preferred sites and during design efforts, utilities present would be identified by contacting utility owners, obtaining as-built drawings and conducting a field utilities search (by Underground Service Alert or similar) at the selected sites to locate and identify any conflicts with these utilities.

Project Schedule

Design and construction of the proposed project would require approximately 5 years. Design and construction of new wells would begin in 2007, and would require approximately 2½ years. Design and construction of the proposed reservoir and pump station upgrade would occur concurrently with new well design and construction, and would require approximately 3 years. Upon completion of new well construction, design and construction of the existing well rehabilitation would occur, and would require approximately 2½ years. The design and construction of the Mayfield Pump Station upgrades would require approximately 1 year.

Construction hours would typically be from 8:00 a.m. to 5:00 p.m. However, well drilling and testing activities could require continuous 24-hour activities for a one to three week period for each well.

Discretionary Approvals Required for the Project

Table 2-5 presents a preliminary list of the agencies and entities in addition to the City of Palo Alto that would use this EIR in their consideration of specific permits and other discretionary approvals that may apply to the project. This EIR is intended to provide these agencies with

**TABLE 2-5
DISCRETIONARY PERMITS POTENTIALLY REQUIRED**

Agency	Permits and Authorizations Required	Activities Subject to Regulations
U.S. Army Corps of Engineers	Clean Water Act (CWA) Section 404 Permit	Placement of dredge or fill materials into waters of the U.S.
Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification Waste Discharge Requirements General Construction Permit	Placement of dredge or fill materials into waters of the state.
State Water Resources Control Board (SWRCB)	General Construction Stormwater Permit	Temporary construction that disturbs more than one acre of land
U.S. Fish and Wildlife Service (USFWS)	Compliance with Section 7 of the Endangered Species Act - Programmatic Biological Opinion - Informal Consultation - Formal Consultation/Issuance of Biological Opinion	Activities within known habitat or designated critical habitat for a federal threatened or endangered species. Activities that could result in potential "take" of a listed species.
California Department of Fish and Game (CDFG)	1602 Lake and Streambed Alteration Agreement	Any activities that will substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.
	2080.1 Consistency Determination	Any activity that has the potential for "take" of a state threatened or endangered species.
California Air Resources Board	Registration of portable engines not related to motor vehicles.	Portable engines, air compressors and generators are required to have a current registration with the California Air Resources Board. This includes any engines associated with the concrete batch plant.
Santa Clara Valley Water District (SCVWD)	Ordinance 83-2	Any activity that could cause pollution of SCVWD water supplies, damage to SCVWD projects and encroachment or interference with SCVWD facilities.
Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)	NPDES	All new and redevelopment projects that create more than 10,000 square feet of impervious surfaces.
City of Palo Alto	Local Encroachment Permit	Construction access within City of Palo Alto easements.
City of Palo Alto	Grading and Drainage Plan Approval	All new construction subject to approval
City of Palo Alto Historic Resources Board	Review and Approval of Project Design	All new construction within or in the vicinity of City recognized historic resources subject to design review and approval
City of Palo Alto Architectural Review Board	Design Approval	All new construction subject to design review and approval

information to support their decision-making processes. The table also lists the types of activities that would be subject to these requirements.

References – Project Description

Carollo Engineers, *Water Wells, Regional Storage and Distribution System Final Study*, December 1999.

Carollo Engineers, *Long-Term Water Supply Study*, May 2000

Carollo Engineers, *Technical Memorandum – Alternative Emergency Water Supply Solutions – Supplement to the Water Wells, Regional Storage, and Distribution Study*, November 2001

Carollo Engineers, *City of Palo Alto Ground Water Supply Feasibility Study*, April 2003.

Dockter, D, City Arborist, personal communication, 2006.

Attachment D
Sample Agreement

CITY OF PALO ALTO CONTRACT NO.:
AGREEMENT BETWEEN THE CITY OF PALO ALTO AND
FOR PROFESSIONAL SERVICES

This AGREEMENT is entered into on this day of , 20 , by and between the CITY OF PALO ALTO, a California chartered municipal corporation ("CITY"), and , a , located at ("CONSULTANT").

RECITALS

The following recitals are a substantive portion of this Agreement.

- A. CITY intends to ("Project") and desires to engage a consultant to in connection with the Project ("Services").
- B. CONSULTANT has represented that it has the necessary professional expertise, qualifications, and capability, and all required licenses and/or certifications to provide the Services.
- C. CITY in reliance on these representations desires to engage CONSULTANT to provide the Services as more fully described in Exhibit "A", attached to and made a part of this Agreement.

NOW, THEREFORE, in consideration of the recitals, covenants, terms, and conditions, this Agreement, the parties agree:

AGREEMENT

SECTION 1. SCOPE OF SERVICES. CONSULTANT shall perform the Services described in Exhibit "A" in accordance with the terms and conditions contained in this Agreement. The performance of all Services shall be to the reasonable satisfaction of CITY.

SECTION 2. TERM.

The term of this Agreement shall be from the date of its full execution through completion of the services in accordance with the Schedule of Performance attached as Exhibit "B" unless terminated earlier pursuant to Section 19 of this Agreement.

SECTION 3. SCHEDULE OF PERFORMANCE. Time is of the essence in the performance of Services under this Agreement. CONSULTANT shall complete the Services within the term of this Agreement and in accordance with the schedule set forth in Exhibit "B", attached to and made a part of this Agreement. Any Services for which times for performance are not specified in this Agreement shall be commenced and completed by CONSULTANT in a reasonably prompt and

timely manner based upon the circumstances and direction communicated to the CONSULTANT. CITY's agreement to extend the term or the schedule for performance shall not preclude recovery of damages for delay if the extension is required due to the fault of CONSULTANT.

SECTION 4. NOT TO EXCEED COMPENSATION. The compensation to be paid to CONSULTANT for performance of the Services described in Exhibit "A", including both payment for professional services and reimbursable expenses, shall not exceed Dollars (\$). In the event Additional Services are authorized, the total compensation for services and reimbursable expenses shall not exceed Dollars (\$). The applicable rates and schedule of payment are set out in Exhibit "C-1", entitled "HOURLY RATE SCHEDULE," which is attached to and made a part of this Agreement.

Additional Services, if any, shall be authorized in accordance with and subject to the provisions of Exhibit "C". CONSULTANT shall not receive any compensation for Additional Services performed without the prior written authorization of CITY. Additional Services shall mean any work that is determined by CITY to be necessary for the proper completion of the Project, but which is not included within the Scope of Services described in Exhibit "A".

SECTION 5. INVOICES. In order to request payment, CONSULTANT shall submit monthly invoices to the CITY describing the services performed and the applicable charges (including an identification of personnel who performed the services, hours worked, hourly rates, and reimbursable expenses), based upon the CONSULTANT's billing rates (set forth in Exhibit "C-1"). If applicable, the invoice shall also describe the percentage of completion of each task. The information in CONSULTANT's payment requests shall be subject to verification by CITY. CONSULTANT shall send all invoices to the City's project manager at the address specified in Section 13 below. The City will generally process and pay invoices within thirty (30) days of receipt.

SECTION 6. QUALIFICATIONS/STANDARD OF CARE. All of the Services shall be performed by CONSULTANT or under CONSULTANT's supervision. CONSULTANT represents that it possesses the professional and technical personnel necessary to perform the Services required by this Agreement and that the personnel have sufficient skill and experience to perform the Services assigned to them. CONSULTANT represents that it, its employees and subconsultants, if permitted, have and shall maintain during the term of this Agreement all licenses, permits, qualifications, insurance and approvals of whatever nature that are legally required to perform the Services.

All of the services to be furnished by CONSULTANT under this agreement shall meet the professional standard and quality that prevail among professionals in the same discipline and of similar knowledge and skill engaged in related work throughout California under the same or similar circumstances.

SECTION 7. COMPLIANCE WITH LAWS. CONSULTANT shall keep itself informed of and in compliance with all federal, state and local laws, ordinances, regulations, and orders that may affect in any manner the Project or the performance of the Services or those engaged to perform Services under this Agreement. CONSULTANT shall procure all permits and licenses, pay all charges and fees, and give all notices required by law in the performance of the Services.

SECTION 8. ERRORS/OMISSIONS. CONSULTANT shall correct, at no cost to CITY, any and all errors, omissions, or ambiguities in the work product submitted to CITY, provided CITY gives notice to CONSULTANT. If CONSULTANT has prepared plans and specifications or other design documents to construct the Project, CONSULTANT shall be obligated to correct any and all errors, omissions or ambiguities discovered prior to and during the course of construction of the Project. This obligation shall survive termination of the Agreement.

SECTION 9. COST ESTIMATES. If this Agreement pertains to the design of a public works project, CONSULTANT shall submit estimates of probable construction costs at each phase of design submittal. If the total estimated construction cost at any submittal exceeds ten percent (10%) of the CITY's stated construction budget, CONSULTANT shall make recommendations to the CITY for aligning the PROJECT design with the budget, incorporate CITY approved recommendations, and revise the design to meet the Project budget, at no additional cost to CITY.

SECTION 10. INDEPENDENT CONTRACTOR. It is understood and agreed that in performing the Services under this Agreement CONSULTANT, and any person employed by or contracted with CONSULTANT to furnish labor and/or materials under this Agreement, shall act as and be an independent contractor and not an agent or employee of the CITY.

SECTION 11. ASSIGNMENT. The parties agree that the expertise and experience of CONSULTANT are material considerations for this Agreement. CONSULTANT shall not assign or transfer any interest in this Agreement nor the performance of any of CONSULTANT's obligations hereunder without the prior written consent of the city manager. Consent to one assignment will not be deemed to be consent to any subsequent assignment. Any assignment made without the approval of the city manager will be void.

SECTION 12. SUBCONTRACTING.

CONSULTANT shall not subcontract any portion of the work to be performed under this Agreement without the prior written authorization of the city manager or designee.

CONSULTANT shall be responsible for directing the work of any subconsultants and for any compensation due to subconsultants. CITY assumes no responsibility whatsoever concerning compensation. CONSULTANT shall be fully responsible to CITY for all acts and omissions of a subconsultant. CONSULTANT shall change or add subconsultants only with the prior approval of the city manager or his designee.

SECTION 13. PROJECT MANAGEMENT. CONSULTANT will assign _____ as the _____ to have supervisory responsibility for the performance, progress, and execution of the Services and _____ as the project _____ to represent CONSULTANT during the day-to-day work on the Project. If circumstances cause the substitution of the project director, project coordinator, or any other key personnel for any reason, the appointment of a substitute project director and the assignment of any key new or replacement personnel will be subject to the prior written approval of the CITY's project manager. CONSULTANT, at CITY's request, shall promptly remove personnel who CITY finds do not perform the Services in an acceptable manner, are uncooperative, or present a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property.

The City's project manager is _____, _____ Department, _____ Division, _____ Palo Alto, CA 94303, Telephone: _____. The project manager will be CONSULTANT's point of contact with respect to performance, progress and execution of the Services. The CITY may designate an alternate project manager from time to time.

SECTION 14. OWNERSHIP OF MATERIALS. Upon delivery, all work product, including without limitation, all writings, drawings, plans, reports, specifications, calculations, documents, other materials and copyright interests developed under this Agreement shall be and remain the exclusive property of CITY without restriction or limitation upon their use. CONSULTANT agrees that all copyrights which arise from creation of the work pursuant to this Agreement shall be vested in CITY, and CONSULTANT waives and relinquishes all claims to copyright or other intellectual property rights in favor of the CITY. Neither CONSULTANT nor its contractors, if any, shall make any of such materials available to any individual or organization without the prior written approval of the City Manager or designee. CONSULTANT makes no representation of the suitability of the work product for use in or application to circumstances not contemplated by the scope of work.

SECTION 15. AUDITS. CONSULTANT will permit CITY to audit, at any reasonable time during the term of this Agreement and for three (3) years thereafter, CONSULTANT's records pertaining to matters covered by this Agreement. CONSULTANT further agrees to maintain and retain such records for at least three (3) years after the expiration or earlier termination of this Agreement.

SECTION 16. INDEMNITY.

16.1. To the fullest extent permitted by law, CONSULTANT shall protect, indemnify, defend and hold harmless CITY, its Council members, officers, employees and agents (each an "Indemnified Party") from and against any and all demands, claims, or liability of any nature, including death or injury to any person, property damage or any other loss, including all costs and expenses of whatever nature including attorneys fees, experts fees, court costs and disbursements ("Claims") that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONSULTANT, its officers, employees, agents or contractors under this Agreement, regardless of whether or not it is caused in part by an Indemnified Party.

16.2. Notwithstanding the above, nothing in this Section 16 shall be construed to require CONSULTANT to indemnify an Indemnified Party from Claims arising from the active negligence, sole negligence or willful misconduct of an Indemnified Party.

16.3. The acceptance of CONSULTANT's services and duties by CITY shall not operate as a waiver of the right of indemnification. The provisions of this Section 16 shall survive the expiration or early termination of this Agreement.

SECTION 17. WAIVERS. The waiver by either party of any breach or violation of any covenant, term, condition or provision of this Agreement, or of the provisions of any ordinance or law, will not be deemed to be a waiver of any other term, covenant, condition, provisions, ordinance or law, or of any subsequent breach or violation of the same or of any other term, covenant, condition, provision, ordinance or law.

SECTION 18. INSURANCE.

18.1. CONSULTANT, at its sole cost and expense, shall obtain and maintain, in full force and effect during the term of this Agreement, the insurance coverage described in Exhibit "D". CONSULTANT and its contractors, if any, shall obtain a policy endorsement naming CITY as an

additional insured under any general liability or automobile policy or policies.

18.2. All insurance coverage required hereunder shall be provided through carriers with AM Best's Key Rating Guide ratings of A-:VII or higher which are licensed or authorized to transact insurance business in the State of California. Any and all contractors of CONSULTANT retained to perform Services under this Agreement will obtain and maintain, in full force and effect during the term of this Agreement, identical insurance coverage, naming CITY as an additional insured under such policies as required above.

18.3. Certificates evidencing such insurance shall be filed with CITY concurrently with the execution of this Agreement. The certificates will be subject to the approval of CITY's Risk Manager and will contain an endorsement stating that the insurance is primary coverage and will not be canceled, or materially reduced in coverage or limits, by the insurer except after filing with the Purchasing Manager thirty (30) days' prior written notice of the cancellation or modification, CONSULTANT shall be responsible for ensuring that current certificates evidencing the insurance are provided to CITY's Purchasing Manager during the entire term of this Agreement.

18.4. The procuring of such required policy or policies of insurance will not be construed to limit CONSULTANT's liability hereunder nor to fulfill the indemnification provisions of this Agreement. Notwithstanding the policy or policies of insurance, CONSULTANT will be obligated for the full and total amount of any damage, injury, or loss caused by or directly arising as a result of the Services performed under this Agreement, including such damage, injury, or loss arising after the Agreement is terminated or the term has expired.

SECTION 19. TERMINATION OR SUSPENSION OF AGREEMENT OR SERVICES.

19.1. The city manager may suspend the performance of the Services, in whole or in part, or terminate this Agreement, with or without cause, by giving ten (10) days prior written notice thereof to CONSULTANT. Upon receipt of such notice, CONSULTANT will immediately discontinue its performance of the Services.

19.2. CONSULTANT may terminate this Agreement or suspend its performance of the Services by giving thirty (30) days prior written notice thereof to CITY, but only in the event of a substantial failure of performance by CITY.

19.3. Upon such suspension or termination, CONSULTANT shall deliver to the City Manager immediately any and all copies of studies, sketches, drawings, computations, and other data, whether or not completed, prepared by CONSULTANT or its contractors, if any, or given to CONSULTANT or its contractors, if any, in connection with this Agreement. Such materials will become the property of CITY.

19.4. Upon such suspension or termination by CITY, CONSULTANT will be paid for the Services rendered or materials delivered to CITY in accordance with the scope of services on or before the effective date (i.e., 10 days after giving notice) of suspension or termination; provided, however, if this Agreement is suspended or terminated on account of a default by CONSULTANT, CITY will be obligated to compensate CONSULTANT only for that portion of CONSULTANT's services which are of direct and immediate benefit to CITY as such determination may be made by

the City Manager acting in the reasonable exercise of his/her discretion

19.5. No payment, partial payment, acceptance, or partial acceptance by CITY will operate as a waiver on the part of CITY of any of its rights under this Agreement.

SECTION 20. NOTICES.

All notices hereunder will be given in writing and mailed, postage prepaid, by certified mail, addressed as follows:

To CITY: Office of the City Clerk
 City of Palo Alto
 Post Office Box 10250
 Palo Alto, CA 94303

With a copy to the Purchasing Manager
To CONSULTANT: Attention of the project director
 at the address of CONSULTANT recited above

SECTION 21. CONFLICT OF INTEREST.

21.1. In accepting this Agreement, CONSULTANT covenants that it presently has no interest, and will not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the Services.

21.2. CONSULTANT further covenants that, in the performance of this Agreement, it will not employ subconsultants, contractors or persons having such an interest. CONSULTANT certifies that no person who has or will have any financial interest under this Agreement is an officer or employee of CITY; this provision will be interpreted in accordance with the applicable provisions of the Palo Alto Municipal Code and the Government Code of the State of California.

21.3. If the Project Manager determines that CONSULTANT is a "Consultant" as that term is defined by the Regulations of the Fair Political Practices Commission, CONSULTANT shall be required and agrees to file the appropriate financial disclosure documents required by the Palo Alto Municipal Code and the Political Reform Act.

SECTION 22. NONDISCRIMINATION. As set forth in Palo Alto Municipal Code section 2.30.510, CONSULTANT certifies that in the performance of this Agreement, it shall not discriminate in the employment of any person because of the race, skin color, gender, age, religion, disability, national origin, ancestry, sexual orientation, housing status, marital status, familial status, weight or height of such person. CONSULTANT acknowledges that it has read and understands the provisions of Section 2.30.510 of the Palo Alto Municipal Code relating to Nondiscrimination Requirements and the penalties for violation thereof, and agrees to meet all requirements of Section 2.30.510 pertaining to nondiscrimination in employment.

SECTION 23. ENVIRONMENTALLY PREFERRED PURCHASING. The City of Palo Alto is a green business and works to purchase and provide products in an environmentally sustainable

manner. CONSULTANT will use production methods that reduce waste and environmentally toxic products, as well as have less packaging. CONSULTANT will adhere to the standard that printed materials will be, at a minimum, printed on 30% post consumer recycled paper with vegetable based ink. The designer will check with the project manager to discuss the maximum recycled content paper available for each project. FSC (Forest Stewardship Council) certified paper that is "process free" is preferred. CONSULTANT will use methods that reduce energy use and thus the carbon footprint for the development, production and delivery of products. CONSULTANT shall adhere to the City's Environmentally Preferred Purchasing policies as may be amended from time to time.

SECTION 24. MISCELLANEOUS PROVISIONS.

24.1. This Agreement will be governed by the laws of the State of California.

24.2. In the event that an action is brought, the parties agree that trial of such action will be vested exclusively in the state courts of California in the County of Santa Clara, State of California.

24.3. The prevailing party in any action brought to enforce the provisions of this Agreement may recover its reasonable costs and attorneys' fees expended in connection with that action. The prevailing party shall be entitled to recover an amount equal to the fair market value of legal services provided by attorneys employed by it as well as any attorneys' fees paid to third parties.

24.4. This document represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, and contracts, either written or oral. This document may be amended only by a written instrument, which is signed by the parties.

24.5. The covenants, terms, conditions and provisions of this Agreement will apply to, and will bind, the heirs, successors, executors, administrators, assignees, and consultants of the parties.

24.6. If a court of competent jurisdiction finds or rules that any provision of this Agreement or any amendment thereto is void or unenforceable, the unaffected provisions of this Agreement and any amendments thereto will remain in full force and effect.

24.7. All exhibits referred to in this Agreement and any addenda, appendices, attachments, and schedules to this Agreement which, from time to time, may be referred to in any duly executed amendment hereto are by such reference incorporated in this Agreement and will be deemed to be a part of this Agreement.

24.8. This Agreement is subject to the fiscal provisions of the Charter of the City of Palo Alto and the Palo Alto Municipal Code. This Agreement will terminate without any penalty (a) at the end of any fiscal year in the event that funds are not appropriated for the following fiscal year, or (b) at any time within a fiscal year in the event that funds are only appropriated for a portion of the fiscal year and funds for this Agreement are no longer available. This Section 24.8 shall take precedence in the event of a conflict with any other covenant, term, condition, or provision of this Agreement.

24.9. The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

24.10 All unchecked boxes do not apply to this agreement.

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

CITY OF PALO ALTO

City Manager

By:_____

Name:_____

Title:_____

APPROVED AS TO FORM:

Senior Asst. City Attorney

Attachment E
SAMPLE TABLE FORMAT
QUALIFICATIONS OF FIRM RELATIVE TO CITY'S NEEDS

Project Name	Client	Description of work performed	Total Project Cost	Percentage of work firm as responsible for	Period work was completed	Client contact information*
Did your firm meet the project schedule (Circle one) : Yes No Give a brief statement of the firm's adherence to the schedule and budget for the project:						
Did your firm meet the project schedule (Circle one) : Yes No Give a brief statement of the firm's adherence to the schedule and budget for the project:						
Did your firm meet the project schedule (Circle one) : Yes No Give a brief statement of the firm's adherence to the schedule and budget for the project:						
Did your firm meet the project schedule (Circle one) : Yes No Give a brief statement of the firm's adherence to the schedule and budget for the project:						

*Include name, title and phone number.

Attachment F
Sample Cost Proposal Format

Scope	Labor Categories (e.g., Consultant, Sr. Consultant, etc.)	Est. Hours	Hourly Rate	Extended Rate
Task 1			\$	\$
			\$	\$
			\$	\$
Travel and Living Expenses			\$	\$
TOTAL NOT TO EXCEED, TASK 1			\$	\$
Task 2			\$	\$
			\$	\$
			\$	\$
Travel and Living Expenses			\$	\$
TOTAL NOT TO EXCEED, TASK 2			\$	\$
Task 3			\$	\$
			\$	\$
			\$	\$
Travel and Living Expenses			\$	\$
TOTAL NOT TO EXCEED, TASK 3			\$	\$
TOTAL NOT EXCEED FOR TASKS 1 -3			\$	\$

Attachment "G"
INSURANCE REQUIREMENTS

CONTRACTORS TO THE CITY OF PALO ALTO (CITY), AT THEIR SOLE EXPENSE, SHALL FOR THE TERM OF THE CONTRACT OBTAIN AND MAINTAIN INSURANCE IN THE AMOUNTS FOR THE COVERAGE SPECIFIED BELOW, **AFFORDED BY COMPANIES WITH AM BEST'S KEY RATING OF A-:VII, OR HIGHER, LICENSED OR AUTHORIZED TO TRANSACT INSURANCE BUSINESS IN THE STATE OF CALIFORNIA.**

AWARD IS CONTINGENT ON COMPLIANCE WITH CITY'S INSURANCE REQUIREMENTS, AS SPECIFIED, BELOW:

REQUIRED	TYPE OF COVERAGE	REQUIREMENT	MINIMUM LIMITS	
			EACH OCCURRENCE	AGGREGATE
YES YES	WORKER'S COMPENSATION EMPLOYER'S LIABILITY	STATUTORY STATUTORY		
YES	GENERAL LIABILITY, INCLUDING PERSONAL INJURY, BROAD FORM PROPERTY DAMAGE BLANKET CONTRACTUAL, AND FIRE LEGAL LIABILITY	BODILY INJURY	\$1,000,000	\$1,000,000
		PROPERTY DAMAGE	\$1,000,000	\$1,000,000
		BODILY INJURY & PROPERTY DAMAGE COMBINED.	\$1,000,000	\$1,000,000
YES	AUTOMOBILE LIABILITY, INCLUDING ALL OWNED, HIRED, NON-OWNED	BODILY INJURY	\$1,000,000	\$1,000,000
		- EACH PERSON	\$1,000,000	\$1,000,000
		- EACH OCCURRENCE	\$1,000,000	\$1,000,000
		PROPERTY DAMAGE	\$1,000,000	\$1,000,000
		BODILY INJURY AND PROPERTY DAMAGE, COMBINED	\$1,000,000	\$1,000,000
YES	PROFESSIONAL LIABILITY, INCLUDING, ERRORS AND OMISSIONS, MALPRACTICE (WHEN APPLICABLE), AND NEGLIGENT PERFORMANCE			
		ALL DAMAGES	\$1,000,000	
YES	THE CITY OF PALO ALTO IS TO BE NAMED AS AN ADDITIONAL INSURED: CONTRACTOR, AT ITS SOLE COST AND EXPENSE, SHALL OBTAIN AND MAINTAIN, IN FULL FORCE AND EFFECT THROUGHOUT THE ENTIRE TERM OF ANY RESULTANT AGREEMENT, THE INSURANCE COVERAGE HEREIN DESCRIBED, INSURING NOT ONLY CONTRACTOR AND ITS SUBCONSULTANTS, IF ANY, BUT ALSO, WITH THE EXCEPTION OF WORKERS' COMPENSATION, EMPLOYER'S LIABILITY AND PROFESSIONAL INSURANCE, NAMING AS ADDITIONAL INSURED CITY, ITS COUNCIL MEMBERS, OFFICERS, AGENTS, AND EMPLOYEES.			

I. INSURANCE COVERAGE MUST INCLUDE:

- A. A PROVISION FOR A WRITTEN THIRTY DAY ADVANCE NOTICE TO CITY OF CHANGE IN COVERAGE OR OF COVERAGE CANCELLATION; AND
- B. A CONTRACTUAL LIABILITY ENDORSEMENT PROVIDING INSURANCE COVERAGE FOR CONTRACTOR'S AGREEMENT TO INDEMNIFY CITY.
- C. DEDUCTIBLE AMOUNTS IN EXCESS OF \$5,000 REQUIRE CITY'S PRIOR APPROVAL.

II. CONTACTOR MUST SUBMIT CERTIFICATES(S) OF INSURANCE EVIDENCING REQUIRED COVERAGE.

III. ENDORSEMENT PROVISIONS, WITH RESPECT TO THE INSURANCE AFFORDED TO "ADDITIONAL INSURED"

A. PRIMARY COVERAGE

WITH RESPECT TO CLAIMS ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED, INSURANCE AS AFFORDED BY THIS POLICY IS PRIMARY AND IS NOT ADDITIONAL TO OR CONTRIBUTING WITH ANY OTHER INSURANCE CARRIED BY OR FOR THE BENEFIT OF THE ADDITIONAL INSURED.

B. CROSS LIABILITY

Attachment "G"
INSURANCE REQUIREMENTS

THE NAMING OF MORE THAN ONE PERSON, FIRM, OR CORPORATION AS INSURED UNDER THE POLICY SHALL NOT, FOR THAT REASON ALONE, EXTINGUISH ANY RIGHTS OF THE INSURED AGAINST ANOTHER, BUT THIS ENDORSEMENT, AND THE NAMING OF MULTIPLE INSURED, SHALL NOT INCREASE THE TOTAL LIABILITY OF THE COMPANY UNDER THIS POLICY.

C. NOTICE OF CANCELLATION

1. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR ANY REASON OTHER THAN THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A THIRTY (30) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.
2. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A TEN (10) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

NOTICES SHALL BE MAILED TO:

**PURCHASING AND
CONTRACT ADMINISTRATION
CITY OF PALO ALTO
P.O. BOX 10250
PALO ALTO, CA 94303.**