

NOTICE TO BIDDERS
PROPOSAL FORM
SPECIFICATIONS
and
STANDARD CONTRACTUAL REQUIREMENTS
For
REHABILITATION OF WELLS
WITHIN THE CITY OF
BEVERLY HILLS, CALIFORNIA

PUBLIC WORKS DEPARTMENT
BEVERLY HILLS, CALIFORNIA

TONY ANTICH, P. E.
INTERIM CITY ENGINEER

Contact Person:
VINCENT CHEE, P.E.
PROJECT MANAGER
(310) 285-2521

Prepared by:
Vincent Chee P. E.
C-26501



Approved As To Form:

January, 2018
Project No. 10111

City Attorney

NOTICE TO BIDDERS
For
REHABILITATION OF WELLS
Within the City of
BEVERLY HILLS, CALIFORNIA
Bid #18-9

BIDS - Sealed Proposals for “**REHABILITATION OF WELLS**” within the City of Beverly Hills, California, will be received up to the hour of 2:00 p.m. on February 1, 2018 at the office of the City Clerk of said City, located in Room 290 of City Hall at 455 North Rexford Drive, Beverly Hills, California. Bids will be publicly opened at 2:00 p.m. on the above-mentioned date in the office of the City Clerk of said City Hall. For additional information, please contact Mr. Vincent Chee, Project Manager, City of Beverly Hills at (310)285-2521 or vchee@beverlyhills.org.

MANDATORY PRE-BID MEETING – A MANDATORY pre-bid meeting is scheduled for January 25, 2018 at 10:00 am at the Beverly Hills Public Works Building located at 345 Foothill Road Beverly Hills, CA. Every bidder is required to attend the pre-bid meeting. Failure by the Bidder to attend will eliminate the Bidder from the Bid process.

ADDRESS OF THE WELLS – The water wells are in a vault located at the following locations

Well No. 2: 9101 Santa Monica Boulevard, Beverly Hills, CA
Well No. 4: 9251 Santa Monica Boulevard, Beverly Hills, CA
Well No. 6: 9300 Burton Way, Beverly Hills, CA

SCOPE OF THE WORK - The contract work to be performed under these specifications shall consist of furnishing all the required labor, materials, equipment, part, implements and supplies necessary for or appurtenant to rehabilitate three municipal supply wells up to 730 ft deep well.

In general terms, the contract work for this project shall consist of the following items of work:

- Move equipment on (and off) the site.
- Remove existing well pump (Wells Nos. 2, 4 and 6)
- Air-lifting or suction-bailing of fill from the bottom of the well.
- Conduct color video surveys as necessary to evaluate progress of chemical treatment.
- Provide two 21,000 gallon storage tanks.

- Provide phosphoric acid and acid enhancer, and introduce into the well by double swab to insure acid flows through the well perforations and into the filter pack and formation. Agitate the well to distribute the chemical. Collect water samples from the well to check pH. Replenish acid as necessary to maintain pH of 3.0 or lower for the first 6 hours of treatment. Provide a minimum of 12-hours and a maximum of 36-hours of contact time.
- Remove the acid by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Provide 5,000-gallon vacuum trucks to haul fluids not meeting discharge limits from the site for proper disposal.
- Provide sodium hypochlorite and chlorine enhancer and introduce into the well by double swab to force chlorine through the well perforations. Agitate the well to disperse the chemical. Provide a minimum of 12-hours and a maximum of 24-hours of contact time.
- Remove the chlorine by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Conduct mechanical redevelopment by swabbing and air lifting.
- Conduct pumping development by the pump and surge method.
- Conduct step drawdown and constant rate pumping tests.
- Conduct spinner survey and depth-specific water sampling.
- Conduct color video survey and well disinfection.
- Provide and Installation of the permanent pump, motor and well head connections for Well Nos. 2, 4 and 6; provide startup test for Well Nos. 2, 4 and 6.
- Conduct final well disinfection with the permanent pump in place.
- Complete site cleanup and repair of damaged facilities as necessary.

<u>ITEM NO.</u>	<u>ESTIMATED QUANTITY</u>	<u>DESCRIPTION</u>
1.	1 LS	Mobilization and Demobilization
2.	2 LS	Mobilization between well sites
3.	3 LS	Remove permanent pump
4.	3 LS	Furnish and Remove 2-21,000 gal Storage Tanks
5.	3 LS	Mechanical Agitation w/Biocide (Brush and Air-lift)
6.	3 LS	Acid Treatment with Enhancer
7.	3 LS	Chlorination/Disinfection with pH adjust

8.	120 Hrs.	Mechanical Development (swab and airlift)
9.	30 Units	Vacuum Trucks (5,000 gallon each)
10.	3 LS	Pumping Equipment for Well Development
11.	96 Hrs	Pumping Development
12.	36 Hrs.	Step Drawdown Pumping Tests
13.	36 Hrs.	Constant Rate Pumping Tests
14.	3 LS	Flow Meter Survey
15.	12 Units	Video Surveys
16.	3 LS	Final Well Disinfection
17.	3 LS	Provide and Install Permanent Pump and Well Head Connections at Well Nos. 2, 4 and 6
18.	3 LS	Well Pump Disinfection
19.	3 LS	Start-Up and Testing
20.	3 LS	Install and Maintain BMPs
21.	1 LS	Waste Management Plan and Execution
22.	3 LS	Security Perimeter Fencing with access gate of work area
23.	60 Hrs	Saturday Work (8:00 AM-6:00 PM)
24.	48 Hrs	Sunday Work (9:00 AM-5 PM)

Copies of the Specifications and Proposal Form may be inspected and obtained at the office of the City Engineer located at 345 Foothill Road, Beverly Hills, California. There is no charge or deposit required for this material; therefore, they are not to be returned to the City for refund. Each bidder shall furnish the City the name, address, and telephone number of the firm requesting specifications.

References in the project specifications to specific sections of the Standard Specifications refer to the book of "Standard Specifications for Public Works Construction", latest edition, written by a Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and Southern California District of the Associated General Contractors of California. Contractors wishing to obtain this book may purchase copies directly from the publisher, Building News, Inc., 1612 South Clementine Street, Anaheim, California, 92802; (800) 873-6397.

TIME FOR COMPLETION - The work on this project shall start within **5** calendar days from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within **120 calendar days** from Notice to Proceed

LIQUIDATED DAMAGES - There will be a One Thousand Five Hundred Dollar (\$1,500.00) assessment for each calendar day that work remains incomplete beyond the time stated in the Proposal Form. Refer to the Proposal Form for specific details.

PUBLIC WORKS CONTRACTOR REGISTRATION NUMBER – The Contractor is required to register with State of California Department of Industrial Relations and meet requirements to bid on public works contracts. A Public Works Contractor Registration No. shall be submitted with the bid.

PREVAILING WAGES - In accordance with the provisions of Section 1770 et seq, of the Labor Code, the Director of Industrial Relations of the State of California has determined the general prevailing rate of wages applicable to the work to be done.

The Contractor will be required to pay to all workers employed on the project sums not less than the sums set forth in the documents entitled "General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to California Labor Code, Part 7, Chapter I, Article 2, Sections 1770, 1773, 1773.1."

A copy of said documents is on file and may be inspected in the office of the City Engineer, located at 345 Foothill Road, Beverly Hills, California 90210.

Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him. The Contractor and any subcontractor under him shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Director of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

PAYROLL RECORDS - The Contractor's attention is directed to Section 1776 of the Labor Code, relating to accurate payroll records, which imposes responsibility upon the Contractor for the maintenance, certification, and availability for inspection of such records for all persons employed by the Contractor or by the Subcontractors in connection with the project. The Contractor shall agree through the Contract to comply with this section and the remaining provisions of the Labor Code.

INSURANCE AND BOND REQUIREMENTS - The Contractor shall provide insurance in accordance with Section 3-13 of the City of Beverly Hills, Public Works Department, Standard Contractual Requirements, included as part of these Specifications. All Subcontractors listed shall attach copies of the Certificate of Insurance naming the

Contractor as the additional insured as part of their insurance policy coverage. In addition, the Contractor shall guarantee all work against defective workmanship and materials furnished by the Contractor for a period of one (1) year from the date the work was completed in accordance with Section 2-11 of the Standard Contractual Requirements. The Contractor's sureties for the "Performance Bond" shall be liable for any work that the Contractor fails to replace within a specified time.

GENERAL INSTRUCTIONS - Bids must be submitted on the Proposal Form prepared for this project and shall be delivered at the office of the City Clerk within a sealed envelope supplied by the City and marked on the outside as follows: "**PROPOSAL FOR REHABILITATION OF WELLS.**"

THE CITY RESERVES THE RIGHT TO REJECT ANY BID OR ALL THE BIDS AND TO WAIVE ANY INFORMALITY OR IRREGULARITY IN ANY BID, BUT IF THE BIDS ARE ACCEPTED, THE CONTRACT FOR THE IMPROVEMENT WILL BE LET TO THE LOWEST RESPONSIBLE BIDDER FOR THE PROJECT AS A WHOLE.

PROPOSAL FORM

For

REHABILITATION OF WELLS

**Within the City of
BEVERLY HILLS, CALIFORNIA**

Date_____

To the Honorable City Council
Beverly Hills, California

In compliance with advertised notice inviting sealed proposals for installation of connector pipe screens at storm drain catch basins at various locations within the City of Beverly Hills, California and after having carefully examined the location of the project and studied the specifications prepared for this work, the undersigned hereby agrees to enter into a contract to furnish all labor, materials, equipment, parts, implements, and supplies needed to perform the contract work to the satisfaction and under the direction of the City Engineer of the City of Beverly Hills, said contract to be drawn in accordance with the provisions in the Specifications, Notice to Bidders, and all the applicable clauses of the "Standard Contractual Requirements for Public Improvements in the City of Beverly Hills, California", as adopted by the Department of Public Works on November 1, 1976.

If awarded the contract, the undersigned agrees to furnish the necessary bonds and insurance as set forth in the above-mentioned Standard Contractual Requirements, within ten (10) days after the award of the contract.

Attached hereto is cash, or cashier's check, or a certified check in favor of the City of Beverly Hills, in an amount equal to at least ten percent (10%) of the total bid, or a bid bond for said amount on a form furnished by the City, with the understanding that said security shall be held by the City Clerk until the contract for doing the work has been entered into and that said security shall be forfeited to the City as liquidated damages should the undersigned fail to enter into a contract and furnish the above-mentioned bonds and insurance within the ten (10) days specified, if awarded the contract, as the undersigned agrees that in the event of such failure, the actual amount of the damage to the City would be impractical, and extremely difficult to determine.

In the event cash, or cashier's check, or a certified check is furnished for the bid bond, then a letter is required from a bonding company stating that said company will furnish the necessary bonds, as specified in Paragraph 2-11 of the Standard Contractual Requirements if the undersigned is awarded the contract. The undersigned is aware of the fact that such a letter must be from a bonding company acceptable to the City of Beverly Hills, and that all bids accompanied by cash, or cashier's check, or a certified check in lieu of the bid bond must be accompanied by such a letter in order to be considered.

The undersigned certifies to have a minimum of three consecutive years of current experience in the type of work related to this project and that this experience is in actual operation of a firm with permanent employees performing a part of the work as distinct from a firm operating entirely by subcontracting all phases of the work.

The undersigned also certifies to be properly licensed by the State of California as a contractor to perform work of this specialty and further certifies to have been so licensed for the three years immediately preceding the date of receipt of bids. The undersigned agrees to furnish the City satisfactory proof of ability to perform the work, as well as records of performance of similar jobs completed recently, if and when requested to do so by the City Engineer.

The undersigned agrees that for change orders involving extra cost, the bidder shall allow the contingency allowance indicated by the City in the following bidding schedule. Expenditures from the contingency allowances shall be made only upon written order of the City. The portion of the allowance remaining unexpended at the completion of the work shall be deducted from the final payment due the Contractor.

The undersigned agrees that the insurance and bonding requirements set forth in Sections 2-11 and 3-13, respectively, of the City of Beverly Hills, Public Works Department, Standard Contractual Requirements can and will be fulfilled.

The undersigned hereby agrees to perform the work as described and in the Specifications prepared for this project, at the following prices, to wit:

NON-OPTIONAL BID ITEMS (ITEMS 1 THROUGH 24)

**WELLS REHABILITATION PROJECT
SCHEDULE BASE BID**

Item No.	Quantity And Unit	Description	Unit Price	Amount
1.	1 LS	Mobilization/Demobilization	\$_____	\$_____
2.	2 LS	Mobilization between well sites	\$_____	\$_____
3.	3 LS	Remove permanent pumps	\$_____	\$_____
4.	3 LS	Furnish & Remove 2-21000 gal storage	\$_____	\$_____
5.	3 LS	Mechanical Agitation w/Biocide (Brush and Air-lift)	\$_____	\$_____
6.	3 LS	Acid Treatment with Enhancer	\$_____	\$_____
7.	3 LS	Chlorination/Disinfection with pH adjust	\$_____	\$_____
8.	120Hrs.	Mechanical Development (swab and airlift)	\$_____	\$_____
9.	30Units	Vacuum Trucks (5,000 gallon each)	\$_____	\$_____

**WELLS REHABILITATION PROJECT
SCHEDULE BASE BID**

Item No.	Quantity And Unit	Description	Unit Price	Amount
10.	3 LS	Pumping Equipment for Well Development	\$_____	\$_____
11.	96 Hrs	Pumping Development	\$_____	\$_____
12.	36 Hrs.	Step Drawdown Pumping Tests	\$_____	\$_____
13.	36 Hrs.	Constant Rate Pumping Tests	\$_____	\$_____
14.	3 LS	Flow Meter Survey	\$_____	\$_____
15.	12 Units	Video Survey	\$_____	\$_____
16.	3 LS	Final Well Disinfection	\$_____	\$_____
17.	3 LS	Install Permanent Pump and Well Head Connections	\$_____	\$_____
18.	3 LS	Well Pump Disinfection	\$_____	\$_____
19.	3 LS	Start-Up and Testing	\$_____	\$_____
20.	3 LS	Install and Maintain BMPs	\$_____	\$_____
21.	1 LS	Waste Management Plan and Execution	\$_____	\$_____
22.	3 LS	Security Perimeter Fencing with access gate of work area	\$_____	\$_____
23.	60Hrs.	Saturday Work (8:00 AM-6:00 PM)	\$_____	\$_____
24.	48Hrs.	Sunday Work (9: AM-5 PM)	\$_____	\$_____

TOTAL Bid Price in written words:

_____ Dollars

and _____ cents.

All blank spaces appearing in the foregoing must be filled in. In case of discrepancy between words and figures, the words shall prevail.

The undersigned hereby declares that the cost of all necessary items for completion of this project are included in the unit prices quoted, all incidental costs having been taken into consideration even though said incidentals are not specifically listed in the specifications or shown on the plan. The undersigned is likewise aware of the fact that distances, quantities, and other estimated figures appearing on the plans or mentioned in the specifications or on this Proposal form are only approximate and declares that the unit prices shown above for the various items of work are based on distances and quantities calculated as the result of actual measures performed at the site of the project.

TIME FOR COMPLETION - The work on this project shall start within **5** calendar days from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within **120 calendar days** from Notice to Proceed

In case all the work called for is not completed in all parts and requirements within the time specified, the City shall have the right to grant or deny an extension of time for completion, as may best serve the interest of the City. The Contractor shall not be assessed with penalties during the delay in the completion of the work caused by acts of God or of the Public Enemy, acts of the State, fire not due to acts of contractors or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually severe weather, or delays of subcontractors due to such causes provided that the Contractor shall, within ten (10) calendar days from the beginning of such delay, notify the City, in writing of the cause of the delay. The City will ascertain the facts and the extent of the delay, and the findings thereon shall be final and conclusive.

LIQUIDATED DAMAGES - Time is of the essence on this contract, and should the Contractor fail to finish the work on or before the time stated above, the Contractor shall be charged by the City, as liquidated and ascertained damages, the sum of One Thousand Five Hundred Dollars (\$1,500) assessment for each calendar day that the work remains incomplete beyond the dates specified (subject, however, to extension of time duly granted in the manner and for the causes specified in the Special Provisions) it being hereby expressly impracticable and extremely difficult to fix the actual damage which would or will be suffered in the event that the Contractor should fail fully to complete the work within the time specified, and it would be further agreed that the charges per day as aforementioned shall be reasonable and proper in premise. The amount so charged shall be deducted by the City from any monies which otherwise are or become payable to the Contractor.

LIST OF SUBCONTRACTORS - The undersigned is required to fill in the following blanks in accordance with the provisions of Section 4104 of the Public Contract Code of the State of California and Section 2-3 of the Standard Specifications.

Name Under Which Subcontractor Licensed	<u>License No.</u>	<u>Location of the Place of Business</u>	<u>Specific Subcontract</u>
_____	_____	_____ _____	_____ _____
_____	_____	_____ _____	_____ _____
_____	_____	_____ _____	_____ _____
_____	_____	_____ _____	_____ _____
_____	_____	_____ _____	_____ _____

Subcontractors listed in accordance with the provision of Section 2-3 of the Standard Specifications must be properly licensed under the laws of the State of California for the type of work which they are to perform. Do not list alternate subcontractors for the same work. All subcontractors listed shall attach copies of the Certificate of Insurance naming the Contractor as additional insured as part of their policy coverage.

The undersigned agrees to furnish proof that all contractors and subcontractors performing any work related to this improvement are complying with all the requirements of Social Security Legislation, both State and Federal, and also agrees to conform with the provisions of Sections 4100 to 4113, inclusive, of the Public Contract Code, as amended, concerning subcontractors and subcontracts.

Respectfully submitted,

Dated _____

FIRM NAME _____

SIGNATURE _____

Bidder

ADDRESS _____

TELEPHONE: BUSINESS _____

RESIDENCE _____

CONTRACTOR'S LICENSE NO. _____ CLASS _____ EXPIRATION DATE _____

STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS PUBLIC WORKS CONTRACTOR REGISTRATION NUMBER _____

Bidder is * _____

If a partnership, names of partners
If a corporation, names of President **or**
Vice President, **and** the Secretary **or**
Assistant Secretary

NAME

ADDRESS

I (we) hereby state and declare under the penalty of perjury under the laws of California, that the representations made herein are true and correct.

Executed on _____ 20____ at _____
California

*By: _____ *By: _____

Title: _____ Title: _____

- Please state whether the bidder is an individual, a partnership, a corporation, or an individual doing business under a fictitious name. If the bidder is a corporation, the following is required: 1) signatures of two corporate officers; or 2) a certified copy of the corporation bylaws, and a resolution of the Board of Directors which gives authority to the officers signing this agreement to execute contracts on behalf of the corporation. Also, refer to Paragraph 2-01 of the Standard Contractual Requirements.

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID**

State of California

County of _____

_____, being first duly sworn, deposes and says that he or she is _____ of the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true, and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Contractor

(attach appropriate notary acknowledgments)

SPECIFICATIONS

For

REHABILITATION OF WELLS

**within the City of
BEVERLY HILLS, CALIFORNIA**

Bid #18-9

SECTION 1

GENERAL PROVISIONS

1-01 WORK TO BE DONE - The contract work to be done under these Specifications shall consist of furnishing all the required labor, materials, equipment, parts, implements and supplies necessary to rehabilitate three wells up to 730-foot deep, within the City of Beverly Hills, California, in accordance with this Project Specifications.

The work generally consists of the following:

- Move equipment on (and off) the site.
- Installation of security fencing enclosure including entrance gates.
- Remove existing well pump at each well.
- Air-lifting or suction-bailing of fill from the bottom of the well.
- Conduct color video surveys as necessary to evaluate progress of chemical treatment.
- Provide 2-21,000 gallon storage tanks.
- Provide phosphoric acid and acid enhancer, and introduce into the well by double swab to insure acid flows through the well perforations and into the filter pack and formation. Agitate the well to distribute the chemical. Collect water samples from the well to check pH. Replenish acid as necessary to maintain pH of 3.0 or lower for the first 6 hours of treatment. Provide a minimum of 12-hours and a maximum of 36-hours of contact time.
- Remove the acid by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Provide 5,000-gallon vacuum trucks to haul fluids not meeting discharge limits from the site for proper disposal.
- Provide sodium hypochlorite and chlorine enhancer and introduce into the well by double swab to force chlorine through the well perforations. Agitate the well to disperse the chemical. Provide a minimum of 12-hours and a maximum of 24-hours of contact time.

- Remove the chlorine by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Conduct mechanical redevelopment by swabbing and air lifting.
- Conduct pumping development by the pump and surge method.
- Conduct step drawdown and constant rate pumping tests.
- Conduct spinner survey and depth-specific water sampling.
- Conduct color video survey and well disinfection.
- Installation of the permanent pump, motor and well head connections; provide startup test at each well.
- Conduct final well disinfection with the permanent pump in place.
- Complete site cleanup and repair of damaged facilities as necessary.

1-02 STANDARD CONTRACTUAL REQUIREMENTS - The provisions of the "Standard Contractual Requirements for Public Improvements in the City of Beverly Hills", as adopted by the Department of Public Works on November 1, 1976, a copy of which is attached hereto and incorporated herein by reference, shall be applicable to the work covered by these Specifications.

1-03 REFERENCE SPECIFICATIONS

1-03.1 GENERAL - The following referenced specifications, including all amendments thereto issued prior to the date of the bid opening, shall be a part of these specifications, the same as though contained fully herein.

1-03.2 STANDARD SPECIFICATIONS - The words "Standard Specifications" when used in these Specifications or in the contract, refer to the "Standard Specifications for Public Works Construction", latest edition written by a Joint Cooperative Committee of the Southern California Chapter of the American Public Works Association and Southern California District of the Associated General Contractors of California.

SECTION 2

SPECIAL PROVISIONS

2-01 SPECIAL PROVISIONS

2-01.1 INTENT OF CONTRACT DOCUMENTS

It is the intent of the Contract Documents to provide City of Beverly Hills (hereinafter referred to as City or Owner) with complete well rehabilitation by chemical treatment, redevelopment and pumping tests as specified. The original capacity of Well Nos. 2, 4 and 6 was 1200 gallons per minute (gpm). The term Geologist herein refers to the hydrogeologic consultant retained by the City for this project.

2-01.2 PURPOSE

The purpose of the well treatment is to restore the groundwater production capabilities at Well Nos 2, 4 and 6 for municipal use and is part of a long-term effort to continue to provide high-quality, sustainable water resources for City customers. Well Nos. 2 and 4 were constructed in 1999, and Well No. 6 was constructed in 1994.

2-01.3 LOCATION

The water wells are in a vault located at the following locations:

Well No. 2: 9101 Santa Monica Boulevard, Beverly Hills, CA

Well No. 4: 9251 Santa Monica Boulevard, Beverly Hills, CA

Well No. 6: 9300 Burton Way, Beverly Hills, CA

It will be the responsibility of the Contractor to have inspected the well site and to make provision for physically moving onto and off the site with personnel, equipment, supplies and material.

2-01.4 LOCAL CONDITIONS AND GEOLOGY

The work will be performed at Well Nos. 2, 4 and 6 completed to a depth of 740 feet, 640 feet, and 670 feet, respectively. Each well was drilled by the reverse rotary method and completed with 12-inch diameter 304L stainless steel casing and Ful-Flo louver screen. It should be noted that the well screen and casing have an approximate wall thickness of 1/4-inch. Aquifer materials consist of unconsolidated silt and fine to medium sand. Static water level is about 120-140 feet below ground surface. A copy of the As-Built well schematic is included in the Technical Provisions.

Well rehabilitation operations are scheduled to begin in Winter 2018. It is understood that the Contractor will familiarize himself with local weather conditions for this time of year and take the necessary measures to ensure that work will progress to the completion of this project.

2-01.5 QUALIFICATIONS OF CONTRACTOR

A Bidder shall hold a valid Class C-57 California Contractor's License. The bidder will submit a list of wells and the dates of work, for similar well rehabilitation projects performed in the last 5 years including description of work, project cost, and client references.

Chemical treatment will require working with caustic acid and strong chlorine. The Contractor shall have experience and take necessary precautions when handling, storing, and dispensing the chemicals. In addition, Contractor's personnel shall understand safe working practices and utilize personal protective equipment, including hard hats, gloves, boots, splash resistant clothing and safety glasses or goggles, to prevent accidents. Water will be available on site. The Contractor shall store a volume of water at the site for emergency rinse or shower of personnel

2-01.6 TIME FOR COMPLETION - The work on this project shall start within **5** calendar days from the date of receipt of written notice to proceed from the City Engineer and the Contractor agrees to complete the entire work within **120** calendar days from the date of receipt of said written "Notice to Proceed".

In case all the work called for is not completed in all parts and requirements within the time specified, the City shall have the right to grant or deny an extension of time for completion as may best serve the interest of the City. The Contractor will not be assessed with liquidated damages during the delay in the completion of the work caused by acts of God or of the Public Enemy, acts of the State, fire not due to acts of contractors or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually severe weather, or delays of subcontractors due to such causes provided that the Contractor shall within ten (10) days from the beginning of such delay notify the City, in writing, of the cause of the delay. The City will ascertain the facts and the extent of the delay, and the findings thereon shall be final and conclusive.

2-01.7 LIQUIDATED DAMAGES - Time is of the essence on this contract, and should the Contractor fail to finish the work on or before the time stated above, the Contractor shall be charged by the City, as liquidated and ascertained damages, the sum of One Thousand Five Hundred Dollars (\$1,500) for each calendar day that the work remains incomplete beyond the dates specified in 2-01.1; it being hereby expressly impracticable and extremely difficult to fix the actual damage which would or will be suffered in the event that the Contractor should fail fully to complete the work within the time specified, and it would be further agreed that the charges per day as aforementioned shall be reasonable and proper in premise. The amount so charged shall be deducted by the City from any monies which otherwise are or become payable to the Contractor.

2-01.8 SPECIFICATIONS - The specifications showing location, character of the work, and details of construction are on file at the office of the City Engineer, located in 345 Foothill Road, Beverly Hills, California.

The construction of this project shall be in accordance with these Specifications, referenced and applicable sections of the Standard Specifications, and all other applicable references contained in the above items.

The Contractor shall field verify and make an independent check of the estimate prior to submitting its bid. It must be understood that payment to the successful contractor will be made on the basis of the unit prices bid for the item of work and on the actual quantities of work done as measured in the field by the City Engineer.

Copies of the specifications and proposal form may be inspected and obtained at the office of the City Engineer.

Contractors wishing to obtain the book "Standard Specifications for Public Works Construction", 2003 Edition, may purchase copies directly from the publisher, Building News, Inc., 1612 South Clementine Street, Anaheim, California, 92802; (800) 873-6397.

2-01.9 SERVICES FURNISHED BY CITY

City's designated representative shall provide observation and direction of the well rehabilitation. Water is available near the site from a 2-inch water line/back flow preventer.

2-01.10 WATER SUPPLY FOR CONSTRUCTION

The Contractor shall apply to City for installation of a temporary meter equipped with a backflow device for construction water used for the project. The water supply available to the Contractor is a 2-inch supply located within 200 feet of the well. The Contractor shall have the responsibility for the cost of a meter deposit (refundable) and the cost of transporting and meter installation at point of intended use. There shall be no charge to the Contractor for water supplied by City during the course of construction. Waste or misuse of water will not be allowed.

2-01.11 SITE ACCESS AND SECURITY FENCING

The well and work site shall be enclosed by a temporary perimeter fence (6 feet high with screening) and security gate by the Contractor. It shall be the Contractor's responsibility to provide security for equipment and materials stored at the site. Contractor shall be responsible for any theft or vandalism that may occur.

2-01.12 CONSTRUCTION NOISE ABATEMENT

Existing, occupied residences border the site on the north. All work is restricted to daylight hours. As a minimum, the Contractor shall conduct all work without excess or unnecessary noise. The Contractor shall also install primary sound attenuation measures around the compressor and all engines.

2-01.13 PROTECTION OF SITE

The Contractor shall provide adequate protection of the site to prevent leaks and spills of fuel, solvents, grease and other chemicals from affecting the ground and pavement.

Plastic sheeting with berms shall be placed beneath the rig, compressor, pump rigs, test engines, welders, chemicals and fuel/oil storage areas. The Contractor shall closely monitor fueling and equipment servicing to prevent leaks and spills. The Contractor shall store absorbent material in a dry condition on the site for cleanup of any spills. Plates or pads shall be used under out riggers to protect underground irrigation piping.

2-01.14 SEQUENCE OF OPERATIONS

The Contractor shall prepare and submit to the City a schedule of his work operations for the proposed project. The schedule projections shall be submitted for approval one week prior to mobilization.

2-01.15 PRE-CONSTRUCTION CONFERENCE

A pre-construction conference will be mandatory and shall include the Contractor's project manager and field supervisor.

2-01.16 ACCESS FOR CITY PERSONNEL

The Contractor shall provide access to the well and site facilities for the Owner at all times during treatment, redevelopment, and testing.

2-03 WORK SCHEDULE

2-03.1 TIME SCHEDULE – The Contractor shall conduct well rehabilitation operations for the well during daytime work hours of **8:00 AM to 6:00 PM**. Saturday work will be from **8:00 AM to 6:00 PM**; Sunday work is allowed from **9:00 AM to 5:00 PM**. Work that will require the temporary closure of any travel lane will be restricted to the hours of **9:00 AM to 3:00 PM**. The closed travel lane must be open to vehicular traffic by **3:00 PM** each working day unless otherwise approved by the Engineer. Weekend work must be approved by the City 24 hours prior to the weekend work.

2-03.2 WORK SCHEDULE – The Contractor shall submit to the City Engineer a schedule indicating the sequence of work, estimated time for completion of each phase of the project and the method of operation required to complete the project in the time specified. The Contractor's schedule shall be submitted to the City Engineer within **7** calendar days from the date of award of contract.

2-03.3 SPECIAL WORK REQUIREMENTS – The following special work requirements shall be adhered to and full compensation for conforming to all of the special work requirements shall be included in the items of work for this contract and no additional compensation will be made therefore:

a.) The Contractor is prohibited from working on the following days:

<u>Day</u>	<u>Date</u>	<u>Holiday</u>
Fri.	March 30, 2018	Passover
Mon.	May 28, 2018	Memorial Day
Wed.	July 4, 2018	Independence Day
Mon.	September 3, 2018	Labor Day
Mon..	November 12, 2018	Veteran's Day

2-04 TRAFFIC CONTROL

2-04.1 GENERAL - All streets and driveways where construction is in progress shall be kept open and in passable condition for emergency vehicles and normal traffic at all times.

2-04.2 PARKING AND ACCESS TO RESIDENT'S DRIVEWAY – The City will furnish to the Contractor "TEMPORARY NO PARKING" signs. The contractor will be responsible for posting and removing these signs as required for this project. These signs shall be placed around the circumference of a tree or street light post by a string. These signs should also reflect the exact time and date of the scheduled work. The Contractor shall comply with the requirements of Paragraph 5-07 of the Standard Contractual Requirements with reference to the need of minimizing the inconvenience caused to residents.

2-04.3 USE OF FLAG PERSON – To properly move traffic through the construction area, Contractor must be prepared to post flagger(s) to slow down and reroute traffic during installation, and if in the opinion of the City Engineer, at other phases of construction work. Flagger(s) shall be on duty the entire period the roadway is constricted.

2-04.4 CONTRACTOR'S RESPONSIBILITY - The Contractor shall take all necessary measures to obtain a normal flow of traffic to prevent accidents and to protect the work throughout the construction stages until completion of the work. The Contractor shall make the necessary arrangements to provide and maintain barriers, cones, guards, barricades and construction warning and regulatory signs. The Contractor shall take measures necessary to protect all other portions of the work during construction and until completion, providing and maintaining all necessary barriers, barricade lights, guards, temporary crossovers and watchmen.

In addition to the foregoing traffic control and safety measures, the Contractor shall undertake immediately to implement any measures requested by the City Engineer, as deemed necessary to ensure the proper flow of traffic and the protection of the public and the safety of the workers. The Contractor shall maintain at all times the ability to respond to calls from the Beverly Hills Police Department during non-working hours to replace or provide additional traffic control or safety devices as shall be required by the Police Department.

2-04.5 PAYMENT - The entire cost for traffic control as detailed in this section and as required for this construction shall be included in the unit prices bid for the various items of work.

2-05 UTILITIES

2-05.1 CONTRACTOR'S RESPONSIBILITY - The Contractor shall verify the location of all underground utilities and services before proceeding with work, requesting in advance the services of inspectors from the utility companies in order to ascertain said locations. Damage to underground utilities resulting from neglect on the part of the Contractor shall be corrected and paid for by the Contractor.

2-05.2 NOTIFICATION - The Contractor shall notify all owners of public utilities 48 hours in advance of excavating around any of their substructures, and shall also provide the same notice to Underground Service Alert of Southern California, Telephone No. 1-800-422-4133. Upon request, the City Engineer will furnish the Contractor a list of the various offices and numbers to call.

2-06 BUSINESS LICENSE - The Contractor is required to have a current City of Beverly Hills business license issued through the City of Beverly Hills Building & Safety and/or Finance Administration Departments. This license shall be obtained by the Contractor at no fee from the City.

2-06.1 PUBLIC WORKS CONTRACTOR REGISTRATION NO. – Under SB 854, Contractor is required to register and meet requirements with the State of California, Department of Industrial Relations to bid on public works contracts. A Public Works Contractor Registration No. shall be submitted with the bid.

2-07 PERMITS

2-07.1 - Prior to the commencement of work, the Contractor shall obtain a construction permit from the City of Beverly Hills Public Works Permit Counter located at 455 North Rexford Drive. Permits shall be kept in a readily available place on the job site at all times during construction. While no fee will be charged for the City of Beverly Hills permit, no permit will be issued unless the Contractor provides evidence of a current City of Beverly Hills business license.

2-07.2 - The Contractor shall obtain an after-hours no fee permit from the Building and Safety Department, 455 North Rexford Drive, for construction operations to be performed during Saturdays and Sundays.

2-09 ADDITIONAL WORK AND EXTRA WORK - The City reserves the right to order additional work over and above the quantities listed in the Proposal Form. In the event that additional work is required and is so ordered by the City Engineer, payment to the Contractor will be based on the actual quantity of additional work ordered and measured in the field by the City Engineer and will be paid for at the unit price bid by the Contractor. Whenever extra work is found to be necessary, the procedure described in Paragraph 5-11 of the Standard Contractual Requirements shall be followed.

2-10 SAFETY REGULATIONS - The Contractor shall comply with the requirements set forth in Section 7-10.4.1 of the Standard Specifications.

2-11 AVOIDANCE OF DUST NUISANCE - During the process of breaking and removal of any material from the site of the project and until completion of the contract work, the Contractor shall take all necessary measures in order to avoid the nuisance of excessive dust. Refer to Section 7-8.1 of the Standard Specifications.

Contractor shall sweep the project area free of all dust and debris at the conclusion of each working day prior to opening the construction area to traffic.

2-12 RECYCLING OF MATERIALS AND NONSTORMWATER DISCHARGES

2-12.1 RECYCLING OF MATERIALS - The Contractor is encouraged to recycle all materials. The Contractor shall provide the City all documentation as to the weight of the material in accordance with the requirements of AB 939.

2-12.2 DISCHARGES INTO STORM DRAIN SYSTEM - Storm water/urban runoff discharges to the public storm drainage system shall be prohibited for all discharges not wholly comprised of storm water, or permitted by a valid National Pollution Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board. "Storm drain system" includes all roads with drainage systems, municipal streets, catch basins, curbs, gutter ditches, man-made channels, or storm drains. The Contractor shall prevent all non-storm water discharges from the construction site (i.e., mixing and cleaning of construction materials, concrete washout, disposal of paints, adhesives, solvents, and landscape products).

2-12.3 NUISANCE WATER

It is possible that nuisance water, such as rainfall, irrigation water, or surface runoff may occur within the construction site during the period of construction under this contract. The Contractor, by submitting his bid, will be held to have investigated the risks arising from such waters and shall take all due measures to control drainage of nuisance water offsite and to prevent delays in progress of the work caused by such waters.

2-12.4 DISCHARGE OF WELL DEVELOPMENT AND TEST WATER

The Contractor shall provide a discharge pipe for development from the test pump to the point of discharge. The owner will provide the NPDES Permit and discharge requirements.

The Contractor shall provide all facilities, including settling tanks, to comply with all waste discharge requirements imposed by the NPDES Permit for discharge to the storm drain and the ultimate receiving waters. All actions and facilities necessary to comply with these requirements shall be the responsibility of the Contractor. All discharges shall cease immediately in the event discharges do not meet the NPDES limits. Discharge will resume after corrective measures have been applied and approved by the City. Any cleanups, violations, penalties, or fines shall be the responsibility of the Contractor.

2-12.5 EXCESS MATERIAL (SOLIDS AND FLUIDS) DISPOSAL

Sand material recovered from the bottom of the well and during redevelopment should be anticipated. The Contractor will be required to provide trucks for excess solids. The Contractor shall provide vacuum trucks to remove, transport and properly dispose of fluids not meeting discharge permit requirements.

2-13 ITEMS OF WORK

Work includes the furnishing of all materials, labor, equipment, fuel, tools, transportation, and services for chemical treatment and redevelopment of an existing well as described in these specifications.

The general work required includes:

- Move equipment on (and off) the site.
- Move equipment between well sites.
- Remove permanent well pumps.
- Air-lifting or suction-bailing of fill from the bottom of the well.
- Conduct color video surveys as necessary to evaluate progress of chemical treatment.
- Provide 2-21,000 gallon storage tanks.
- Provide phosphoric acid and acid enhancer, and introduce into the well by double swab to insure acid flows through the well perforations and into the filter pack and formation. Agitate the well to distribute the chemical. Collect water samples from the well to check pH. Replenish acid as necessary to maintain pH of 3.0 or lower for the first 6 hours of treatment. Provide a minimum of 12-hours and a maximum of 36-hours of contact time.
- Remove the acid by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Provide 5,000-gallon vacuum trucks to haul fluids not meeting discharge limits from the site for proper disposal.
- Provide sodium hypochlorite and chlorine enhancer and introduce into the well by double swab to force chlorine through the well perforations. Agitate the well to disperse the chemical. Provide a minimum of 12-hours and a maximum of 24-hours of contact time.

- Remove the chlorine by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
- Conduct mechanical redevelopment by swabbing and air lifting.
- Conduct pumping development by the pump and surge method.
- Conduct step drawdown and constant rate pumping tests.
- Conduct spinner survey and depth-specific water sampling.
- Conduct color video survey and well disinfection.
- Installation of the permanent pump, motor and well head connections; provide startup test.
- Conduct final well disinfection with the permanent pump in place.
- Complete site cleanup and repair of damaged facilities as necessary.

2-13.1 OTHER WORK REQUIRED

The Contractor shall be required to convey all clean discharge water in closed pipe to the discharge point at the drain inlet located about 50 feet from the well. The well rehabilitation work will occur during upgrades to Beverly Gardens Park and will require coordination with other Contractors.

2-14 SHOP DRAWING SUBMITTALS

2-14.1 The Contractor shall submit to the City Engineer within seven (7) calendar days after the notice to proceed of the contract for review five (5) copies of each shop drawing as specified in Section 3 of these Specifications. Shop drawing submittals shall include detailed design calculations, shop drawings, fabrication and installation drawings, catalog sheets, data sheets and similar items. The City Engineer shall review the shop drawings and return them to the Contractor within fourteen (14) calendar days.

2-13.2 Fabrication and/or purchase of an item may be commenced only after the City Engineer has reviewed the pertinent submittals and returned them to the Contractor marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on the submittals shall be considered as changes necessary to meet the requirements of the specifications and shall not be taken as the basis of claims for extra work.

2-13.3 The City Engineer's review of shop drawing submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor submittals. The Contractor shall assume all responsibility for the dimensions and the design of adequate connections and details.

SECTION 3

CONSTRUCTION REQUIREMENTS AND MATERIALS

3-01 REMOVAL AND DISPOSAL OF MATERIALS - All materials removed must be hauled away from the construction site on the same working day and legally disposed of and/or recycled. The Contractor shall recycle materials whenever possible. If the Contractor recycles materials in accordance with the requirements of AB 939, the City shall be provided documentation as to the weight of the material.

Except as otherwise specifically authorized by the City Engineer, all self-propelled equipment used by the Contractor in breaking and removal operations shall be equipped with rubber tires.

3-02 AVOIDANCE OF DUST NUISANCE - The Contractor shall take all necessary measures in order to avoid the nuisance of excessive dust resulting from the process of breaking, reconstructing and removing any materials on the project site. Such measures shall be employed for the duration of the contract work. Refer to Section 7-8.1 of the Standard Specifications.

3-03 GUARANTY

A material guaranty for a period of one year from the date the City of Beverly Hills records a notice of completion for the work will be required for this contract.

3-04 CLEANUP

3-04.1 The Contractor shall clean up the construction sites throughout the course of the work. No dirt, scrap material, trash, tools, or other unwanted material shall be trapped or left at the sites.

3-04.2 After the work specified herein has been completed. The entire area of work shall be left in a neat and presentable condition, free of all cleared vegetation, rubbish, construction debris and waste, surplus materials, and other objectionable materials. All such removed materials shall be disposed of by Contractor away from the site of work and in conformance with all applicable codes, ordinances, and regulations.

STANDARD CONTRACTUAL REQUIREMENTS

FOR PUBLIC IMPROVEMENTS IN THE CITY OF BEVERLY HILLS CALIFORNIA

AS ADOPTED BY
THE DEPARTMENT OF PUBLIC WORKS
ON NOVEMBER 1, 1976

PART I

GENERAL PROVISIONS

1-01 APPLICABILITY - Whenever these Standard Contractual Requirements are referred to in any proposal form, specifications, or contract for any work of public improvement proposed to be made by the City of Beverly Hills, they are made an integral part of all such documents pertaining to such work and are incorporated in each of such documents by reference as though set forth at length therein.

1-02 DEFINITION OF TERMS - The following terms, unless the context requires a different meaning, when used herein or in the proposal form, specifications, or the contract, shall have the following meanings:

BIDDER - Any individual, firm, partnership, corporation, or combination thereof, submitting a proposal for work contemplated.

BIDDER'S SECURITY - The cash, cashier's or certified check, or bidder's bond accompanying the proposal submitted by the bidder, as a guaranty that the bidder will enter into a contract with the City for the performance of the work if the contract is awarded to him.

CITY - The City of Beverly Hills, California.

CITY ATTORNEY - The City Attorney of the City.

CITY CLERK - The City Clerk of the City.

CITY ENGINEER - The City Engineer of the City

CITY COUNCIL - The Council of the City of Beverly Hills.

CODE - The terms Business and Professions Code, Civil Code, Government Code, Labor Code and Streets and Highways Code refer to codes of the State of California.

CONTRACT DOCUMENTS - The written agreement covering the performance of the work and the furnishing of labor, materials, tools and equipment in the construction of the work. The contract shall include the

notice to bidders, proposal, plans, specifications, these Standard Contractual Requirements and contract bonds; also any and all supplemental agreements amending or extending the work contemplated and which may be required to complete the work in a substantial and acceptable manner.

CONTRACTOR - The person or persons, firm, partnership, corporation, or combination thereof, which have entered into a contract with the City, as party or parties of the second part.

INSPECTOR - The Inspector of the Department of Public Works of the City, authorized by the City Engineer to represent him in the field during the performance of the work.

NOTICE TO BIDDERS - The public advertisement through which the City invites bids for the performance of specific work.

PLANS - The official project drawings and Standard Drawings, profiles, cross sections, working drawings and supplemental drawings, or reproductions thereof, approved by the City Engineer, which show the location, character, dimensions and details of the work to be performed.

PROJECT DRAWINGS - The project drawings are specific details and dimensions to the work and are supplemented by the Standard Drawings insofar as the same may apply.

PROPOSAL OR BID - The offer of the bidder for the work when made out and submitted on the prescribed proposal form, properly signed and guaranteed.

PROPOSAL FORM - The form furnished to prospective bidders by the City, for use by the bidder in preparing and submitting his bid.

PUBLIC UTILITIES - Railroad tracks, overhead or underground wires, pipe lines, conduit, ducts or structures owned, operated or maintained along or across a public right of way, including such installations owned by the Water Department, the Fire Department or the Police Department of the City, but excluding sewers, storm drains, street lighting systems and traffic signal systems owned by the City and operated or maintained by the Department of Public Works.

PUBLIC WORKS DIRECTOR - The Public Works Director of the City.

REFERENCE SPECIFICATIONS - Bulletins, standards, rules, methods of analysis or test, codes, and specifications of other agencies, engineering societies, or industrial associations referred to on the plans or in the specifications, copies of which are on file in the office of the City Engineer.

ROADWAY - That portion of a street or alley reserved for vehicular use.

SPECIFICATIONS - The project specifications prepared for the proposed work, and specifications included therein by reference, including standard specifications of other agencies, and any other specifications contained or referred to in supplemental agreements between the Contractor and the City.

STANDARD DRAWINGS - Plans of structures or devices adopted for work in the City and referred to on the plans or in the specifications by title or index number, or standard drawings or plans of other agencies which are referred to on the plans or in the specifications.

STATE - The State of California.

STREET SUPERINTENDENT - The City Engineer who has been authorized by the City Council to act in the capacity of Street Superintendent in the course of improvements carried under the proceedings of the Improvement Act of 1911, as amended, now a part of the Streets and Highways Code, as amended.

SUBCONTRACTOR - The person or persons, firm, partnership, corporation or combination thereof, who have entered into a contract with the Contractor to perform part of the work.

SUBGRADE - The surface to be used as a base for the pavement, gutter sidewalk, conduit, pipe or structure proposed to be installed.

SURETY - Any individual, firm or corporation, bound with and for the Contractor for the acceptable performance, execution, and completion of the work, and for the satisfaction of all obligations incurred.

WORK, PROJECT OR IMPROVEMENT - All the work specified, indicated, shown or contemplated in the contract to construct the improvement including all alterations, amendments or extensions thereto made by change order or other written orders of the City Engineer.

The meaning of any other word not mentioned herein shall be clarified by the City Engineer at the request of the Contractor, who shall accept the interpretation furnished him as representing the true meaning of such word.

1-03 ABBREVIATIONS - Following is a list of the most common abbreviations and symbols used on the plans and in the specifications.

ABBREVIATIONS

WORD or WORDS

AC	Asphalt concrete
ASTM	American Society for Testing Materials
BC	Beginning of curve
BCR	Beginning of curb return
BHW	Beverly Hills Water Department

BM	Bench mark
BVC	Beginning of vertical curve
CB	Catch basin
CC or C/C	Center to center
CF	Curb face
cfs	Cubic feet per second
CIP	Cast iron pipe
CL or C	Center line
CMP	Corrugated metal pipe
Conc.	Concrete
Cu.	Cubic
D	Diameter of pipe
Dia.	Diameter
Dr	Drive
DW&P	Los Angeles Department of Water & Power
Dwy.	Driveway
EC	End of curve
ECR	End of curb return
EG	Edge of gutter
Elev.	Elevation
EVC	End of vertical curve
Ex or Exist.	Existing
FB	Field Book
FH	Fire hydrant
FL	Flow line
fps	Feet per second
FS	Finished surface
Ft.	Foot or feet
Galv.	Galvanized
GL	Ground line
Gr	Grade
GRS	Galvanized Rigid Conduit
H	High or height
HC	House connection (sewer)
HOR	Horizontal
ID	Inside diameter
IDTC	Innerduct conduit
JC	Junction chamber

ABBREVIATIONS

WORD or WORDS

JS	Junction structure
L	Length
LACFCD	Los Angeles County Flood Control District
L&T	Lead and tack
LD	Local depression
Lin.	Linear
Long.	Longitudinal
MFS	Metropolitan Fiber Systems
MH	Manhole
MTD	Multiple tile duct

MWD	Metropolitan Water District
No.	Number
OD	Outside diameter
OLC.	Ornamental lighting conduit
PCC	Portland cement concrete or point of compound curvature
PI	Point of intersection
PL	Property line
PP	Power pole
PRC	Point of reverse curvature
Prop.	Proposed
psi	Pounds per square inch
PT	Point of tangency
PT&T	Pacific Telephone & Telegraph Co.
Pvmt.	Pavement
Q	Rate of flow
R	Radius
RC	Reinforced concrete
RCP	Reinforced concrete pipe
Rdwy	Roadway
R&O	Rock and oil
R/W	Right of way
S	Slope
San.	Sanitary
SCE	Southern California Edison Company
SCG	Southern California Gas Company
SD	Storm drain
SIC	Signal interconnect cable
Spec.	Specifications
SPCo	Southern Pacific Company
Sq.	Square
SS	Sanitary sewer
St.	Street
Sta.	Station
Std.	Standard
Str.Gr.	Straight Grade

ABBREVIATIONS

WORD or WORDS

T	Tangent distance
TC	Top of curb
TS	Traffic signal or transition structure
TSC	Traffic signal conduit
USC&GS	United States Coast and Geodetic Survey
USGS	United States Geological Survey
V	Depth of catch basin
v	Velocity
VC	Vertical curve
Vert.	Vertical
W	Width
WS	Water surface or wearing surface

Yd. Yard or yards

The meaning of any other symbol or abbreviation not shown on the preceding list and not clarified in the plans, specifications, or contract, shall be interpreted by the City Engineer at the request of the Contractor, who shall accept such interpretation as representing the true meaning thereof.

REV 10-30-80

REV 10-12-88

REV 07-17-90

REV 03-13-91

REV 08-10-95

REV 12-21-95

PROPOSAL REQUIREMENTS

2-01 PROPOSAL FORMS - All bids must be submitted on the proposal form attached to the specifications for a given project, and shall be delivered at the office of the City Clerk of Beverly Hills, located at 455 North Rexford Drive, Beverly Hills, California 90210.

All proposals must give the prices bid, both in written words and in figures, and must be signed by the bidder, who must state his address. If the proposal is made by an individual, his name, post office address and telephone number must be given. If made by a firm or partnership, the name, post office address and telephone number of each member of the firm or partnership must be shown. If made by a corporation, the proposal must show the name of the state under the laws of which the corporation was chartered, and the names, title and business addresses of the president, secretary and treasurer.

2-02 REJECTION OF PROPOSALS CONTAINING ALTERATIONS, ERASURES OR IRREGULARITIES - Proposals may be rejected by the City Council if they show any alterations of form, additions not called for, conditional or alternative bids, incomplete bids, erasures or irregularities of any kind. The City reserves the right to reject any or all bids, and to waive any informality or irregularity in any bid.

2-03 BIDDER'S SECURITY - Each bid submitted must be accompanied by cash, cashier's check, or certified check made payable to the City, or a bidder's bond in favor of the City, in the form set forth in Exhibit "A" attached hereto. Any of the foregoing types of bidder's security must be in an amount equal to at least ten percent (10%) of the total bid submitted by the bidder for the project. A bidder's bond shall be executed by a corporate surety acceptable to, and approved by, the City Attorney. A bid will not be considered unless one of the above-mentioned forms of bidder's security is enclosed with it.

2-04 FORFEITURE OF THE BIDDER'S SECURITY - If the successful bidder fails to execute the contract and furnish the necessary bonds and insurance within ten (10) days from the date of award of the contract, his bidder's security shall be forfeited to the City as liquidated damages.

2-05 BONDING LETTER - If cash, or cashier's check, or a certified check is furnished for the bid bond, a letter is required from a bonding company stating that in the event the contract is awarded to the bidder the bonding company will furnish, at the bidder's expense, the bonds required by Paragraph 2-11 hereof.

2-06 WITHDRAWAL OF BIDS - A bid may be withdrawn by a bidder prior to, but not after, the date and hour fixed for the opening of the bids, as said date and hour are specified in the Notice to Bidders

2-07 JURISDICTION OF THE CITY COUNCIL REGARDING BIDS - All bids shall be under the jurisdiction of the City Council and subject to final acceptance or rejection until after the City Council has awarded the contract and said contract has been duly entered into with the successful bidder.

2-08 DECISION AS TO WHICH CONTRACTOR IS THE LOWEST AND BEST BIDDER -All bidders must submit with their proposal satisfactory evidence that they are capable of performing the work in accordance with the plans and specifications. The City Engineer may require any bidder bidding on any public improvement to submit experience records covering a three-year period. The City Council may reject the bid of any bidder who has been delinquent or unfaithful in the performance of any previous contract work. The decision of the City Council as to which bidder is considered the "lowest responsible bidder" will be based not only on the actual amount of the bid but also on the relative competence and experience of the bidders, with particular regard to the quality of performance of any work done by them for the City in the past, and such decision shall be final and binding upon all persons.

2-09 AWARDS - A decision with reference to the acceptance of bid and the award of a contract will be made by the City Council within sixty (60) days after the opening of bids.

2-10 EXECUTION OF THE CONTRACT - The contract, in the form set forth in Exhibit "C" attached hereto, shall be executed by the successful bidder, in accordance with the instructions set forth in Exhibit "B" attached hereto, and returned to the City for execution by the City, and shall be accompanied by the bonds required in Paragraph 2-11 hereof and the evidence of insurance required by Paragraph 3-12 hereof, all within ten (10) days after the bidder has received notice of the award of the contract. No bid or proposal shall be considered binding upon the City until such time as it has been executed by the City. The failure of the successful bidder to execute the contract and to submit acceptable bonds and evidence of insurance as, and within the time, required shall be cause for the annulment of the award and the forfeiture of the bidder's security.

2-11 CONTRACT BONDS - The successful bidder shall furnish to the City, at his own expense, two surety bonds. One bond shall be in the amount of One Hundred percent (100%) of the contract price, in the form set forth in Exhibit "D" attached hereto, to guarantee faithful performance of the contract work. The "Performance Bond" shall guarantee that all materials and workmanship will be free from original or developed defects. The "Performance Bond" must remain in effect until the end of all warranty periods set forth in the contract.

All work shall be guaranteed by the Contractor against defective workmanship and materials furnished by the Contractor for a period of one (1) year from the date the work was completed. The Contractor shall replace or repair any such defective work in a manner satisfactory to the City Engineer, after notice to do so from the City Engineer, and within the time specified in the notice. If the Contractor fails to make such replacement or repairs within the time specified in the notice, the City may perform this work and the Contractor's sureties shall be liable for the cost thereof.

2-12 RETURN OF BIDDER'S SECURITY - If cash, or cashier's check or certified check is furnished as bidder's security, the City Clerk will return the bidder's security (excepting anyone subject to forfeiture) upon the occurrence of either of the following: the decision of the Council not to award a contract, or the compliance by a successful bidder with Paragraph 2-10 hereof.

2-13 EXAMINATION OF THE SITE OF THE WORK, PLANS AND SPECIFICATIONS - Before submitting their bids, all bidders are required to examine carefully the site of the project and the proposal, plans, specifications and contract forms for the work contemplated, and it will be assumed that all bidders have investigated and are satisfied with the conditions to be encountered as to the character, quality and quantities of work to be performed and materials to be furnished, as well as to the requirements of the plans, specifications, and the contract. Quantities and dimensions, as shown on the plans, specifications and proposal form, shall be considered as being only approximate and merely intended to assist the bidders in checking their own figures as ascertained at the site of the proposed work. The submission of a proposal shall constitute a representation and warranty by the bidder that the bidder has made such an examination.

2-14 COMPLIANCE WITH THE PROVISIONS OF THE GOVERNMENT CODE - All contractors shall conform to the provisions of Sections 4100 to 4113, inclusive, of the Public Contract Code, as amended, concerning subcontractors and subcontracts.

2-15.1 REJECTION OF BIDS - Proposals may be rejected by the City Council, whereupon evidence of prior performance of the bidder, the City Council has made a finding that within a three-year period prior to the bid opening the bidder is not a responsible contractor because of past unsatisfactory performance with the City or with other public entities.

2-16 COMPLIANCE WITH PROVISIONS OF THE FEDERAL EQUAL EMPLOYMENT OPPORTUNITY BID CONDITIONS - All bidders to be eligible for the federally-assisted or non-exempt federal construction contracts in the area of jurisdiction of the Los Angeles Building and Construction Trades Council must comply with the provisions of the greater Los Angeles Plan or the affirmative action program, both of which are set forth in the Federal Equal Employment opportunity Bid Conditions incorporated by reference herein and attached hereto as Exhibit "H" pursuant to the U.S. Department of Labor Orders dated September 23, 1971.

NOTE: Exhibit "H" will not be attached hereto for projects which are not financed with federal funds.

2-17 INTERPRETATION OF CONTRACT DOCUMENTS - No oral interpretations will be made to any bidder as to the meaning of the contract documents. Should a prospective bidder discover discrepancies or omissions in the contract documents or should he be in doubt as to the meaning of the contract documents, he shall request clarification or modification from the City. Request for an interpretation shall be made in writing and delivered to the City at least 10 days (240 hours) before the time announced for opening the proposals. Interpretations by the City will be in the form of an addendum to the contract documents and, when issued, will be sent as promptly as is practical to all parties to whom the contract documents have been issued. All such addenda shall become part of the contract. The submission of a proposal by the bidder shall constitute the acknowledgment that if awarded the contract, he has carefully reviewed the contract documents, based his bid solely on these documents, and has found them free of any ambiguity and sufficient for bid purposes and that he has not relied on any explanatory or interpretations from any other source except as provided for herein.

REV 10-30-80
REV 10-12-88
REV 08-19-91

LEGAL RELATIONS AND RESPONSIBILITY TO THE CITY

3-01 LAWS TO BE OBSERVED - The Contractor shall keep himself fully informed on all existing and pending State and national laws and all municipal ordinances and regulations of the City, which in any manner affect those employed in the work, or the material used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having jurisdiction or authority over the same. The Contractor shall particularly observe all ordinances of the City in relation to the obstruction of streets or conduct of the work, keeping open passageways and protecting the same where they are exposed or dangerous to traffic.

3-02 SOCIAL SECURITY REQUIREMENTS - The Contractor shall furnish to the City satisfactory evidence that he and all subcontractors working for him are complying with all requirements of the Federal and State Social Security legislation. The Contractor, at any time on request, shall satisfy the City that the Social Security and Withholding Tax are being properly reported and paid.

3-03 PREVAILING WAGES - In accordance with the provisions of Section 1770 et seq, of the Labor Code, the Director of the Department of Industrial Relations of the State of California has ascertained the general prevailing rate of wages applicable to the work to be done under contract for public improvement. The Contractor will be required to pay to all men employed on the project sums not less than the sums set forth in the documents entitled "General Prevailing Wage Determination made by the Director of Industrial Relations pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1."

A copy of said documents is on file and may be inspected in the office of the City Engineer in Room G10 of the Beverly Hills City Hall located at 455 North Rexford Drive, Beverly Hills, California 90210.

3-04 PENALTIES - The Contractor shall comply with Labor Code Section 1775 and he shall forfeit, as a penalty to the City, the sum of twenty-five (\$25.00) dollars for each calendar day or portion thereof during which the Contractor or any subcontractor under him has paid to any worker employed in the project an amount less than that required by the provisions of the preceding Paragraph 3-03.

3-05 PAYROLL RECORDS - The Contractor's attention is directed to Section 1776 of the Labor Code, relating to accurate payroll records, which imposes responsibility upon the Contractor for the maintenance, certification, and availability for inspection of such records for all persons employed by the Contractor or by the Subcontractors in connection with the project. The Contractor shall agree through the Contract to comply with this section and the remaining provisions of the Labor Code.

3-06 WORKING HOURS - The Contractor shall forfeit, as penalty to the City, the sum of twenty-five (\$25.00) dollars for each worker employed in the execution of the contract by him or by any subcontractor under him for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week, in violation of the provisions of Article 3, Chapter 1, Part 7, Division 2 of the Labor Code (Section 1810 et seq).

3-07 APPRENTICES - Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him. The Contractor and any subcontractor under him shall comply with the requirements of said sections in the employment of apprentices.

Information relative to apprenticeship standards and administration of the apprenticeship program may be obtained from the Department of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

3-08 COLLUSION IN BIDDING - Any collusion between bidders bidding on the work and limiting free competition in bidding, shall be considered unlawful and may prevent a Contractor who has been a party thereto from receiving payment under the contract.

3-09 REGISTRATION OF CONTRACTORS - Only a Contractor licensed in accordance with the provisions of Chapter 9, Division 3 of the Business and Professions Code shall be permitted to enter into a contract with the City for any public improvement.

3-10 PERMITS AND LICENSES - The Contractor shall procure all permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the work. City of Beverly Hills permits will be at no cost to the Contractor.

3-11 PATENTS - The Contractor shall assume all responsibility arising from the use of any patented, or allegedly patented, materials, equipment, devices or processes used on or incorporated in the work, and shall defend, indemnify, and hold harmless the City of Beverly Hills and each of its officers, agents, and employees from and against any and all liabilities, demands, claims, damages, losses, costs, and expenses, of whatsoever kind or nature, arising from such use.

3-12 INDEMNITY - The Contractor agrees to defend, indemnify, and save harmless the City of Beverly Hills and each of its officers, agents, and employees, from and against any and all liabilities, demands, claims, damages, losses, costs and expenses of whatsoever kind or nature, including, but not limited to, any and all direct and indirect cost of defense, made against, or incurred or suffered by, any such indemnity as a direct or indirect consequence of entering into this contract or of injury, sickness, or disease, including death, to persons or injury to, or destruction of, property, including, but not limited to, the loss of use of property, resulting directly or indirectly from, or in any manner connected with or pertaining to any and all operations, and any and all activities, omissions and conditions in any manner connected therewith or pertaining thereto, of the Contractor under the contract.

3-13 INSURANCE - The Contractor and Subcontractors shall at all times, during the term of the contract, carry, maintain, and keep in full force and effect, a policy or policies of Comprehensive Public Liability Insurance with an insurance company acceptable to, and approved by, the City Attorney, with minimum limits of Two Million Dollars (\$2,000,000), combined single limit coverage against any injury, death, loss or damage as a result of wrongful or negligent acts or omissions by the Contractor, together with an endorsement in substantially the form set forth in Exhibit "F", attached hereto.

All Subcontractor's Certificate of Insurance shall name the Contractor as the additional insured as part of their insurance policy coverage. Evidence of such coverage shall be submitted with the Contract Documents for review and approval by the City.

The Contractor shall provide the necessary insurance during the term of the contract issued by an insurer with a B+:VII or better rating in the most recent edition of Best's Insurance Guide.

3-14 WORKER'S COMPENSATION - The Contractor shall at all times, during the term of the contract, carry, maintain, and keep in full force and effect a policy or policies of Workmen's Compensation in substantially the form set forth in Exhibit "G", attached hereto.

PROSECUTION AND PROGRESS OF THE WORK

4-01 WORK SCHEDULE - As soon as notified of the award of the contract, the Contractor shall prepare and submit to the City Engineer a work schedule for accomplishing the work. Said schedule must show the dates of the expected start and completion of the various items of the contract work. During a scheduling conference between the Contractor and the City Engineer, the work schedule will be discussed and modified, if necessary, by mutual agreement. The work schedule must be carefully conceived and adhered to, because it will be the basis for the contents of letters addressed to owners of property adjoining the work area, giving them an understanding of the dates on which their street will be under construction and that they may be prevented from using their driveways during the Contractor's operations. Should it become necessary for the City to delay temporarily the work schedule agreed upon during the scheduling conference, every effort will be made to permit a new work schedule at the time most convenient to the Contractor, thus permitting the project to proceed with the shortest intramural movement of equipment. The Contractor shall notify the City Engineer in all such cases, in order to arrive at a mutually satisfactory schedule.

4-02 SUBLETTING AND ASSIGNMENT - The Contractor shall give his personal attention to the fulfillment of the contract and shall keep the work under his control. The Contractor shall not assign, transfer nor sublet any part of the work without the written consent of the City by the City Engineer and of the Surety of the Contractor's bond, and such consent of Surety, together with a copy of the subcontract, shall be filed with the City Engineer. No assignment, transfer or subletting, even though consented to, shall relieve the Contractor of his liabilities under the contract. Subcontractors shall not be recognized as such, and all persons engaged in the project will be considered as employees of the Contractor, their work being subject to the provisions of the contract and the specifications. Should any subcontractor fail to perform the work undertaken by him to the satisfaction of the City Engineer, said subcontractor shall be removed immediately from the project upon request by the City Engineer and shall not again be employed on the work, and the Contractor shall be held liable for the deficient work.

The Contractor shall submit to the City a list with the names, addresses and telephone numbers of all subcontractors who will work under him, as a part of, and in addition to the requirements set forth in Paragraph 2-14 hereof.

4-03 CHARACTER OF WORKMEN - The Contractor shall employ none but competent foremen, laborers and mechanics. Any overseer, superintendent, laborer or other person employed on the work by the Contractor who is intemperate, incompetent, troublesome or otherwise undesirable, or who fails or refuses to perform the work in the manner specified herein, shall be discharged immediately and such person shall not again be employed on the work.

4-04 AGENTS OR FOREMAN - In the absence of the Contractor from the site of the project, even if such is only of a temporary duration, he must provide and leave at the site a competent and reliable agent or foreman in charge. All notices, communications, orders or instructions given, sent to, or served upon, such agent or foreman by the City Engineer shall be considered as having been served upon the Contractor.

4-05 TEMPORARY STOPPAGE OF CONSTRUCTION ACTIVITIES - The City Engineer shall have the authority to suspend the contract work wholly or in part, for such a period of time as he may deem necessary, due to unsuitable weather, or to such other conditions as he considers unfavorable for the proper prosecution of the work, or for such time as he may deem necessary due to failure on the part of the Contractor or his workmen to carry out orders or to perform any of the requirements of the contract. The Contractor shall immediately comply with such an order from the City Engineer and shall not resume operations until so ordered in writing.

4-06 TIME OF COMPLETION AND LIQUIDATED DAMAGES - If all the contract work is not completed in all parts and requirements within the time specified in the proposal form, the City shall have the right to grant or deny an extension of time for completion, as may seem best to serve the interest of the City. The Contractor shall not be assessed with liquidated damages during any delay in the completion of the work caused by acts of God or of the Public Enemy, acts of the State, fire not due to acts of contractors or subcontractors, floods, epidemics, quarantine, restrictions, strikes, freight embargo or unusually or severe weather, or delays of subcontractors due to such causes, provided that the Contractor shall, within ten (10) days from the beginning of such delay, notify the City, in writing, of the cause of the delay. The City will ascertain the facts and the extent of the delay, and the findings thereon shall be final and conclusive.

4-07 SUSPENSION OF CONTRACT - If at any time, in the opinion of the City Council, the Contractor fails to supply an adequate working force, manufactured articles, or material of proper quality, or has failed in any other respect to prosecute the work with the diligence and force specified and intended in and by the terms of the contract, notice thereof in writing will be served upon him, and should he neglect or refuse to provide means for a satisfactory compliance with the contract within the time specified in said notice and as directed by the City Engineer, City Council shall have the power to suspend the operation of the contract and discontinue all work or any part thereof. Thereupon, the Contractor shall discontinue such work, or such part thereof as the City may designate, and the City may thereupon, by contract or otherwise, as it may determine, complete the work or such part thereof, and charge the entire expense of so completing the work or any part thereof to the Contractor, and for such completion the City itself or its contractors may take possession of and use, or cause to be used in the completion of the work, or any part thereof, any such materials, implements and tools of every description as may be found at the place of such work. All expense charged under this paragraph shall be deducted and paid for by the City out of any monies then due or to become due the Contractor under the contract, or any part thereof, and in such accounting the city shall not be held to obtain the lowest figure for the work for completing the contract, or any part thereof, or for insuring its proper completion, but all sums paid therefor shall be charged to the Contractor. In case the expenses so charged are less than a sum which would have been payable under the contract, if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference, and in case such expense shall exceed the amount payable under the contract, then the Contractor shall pay the amount of the excess to the City, upon completion of the work, without further demand being made therefor. In the determination of the question as to whether or not there has been any such noncompliance with the contract as to warrant the suspension or annulment thereof, the decision of the City Council shall be binding on all parties to the contract.

CONTROL OF THE WORK

5-01 AUTHORITY OF THE CITY ENGINEER - The City Engineer shall decide any and all questions that may arise as to the quality and acceptability of materials furnished and work performed, as to the manner of performance and rate of progress of the work, and any and all questions which may arise as to the interpretation of the plans and specifications. The City Engineer shall likewise decide any and all questions as to the acceptable fulfillment of the contract on the part of the Contractor, and all questions as to claims and compensations. The decision of the City Engineer shall be final and he shall have relative authority to enforce and make effective such decisions and actions as the Contractor fails to carry out promptly.

5-02 CONFORMITY WITH PLANS AND ALLOWABLE VARIATION - Finished surfaces shall in all cases conform to the lines, grades, cross-sections and dimensions shown on the plans. Minor deviations from approved plans, whenever required by the exigencies of construction, shall be determined in all cases by the City Engineer and authorized in writing.

5-03 PROGRESS OF THE WORK - The Contractor shall begin work on the date agreed upon following the scheduling conference mentioned in Paragraph 4-01 hereof, and shall diligently prosecute the same to completion before the expiration of the time limit appearing in the specifications and in the proposal form.

5-04 SAMPLES - The Contractor shall furnish all products and materials required to complete the work. All materials and products must be of the specified quality and fully equal to samples, when samples are required. Whenever required, the Contractor shall submit to the City Engineer for test, and free of charge, samples of any one of the materials or products proposed to be used in the work. Said samples shall be delivered by the Contractor to the place within the City designated by the City Engineer. Rejected material must be immediately removed from the work by the Contractor and shall not again be brought back to the site.

5-05 TRADE NAMES AND ALTERNATIVES - For convenience in designation on the plans or in the specifications, certain equipment or articles or materials to be incorporated in the work may be designated under a trade name or the name of a manufacturer and his catalog information. The use of alternative equipment or an article or equipment which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the approval of the City Engineer, in accordance with the following requirements.

The burden of proof as to the comparative quality and suitability of alternative equipment or articles or materials shall be upon the Contractor and he shall furnish, at his own expense, all information necessary or related thereto as

required by the City Engineer. The City Engineer shall be the sole judge as to the comparative quality and suitability of alternative equipment or articles or materials and his decision shall be final. All requests for substitution shall be submitted seven (7) days in advance of bid opening to permit, if the request is approved, an addendum to be issued to all bidders.

5-06 PROTECTION OF THE WORK - The Contractor shall continuously maintain adequate protection of all his work from damage, and the City will not be held responsible for the care or protection of any material, equipment, or parts of work, except as expressly provided for in the specifications.

5-07 ACCESS TO RESIDENTS DRIVEWAYS - The Contractor shall notify residents of property adjoining the location of the work, sufficiently in advance of construction, as of the date when such construction work will start. In case of work requiring excavation of the roadway which may interfere with the use by residents of their driveways, suitable provisions shall be made by the Contractor to make it possible for residents to gain access to their driveways until such time as the exigencies of construction may demand a temporary blocking of said driveways. Efforts shall be made by the Contractor to minimize the duration of said blocking and to notify the residents of this need well in advance, thus allowing them to make suitable arrangements to keep their automobiles elsewhere.

5-08 CONFLICT OF TERMS - The notice to bidders, proposal, plans, specifications, and Standard Contractual Requirements are essential parts of the contract for a given project. These documents, together with the necessary bonds and bidder's guarantee, constitute the contract as defined herein and a requirement included in one document shall be as binding as though included in all, as they are intended to be cooperative and to provide a description of the work to be done. Should there be any conflict or discrepancy between terms used, then the specifications shall govern over the plans and change orders and supplemental agreements shall govern over any other contract document.

Special specifications of other agencies, engineering societies or industrial associations and Standard Drawings of the City or of other agencies referred to in the specifications or on the plans shall also be considered as essential parts of the contract. Where a given specification is incorporated by reference, said reference shall apply to the latest modification, unless otherwise shown on the plans or in the specifications. Whenever an object, thing, or work of any kind is indicated only on either the plans or in the specifications, it shall be deemed that the intent was to show said item in both places, and the work shall be done in the place where it is shown. In case of doubt about the meaning of any contracting clause the interpretation shall be made by the City Engineer and shall be so accepted by the Contractor.

5-09 INTERPRETATION OF PLANS AND SPECIFICATIONS - Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained on the plans or in the specifications, the Contractor shall

request the City Engineer for such further explanation as may be necessary, and shall conform to such explanation or interpretation as part of the contract, so far as may be consistent with the intent of the original specifications. In the event of doubt or question relative to the true meaning of the specifications, reference shall be made to the City Council, whose decision thereon shall be final.

5-10 ALTERATIONS, INCREASES AND DECREASES OF WORK TO BE DONE - The City reserves the right to increase or decrease the quantity of any item or portion of the work described on the plans, the specifications, or the proposal form or to omit portions of the work so described as may be deemed necessary or expedient by the City Engineer and the Contractor shall agree not to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any kind of work to be done. By mutual consent of the parties signatory to the contract, alterations, modifications or deviations from the type of work described on the plans, specifications, or on the proposal form, may be made without in any way making the contract void. The price to be paid by the City to the Contractor for such altered or modified work shall be agreed upon in writing, endorsed upon the original contract and signed by the proper parties to said contract.

Whenever, during the progress of the work, such changes or modifications are deemed necessary by the City Engineer and agreed upon, as aforesaid, said deviations shall be considered and treated as though originally contracted for, and shall be subject to all the terms, conditions and provisions of the original contract.

5-11 CHANGE ORDERS - If for any reason it may become desirable during the course of the Work to change the alignment, dimensions or design of the Work, the City reserves the right to issue change orders in writing to give effect to such changes as may be necessary or desirable. The changes may or may not result in a change in the amount of Work. When the Contractor considers that any change order in writing by the City involves extra work, he shall immediately notify the City in writing as to when and where extra work is to be performed and shall make claim for compensation therefor each month not later than the first day of the month following that in which the work claimed as extra work was performed. If the changes do, in the opinion of the City, change the amount of Work, the Contract Price shall be adjusted as "extra work", pursuant to Section 6-01.

New and unforeseen work will be classed as extra work only when said work is not covered and cannot be paid for under any of the various items or combination of items for which a bid price appears on the proposal form. The Contractor shall not do any extra work except upon written order from the City Engineer. Compensation for such extra work shall be previously agreed upon in writing between the Contractor and the City Engineer.

5-12 LINES AND GRADES - Except when, as per orders from the City Engineer, minor changes in the work are to be made by the Contractor, all work shall during its progress and upon completion, conform to the lines, grades and

elevations shown on the plans. All distances and measurements are given thereon and will be made in a horizontal plane. Three consecutive points shown on the same rate of slope must be used in common in order to detect any variation from a straight line, and in case any such discrepancy exists, it must be reported to the City Engineer. Failure to make this report shall make the Contractor responsible for any error in the finished work.

5-13 GRADE STAKES - The Contractor shall give at least twenty-four (24) hours notice in writing when he will require the services of the City Engineer for laying out any portion of the work, and shall dig all holes necessary for line and grade stakes. The Contractor shall preserve all stakes set for the lines, grades or measurements of the work in their proper place until authorized to remove them by the City Engineer. Any expense incurred in replacing said stakes as the Contractor may have failed to preserve shall be borne by the Contractor.

5-14 PROTECTION OF SURVEY MONUMENTS - All survey monuments existing along the portions of any street where work is to be done shall be carefully protected and preserved by the Contractor. Any displacement or damage to said monuments resulting from carelessness in spotting their location during the progress of the work or from negligent use of equipment in their vicinity shall be corrected by the Contractor at his own expense.

5-15 PUBLIC UTILITIES - In case it should be necessary to remove the property of a public utility or franchise, such owner will, upon proper application by the Contractor, be notified by the City Engineer to move such property within a reasonable time and the Contractor shall not interfere with said property until after the expiration of the time specified. The right is reserved to the owners of public utilities or franchises to enter upon the streets for the purpose of making repairs or changes in their property which may be necessary as a result of the work. Employees of the City shall likewise have the privilege of entering upon the streets for the purpose of making any necessary repairs or replacements.

5-16 UNIDENTIFIED EXISTING UTILITIES - The City shall be responsible for the timely removal, relocation or protection of existing main or trunk line utility facilities located on the site, if such utilities are not identified by the City in the plans and specifications made a part of the invitation for bids. The Contractor will be compensated by the City for the costs of locating repairing damage not due to failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications, with reasonable accuracy, and for equipment on the project necessarily idled during such work.

The Contractor shall not be assessed for liquidated damages for delay in completion of the project, when such delay was caused by failure of the City or owner of the utility to provide for removal or location of such utility facilities. This shall not be deemed to require the City to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes on or adjacent to the side of the construction; provided, however, nothing herein shall relieve the City from

identifying main or trunk lines in the plans and specifications. If the Contractor performing services required under the contract discovers utility facilities not identified by the City in the contract plan and specifications, he shall immediately notify the City and the utility in writing. The City, if it is the owner of the public utility shall have the sole discretion to perform repairs or relocation work or permit the contractor to do such repairs or relocation at a reasonable price.

5-17 REMOVAL OF INTERFERING OBSTRUCTIONS -The Contractor shall remove and dispose of all debris, abandoned structures, tree roots, and obstructions of any character met during the process of excavation, it being understood that the cost of said removals are made a part of the unit price bid by the Contractor under the item for excavation or removal of existing work.

5-18 PROCEDURE IN CASE OF DAMAGE TO ADJOINING WORK - Any portions of adjoining curb, gutter, sidewalk or any other City improvements damaged by the Contractor during the course of construction shall be replaced by the Contractor at his own cost, free of all charges to the City. The cost of additional replacement of curb, gutter or sidewalk in excess of the estimated quantities shown in the proposal form and specifications, and found necessary during the process of construction, (but not due to damage resulting from carelessness on the part of the Contractor during his operations), shall be paid to the Contractor at the unit prices submitted in his bid.

5-19 AVOIDANCE OF PATCHWORK APPEARANCE - New PCC work shall conform in grade, finish and color to the adjoining portions. Any sections of said work having a patchwork appearance will be rejected by the City Engineer and the Contractor shall replace them at his own expense. To insure a neat break line between existing and new portions of PCC work, the Contractor will be required to use a concrete cutting saw of a type approved by the City Engineer. The cost of saw cutting shall be included by the Contractor in the unit prices bid for removal of existing work. Likewise, whenever adjoining PCC work is damaged during the process of new construction, the damaged portions shall be removed in such a way that a neat, straight joint is provided between the new portions and existing work.

5-20 CARE OF GUTTERS ADJACENT TO AREAS TO BE PAVED - During the process of resurfacing the roadways or construction of new pavement, the Contractor shall exercise particular care to remove all excess resurfacing material which may be deposited upon the PCC gutters. Whenever specifications call for the resurfacing material to overlap the existing gutters the overlapping portions shall not exceed the dimensions shown on the plans and a wavy overlapping line shall be avoided. Any undulation of the overlapping line accidentally resulting from the application of the paving or resurfacing material shall be corrected by the Contractor before the work is accepted by the City Engineer.

5-21 DEPTH OF THE REQUIRED EXCAVATION - When the contract work requires excavation and removal of existing pavement and excess of underlying soil, these materials shall be removed to the depth shown on the plans.

Whenever the subgrade exposed after the removal of the excess underlying soil is found to be of the desirable kind, excavation need not proceed below the depth specified on the plans. However, if the excavation discloses the fact that there is mud or any other soft material in the subgrade, said material shall be removed to a minimum depth of six inches (6"), at the discretion of the City Engineer. Backfill of the additional excavated portions shall be made with select material removed from other portions of the work, provided said material is found suitable by the City Engineer. The volume in place of the additional soil excavation will be determined by the field representatives of the City Engineer, and the Contractor will be entitled in this case to extra payment based on the additional number of cubic yards excavated, at the unit price bid by him under the item for excavation in the proposal form. Should imported material be required for the backfill, the unit cost per cubic yard of said imported material shall be agreed in advance, in writing, between the Contractor and the City Engineer, and extra payment for said material will be made to the Contractor for the actual volume used, as verified in the field by representatives of the City Engineer.

5-22 SEQUENCE OF THE WORK OF EXCAVATION - Whenever the contract work calls for excavation of existing pavement and excess soil and for construction of base material, the process of excavation shall be conducted by the Contractor so that, at the end of any working day, the area where excavation is proceeding shall not be more than 300 feet in advance of the area where the untreated rock base over sections already excavated is being laid, unless otherwise indicated in the specifications.

5-23 AVOIDANCE OF DUST NUISANCE - During the process of breaking, excavating and removing any material from the site of the project and until completion of the work, the Contractor shall take every precaution to avoid the nuisance of unnecessary dust by using any measures advocated by the City Engineer.

5-24 MAINTENANCE OF TRAFFIC AND SAFETY REQUIREMENT - Any Contractor performing work in a street right-of-way shall conduct his operations so as to cause the least possible obstruction and inconvenience to public traffic and safety, and shall take all necessary measures to maintain an adequate traffic flow, to prevent accidents and to protect the site of the work. During construction the Contractor shall, as far as practicable, keep the project free of rubbish and debris and in as clean a condition as possible.

A suitable width of any intersecting street shall be kept in reasonably good condition for traffic, including the necessary provisions for proper drainage. Should the requirements of construction demand closing the full width of an intersection, such closing shall be allowed only after the Contractor has secured permission from the City Engineer and the duration of the closing must be for the minimum length of time possible. After said permission is granted, the Contractor shall make the necessary arrangements to provide temporary crossings, or to reroute traffic away from said intersection and provide and maintain barriers, guards, directional signs, watchmen and lights at all detour points, in order to give adequate warning to the public at all times that the streets

are under construction and of the dangerous conditions as a result thereof. The Contractor shall also erect and maintain such additional warning and directional signs as may be furnished by the City.

5-25 BARRIERS, LIGHTS, ETC. - The above-mentioned barriers, safety lights, warning and regulatory signs, guards, temporary crossovers and watchmen shall also be provided and maintained by the Contractor at his own cost over all portions of the work during construction and until completion. Provisions shall be made by the Contractor to insure operation of the safety lights throughout the evenings without interruption. No safety lights using the inflammable liquids shall be permitted during the progress of the work, and only electric battery operated safety lamps will be approved for this purpose.

5-26 REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK - It is the intent of the specifications that only first class work, materials and workmanship will be acceptable. All work which is defective in its construction or deficient in any of the requirements of the specifications shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed for such correction. Any work done beyond the lines shown on the plans or established by the City Engineer, or any extra work done without written authority will be considered as unauthorized and will not be paid for. Upon failure on the part of the Contractor to comply forthwith with any order of the City Engineer made under the provisions of this paragraph, the City Engineer shall have authority to cause defective work to be remedied or removed and replaced, and unauthorized work to be removed, and to deduct the costs thereof from any monies due or to become due the Contractor. If the work is found to be in compliance with these specifications, the City Engineer will furnish the Contractor with a certificate to that effect.

5-27 SUPERVISION - All manufactured products, materials and appliances used and installed and all details of the work done shall at all times be subject to the supervision, test and approval of the City Engineer or his authorized representatives. The City Engineer or his authorized representatives shall have access to the work at all times during construction, and shall be furnished with every reasonable facility for securing full knowledge with regard to the progress, workmanship and character of the materials used or employed in the work.

5-28 INSPECTORS - The Contractor shall prosecute work only in the presence of Inspectors appointed by the City Engineer and any work done in the absence of said Inspectors will be subject to rejection. All instructions given to the Contractor by such assistants shall be regarded as having been given directly by the City Engineer. The Contractor shall make a written application for an Inspector at least twenty-four (24) hours before his services are required on the work. Whenever the cost of an improvement or the cost of any portion thereof is defrayed from the Gas Tax Funds allocated to the City by the County of Los Angeles, or by the State of California, Inspectors appointed by the State or County shall likewise be given full access to the site of the work in order that they may perform their inspection duties efficiently and without interference. The inspection of the work shall not relieve the Contractor of any of his obligations to

fulfill the contract as prescribed. Defective work shall be made good and unsuitable materials rejected, notwithstanding the fact that such defective work and unsuitable materials may have been previously overlooked by the Inspectors and accepted or estimated for payment.

5-29 FINAL CLEANING UP - Upon completion of the project and before making application to the City Engineer for acceptance of the work, the Contractor shall clean all the streets and grounds occupied by him in connection with the project, of all rubbish, debris, excess material, temporary structures and equipment, leaving the entire site of the work in a neat presentable condition.

5-30 LOSS OR DAMAGE - Any loss or damage arising from any omission or act of the Contractor or any agent or person employed by him or by any action which had not been authorized in the provisions of the specifications, shall be sustained by the Contractor.

REV 10 -12-88

PART 6

MEASUREMENT AND PAYMENT

6-01 EXTRA WORK - Extra work as hereinbefore defined, when ordered and accepted, shall be paid for under a written work order in accordance with the terms therein provided. Payment for extra work will be made at the unit price or lump sum previously agreed upon between the Contractors and prepared by the City Engineer. All extra work shall be adjusted daily upon report sheets prepared by the City Engineer, furnished to the Contractor, and signed by both parties, and said daily reports shall be considered thereafter the true record of extra work done.

6-02 PAYMENTS - Monthly payments will be made to the Contractor in amounts equal to ninety five percent (95%) of the value of all work done during the preceding calendar month, calculated at the unit price bid by the Contractor for the work and on the basis of the percentage of work performed, as estimated by the representative of the City Engineer, it being understood that the sums thus figured to be due the Contractor will become payable ten (10) days after the approval and acceptance of said estimate by the City Engineer. The Contractor shall submit an invoice for all payments requested by him. No such estimate of work done or payment to be made shall be required when, in the judgment of the City Engineer, the work is not proceeding in accordance with the provisions of the contract, or when the total value of the work done since the beginning of the project or since the preceding monthly payment is estimated to amount to less than three hundred (\$300.00) dollars.

After completion of the project, the City Engineer will make a final inspection of its site and, if the work is found satisfactory, he will recommend the official approval of the contract work. The City Engineer will also make a final estimate of the actual amount of work done on each item appearing on the proposal form, including extra work, if any, and of the value of such work, and the City will pay the entire sum so found to be due after deducting therefrom all previous payments and five percent (5%) to be retained. All previous partial estimates shall be subject to correction in the final estimate and payment. The five percent (5%) retained shall not be due and payable until the Notice of Completion of the project has been filed by the City Clerk with the Los Angeles County Recorder and until after the expiration of thirty-five (35) days after the date of the official approval of the work by the City Council.

In accordance with Government Code Section 4590, the Contractor will be paid the amount of any funds retained by the City, if the Contractor so requests in writing, and the Contractor provides to the Director of Finance Administration a bank or savings and loan certificate of deposit or a security as described in Government Code Section 16430 in the amount equivalent to the amount withheld as determined by the Director of Finance Administration. In lieu of providing such securities to the Director of Finance Administration, the Contractor may deposit such security with a state or federally chartered bank as an escrow agent, said escrow agreement to be satisfactory to the City Attorney. The escrow shall provide that payment of the funds shall not be made to the Contractor until satisfactory completion of the contract as provided in this Section above and shall include the satisfaction of any Stop Notices filed as provided by law and the satisfaction by the Contractor assessed against the Contractor as provided for herein. Any such security shall be provided by the Contractor at the sole expense of the Contractor and the Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest therein. To cover the expenses of the City in processing any request by Contractor for payment of funds retained pursuant to this subsection, Contractor shall pay City the amount of One Hundred (\$100.00) Dollars for processing the first application for withdrawal of funds retained and the amount of Fifty (\$50.00) Dollars for each additional withdrawal of funds retained.

It shall be mutually agreed between the parties to the contract that no certificate given, with the exception of the certificate of final payment, shall be conclusive evidence of the faithful performance of the contract, either in whole or in part, and that no payment shall be construed to be in acceptance of any defective work or improper materials.

PUBLIC WORKS DEPARTMENT
CITY OF BEVERLY HILLS

REV 01-22-82
REV 12-10-86
REV 08-19-91
STDCREQ

EXHIBIT A

BIDDER'S BOND
(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum of ten per cent (10%) of the total amount of the bid of Principal for the herein described work of improvement,

lawful money of the United States of America, for the payment of which, well and truly to be made, we hereby bind ourselves and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal is bidding, or is about to bid, for the following described work of improvement, all in accordance with the Notice to Bidders, Proposal form, Improvement Map, Specifications, and Standard Contractual Requirements of Obligee therefor:

NOW, THEREFORE, if Obligee shall make an award to Principal for said work of improvement according to the terms of such bid, and Principal shall duly execute, or cause to be executed, and delivered to Obligee the Contract, bonds, and evidence of insurance coverage as, and within the time, required by the Standard Contractual Requirements, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

No extension of time granted to the Principal and no change or alteration in any of the terms of the bid or the bid requirements, whether made after notice or not, shall release or otherwise affect the obligations of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

In the event suit is brought upon this bond by the Obligee and judgement is recovered by the Obligee, court costs, including reasonable attorney's fees, shall be an additional obligation of this bond for which Principal and Surety shall be liable.

Signed and sealed the _____ day of _____, 20____.

PRINCIPAL

SURETY

APPROVED AS TO FORM:

City Attorney

NOTE TO SURETY COMPANY: The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of unrevoked resolution of authority for the attorney-in-fact.

By: _____

_____ 20____.

(SURETY CO. ATTORNEY-IN-FACT)

STATE OF CALIFORNIA: COUNTY OF LOS ANGELES: SS.

On _____, before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____, known to me to be the duly authorized attorney-in-fact of the corporate surety named in the within Instrument, known to me to be authorized to execute said Instrument on behalf of

said corporation, known to me to be the person whose name is subscribed to said Instrument as the attorney-in-fact of said corporation, and acknowledged to me that he (she) subscribed the name of said corporation thereto as surety, and his (her) own name as attorney-in-fact and that said corporation executed the same.

WITNESS my hand and official seal

(Seal)
County and State

Notary Public on and for said

EXHIBIT “A”

EXHIBIT B

INSTRUCTIONS FOR EXECUTION OF INSTRUMENTS

1. **By an Individual.** The individual must sign the instrument, and if he is doing business under a fictitious name, the fictitious name must be set forth. **The signature must be acknowledged before a Notary public.**
2. **By a Partnership.** The name of the partnership must be set forth followed by the signature of all of the partners. **The signatures must be acknowledged before a Notary Public.** The signatures of less than all of the partners will be acceptable only if submitted with evidence of authority to act on behalf of the partnership.
3. **By a Corporation.** The name of the corporation must be set forth, followed by the signatures of the President or Vice-President and Secretary or Assistant Secretary. **The signatures must be acknowledged before a Notary Public, using in substance the following form of acknowledgement:**

"STATE OF _____)
) ss.
COUNTY OF _____)

On _____, 20____, before me the undersigned Notary Public, personally appeared _____, known to me to be the (President) (Vice President), and _____, known to me to be the (Secretary) (Assistant Secretary), of the corporation that executed the within instrument, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my signature and seal.

(Seal)

Notary Public

4. **By a Surety.** The name of the surety must be set forth, followed by an authorized signature. **The signature must be acknowledged before a Notary Public.**

By an Insurance Company. The name of the company must be set forth, followed by an authorized signature. **The signature must be acknowledged before a Notary Public.**

EXHIBIT "B"

EXHIBIT C

AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between the CITY OF BEVERLY HILLS, a municipal corporation, hereinafter referred to as "City", and

hereinafter referred to as "Contractor";

W I T N E S S E T H

In this consideration of their covenants the parties hereto agree as follows:

1. Contractor shall furnish all labor, materials and equipment necessary to perform the following work in the City of Beverly Hills, California, strictly in accordance with the Notice to Bidders, Proposal form, Plans and Specifications for such improvement, Standard Contractual Requirements and inclusive of Addendums, each of which documents are made a part of this Contract as though fully set forth herein:

2. In consideration of such work City agrees to pay Contractor and Contractor agrees to accept the sum of

in the manner provided in subject Plans and Specifications and subject to adjustment provided therein.

3. Concurrently with the execution of this Contract, Contractor shall file with the City the bonds and certificates of insurance specified in said Standard Contractual Requirements.

This Contract shall not be assigned without the written permission of the City Council.

IN WITNESS WHEREOF, the parties hereto have executed this instrument the day and year first above written.

ATTEST:

CITY OF BEVERLY HILLS,
A municipal corporation

BYRON POPE, City Clerk

Lili Bosse, Mayor

APPROVED AS TO CONTENT:

CONTRACTOR:

MAHDI ALUZRI, City Manager

SHARON L'HEUREUX DRESSEL, Interim Risk Manager

SHANA E. EPSTEIN, Director
Of Public Works

APPROVED AS TO FORM:

FUNDS AVAILABLE:

LAURENCE S. WIENER, City Attorney

DON RHOADS, Director of Administrative Services/Chief
Financial Officer

EXHIBIT "C"

EXHIBIT D

PERFORMANCE BOND

(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum **xxxxxxxxx Dollars (\$xxxxxxx.00)** lawful money of the United States of America, (said sum being equal to 100% of the estimated amount payable by the terms of the hereinafter described Contract) for the payment of which, well and truly to be made, we hereby bind ourselves, and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal has been awarded a Contract for the following described work of improvement and is required by Obligee to give this bond in connection with the execution of the written Contract therefor:

NOW, THEREFORE, if Principal shall well and truly do and perform each and all of the covenants, conditions, and agreements of said Contract on the Principal's part to be done and performed, and any and all alterations thereof made as therein provided, at the time and in the manner therein specified, and shall indemnify and save harmless the Obligee, its officers, agents, and employees, as therein stipulated, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

No extension of time granted to the Principal and no change or alteration in any of the terms of the Contract or the Contract documents or the work to be performed thereunder, whether made after notice or not, shall release or otherwise affect the obligation of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

In the event suit is brought upon this bond by the Obligee and judgment is recovered by the Obligee, court costs, including reasonable attorney's fees, shall be an additional obligation of this bond for which Principal and Surety shall be liable.

Signed and sealed the _____ day of _____, 20____.

PRINCIPAL

SURETY

APPROVED AS TO FORM:

City Attorney

By: _____

_____ 20____.

NOTE TO SURETY COMPANY: The following form of acknowledgement should be used. If any other form of acknowledgement is used, there must be submitted a certified copy of unrevoked resolution of authority for the attorney-in-fact.

**ATTACH APPROPRIATE JURAT
EXHIBIT "D"**

EXHIBIT E

CONTRACTOR'S PAYMENT BOND

(Public Contract)

KNOW ALL MEN BY THESE PRESENTS: That

as Principal (herein called "Principal") and

as Surety (herein called "Surety") are held and firmly bound unto the CITY OF BEVERLY HILLS, a municipal corporation of the State of California (herein called "Obligee"), in just and full sum of **XXXXXXX Dollars (\$XXXXXXX)**, lawful money of the United States of America, (said sum being equal to 100% of the estimated amount payable by the terms hereinafter described Contract) for the payment of which, well and truly to be made, we hereby bind ourselves, and our, and each of our, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That

WHEREAS, Principal has been awarded a Contract for the following described work of improvement and is required by Obligee to give this bond in connection with the execution of the written Contract therefor:

NOW, THEREFORE, if Principal or his subcontractors shall fail to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, the surety will pay for the same, in an amount not exceeding the sum specified above, and also in case suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall insure to the benefit of any and all persons entitled to file claims under the Civil Code so as to give a right of action to them or their assigns in any suit brought upon the bond.

No extension of time granted to the Principal and no change or alteration in any of the terms of the Contract or the Contract documents or the work to be performed thereunder, whether made after notice or not, shall release or otherwise affect the obligation of the Surety hereunder, and the Surety waives notice of any such extension, change, or alteration. The Surety, by the execution of this bond, represents and warrants that this bond has also been duly executed by the Principal with proper authority, and the Surety hereby waives any defense which it might have by reason of any failure of the Principal to execute or properly execute this bond.

Signed and sealed the _____ day of _____, 20____.

PRINCIPAL

APPROVED AS TO FORM:
City Attorney

By: _____

20

ATTACH APPROPRIATE JURAT

EXHIBIT "E"

EXHIBIT F

CERTIFICATE OF INSURANCE
(PUBLIC LIABILITY)

This is to certify that the following endorsement is part of the policy(ies) described below:

Named Insured (Contractor)

Companies Affording Coverage

A.

Address

B.

C.

Policy Number	Company A,B,C	Coverage	Expiration Date	B.I.	Limits P.D.	Aggregate
		<input type="checkbox"/> Automobile Liability				
		<input type="checkbox"/> General Liability				
		<input type="checkbox"/> Products/Completed Operations				
		<input type="checkbox"/> Blanket Contractual				
		<input type="checkbox"/> Contractor's Protective				
		<input type="checkbox"/> Personal injury				
		<input type="checkbox"/> Other				
		<input type="checkbox"/> Excess Liability				
		<input type="checkbox"/> Workers' Compensation				

It is hereby understood and agreed that the City of Beverly Hills, its City Council and each member thereof and every officer and employee of the City shall be named as a joint and several assureds with respect to claims arising out of the following project:

It is further agreed that the following indemnity agreement between the City of Beverly Hills and the named insured is covered under the policy: Contractor agrees to indemnify, hold harmless and defend City, its City Council and each member thereof and every officer and employee of City from any and all liability or financial loss resulting from any suits, claims, losses or actions brought against and from all cost and expenses of litigation brought against City, its City Council and each member thereof and any officer or employee of City which results directly or indirectly from the wrongful or negligent actions of contractor's officers, employees, agents, or others employed by contractor while engaged by contractor in the (performance of this agreement) construction of this project.

It is further agreed that the inclusion of more than one assured shall not operate to increase the limit of the company's liability and that insurer waives any right on contribution with insurance which may be available to City of Beverly Hills.

In the event of cancellation or material change in the above coverage, the company will give 45 days' written notice of cancellation or material change to the certificate holder.

Except to certify that the policy(ies) described above have the above endorsement attached, this certificate or verification of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, condition of any contract or other document with respect to which this certification or verification of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

DATE _____

BY _____

AUTHORIZED INSURANCE
REPRESENTATIVE

AGENCY _____

TITLE _____

ADDRESS _____

EXHIBIT "F"

REHABILITATION OF WELLS TECHNICAL SPECIFICATIONS

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Identification and summary description of the Project, the Work, location, Owner-furnished products, activities by others, coordination, and early occupancy by Owner.
- B. Related section:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the Contractor's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of Contractor's Work.
 - 3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the Contractor to see that the completed Work complies accurately with the Contract Documents.
 - a. Section 11313I - Submersible Vertical Turbine Pumps.

1.02 THE WORK

- A. The Work consists of rehabilitation of three municipal supply wells, mechanical and electrical installation of an owner supplied submersible pump and column pipe, and reconnection of the well pump to existing piping. All the work specified in the bid proposal and these technical provisions shall be done in accordance with the provisions of the latest edition of the District's Standards, California Well Standards and the Standard Specifications for Public Works Construction ("Green Book"), unless superseded by these specifications, and all amendments thereto, adopted by the Joint Cooperative Committee of Southern California Chapter, American Public Works Association and Southern California District, Associated General Contractors of California; hereinafter referred to as the "Standard Specifications".
- B. The wells will be rehabilitated by chemical treatment and redevelopment. The wells are located in the City of Beverly Hills near Santa Monica Blvd and Palm Dr., Santa Monica Blvd, and Carmelita Ave., and Burton Way and Foothill Road. Treatment, redevelopment, and pump installation will generally include, but not be limited to, the following:
 - 1. Move equipment on (and off) the site.
 - 2. Remove permanent pump.
 - 3. Air-lifting or suction-bailing of fill from the bottom of the well.
 - 4. Conduct color video surveys as necessary to evaluate progress of chemical treatment.
 - 5. Provide two 21,000 gallon storage tanks.
 - 6. Provide phosphoric acid and acid enhancer, and introduce into the well by double swab to insure acid flows through the well perforations and into the filter pack and formation. Agitate the well to distribute the chemical. Collect water samples from the well to check pH. Replenish acid as necessary to maintain pH of 4.0 or lower for the first 6 hours of treatment. Provide a minimum of 12-hours and a maximum of 36-hours of contact time.
 - 7. Remove the acid by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
 - 8. Provide 5,000-gallon vacuum trucks to haul fluids not meeting discharge limits from the site for proper disposal.

9. Provide sodium hypochlorite and chlorine enhancer and introduce into the well by double swab to force chlorine through the well perforations. Agitate the well to disperse the chemical. Provide a minimum of 12-hours and a maximum of 24-hours of contact time.
10. Remove the chlorine by air lifting through a perforated double swab, contain discharge water, test and neutralize as necessary prior to discharge to the local drain.
11. Conduct mechanical redevelopment by swabbing and air lifting.
12. Conduct pumping development by the pump and surge method.
13. Conduct step drawdown and constant rate pumping tests.
14. Conduct spinner survey and depth-specific water sampling.
15. Conduct color video survey and well disinfection.
16. Installation of the owner provided permanent pump, motor, column pipe, and well head connections; provide startup test.
17. Conduct final well disinfection with the permanent pump in place.
18. Complete site cleanup and repair of damaged facilities as necessary.

- C. Submission of a bid by the bidder shall constitute acknowledgment that, if awarded the contract, he has relied and is relying on his own examination of (a) the site of the work, (b) access to the site, (c) the conditions under which the work is to be performed, and (d) all other data and matters requisite to the fulfillment of the Work and on his knowledge of existing facilities on and in the vicinity of the site of the work to be constructed under the contract.
- D. Except as specifically noted otherwise, provide and pay for:
 1. Insurance and bonds.
 2. Labor, materials, and equipment.
 3. Tools, equipment, and machinery required for construction.
 4. Utilities required for construction.
 5. Temporary facilities including sheeting and shoring.
 6. Traffic control and dust control measures.
 7. Other facilities and services necessary for proper execution and completion of the Work.
- E. Secure and pay for all permits including OSHA excavation permits, Department of Transportation permits, government fees, and licenses.
- F. Comply with codes, ordinances, regulations, orders, and other legal requirements of public authorities having bearing on the performance of the Work.

1.03 LOCATION OF PROJECT

- A. The Work is located near the intersection of Santa Monica Blvd. and Canon Dr.

1.04 ACTIVITIES BY OTHERS

- A. Owner, utilities, and others may perform activities within Project area while the Work is in progress.
 1. Schedule the Work with Owner, utilities, and others to minimize mutual interference.
- B. Cooperate with others to minimize interference and delays.
 1. When cooperation fails, submit recommendations and perform Work in coordination with work of others.

1.05 COORDINATION OF WORK

- A. Maintain overall coordination of the Work.

- B. Obtain construction schedules from each subcontractor, and require each subcontractor to maintain schedules and coordinate modifications.

1.06 EARLY OCCUPANCY OF PORTIONS OF WORK

- A. Certificates of Substantial Completion will be executed for each designated portion of Work prior to Owner occupancy.
 - 1. Such certificate of Substantial Completion will describe the portion of the Work to be occupied by Owner, items that may be incomplete or defective, date of occupancy by Owner, and other information required by Owner and Contractor.
- B. After Owner occupancy, allow access for Owner's personnel, access for others authorized by Owner, and Owner operation of equipment and systems.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

TABLE 1
WELL No. 2 CASING SCHEDULE

Item	Depth Interval¹ (feet)	Size	Type
Conductor Casing	0-60	24-inch	Mild Steel
Pilot Hole	60-836	17.5-inch	- - -
Final Ream	60-760	22-inch	- - -
Well Casing ²	0-399	12.25-inch x 5/16-inch	304L Stainless Steel Blank
	399-426	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	426-466	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	466-518	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	518-566	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	566-608	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	608-721	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	721-730	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	730-740	12.25-inch x 1/4-inch	304L Stainless Steel End Cap
Cement Seal	0-362		Sand-Cement Grout
Filter Pack	362-760		SRI 6 x 8
Sounding Tube	0-393	2-inch	304L Stainless Steel
Gravel Feed Tube	0-378	3-inch	304L Stainless Steel
Air Vent Tube	0-11	2-inch	304L Stainless Steel

Notes: 1. Depth below ground surface. Top of well casing/flange in vault is 9 feet below ground surface.
2. Screen interval depths based on As-built drawing and video survey 12-06-17.

TABLE 2
WELL No. 4 CASING SCHEDULE

Item	Depth Interval¹ (feet)	Size	Type
Conductor Casing	0-60	24-inch	Mild Steel
Pilot Hole	60-685	17.5-inch	- - -
Final Ream	60-665	22-inch	- - -
Well Casing ²	0-391	12.25-inch x 5/16-inch	304L Stainless Steel Blank
	391-427	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	427-465	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	465-495	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	495-521	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	521-550	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	550-566	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	566-588	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	588-613	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	613-630	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	630-640	12.25-inch x 1/4-inch	304L Stainless Steel End Cap
Cement Seal	0-343		Sand-Cement Grout
Filter Pack	343-665		SRI 6 x 8
Sounding Tube	0-387	2-inch	304L Stainless Steel
Gravel Feed Tube	0-375	3-inch	304L Stainless Steel
Air Vent Tube	0-11	2-inch	304L Stainless Steel

Notes: 1. Depth below ground surface. Top of well casing/flange in vault is 9 feet below ground surface.
2. Screen interval depths based on As-built drawing.

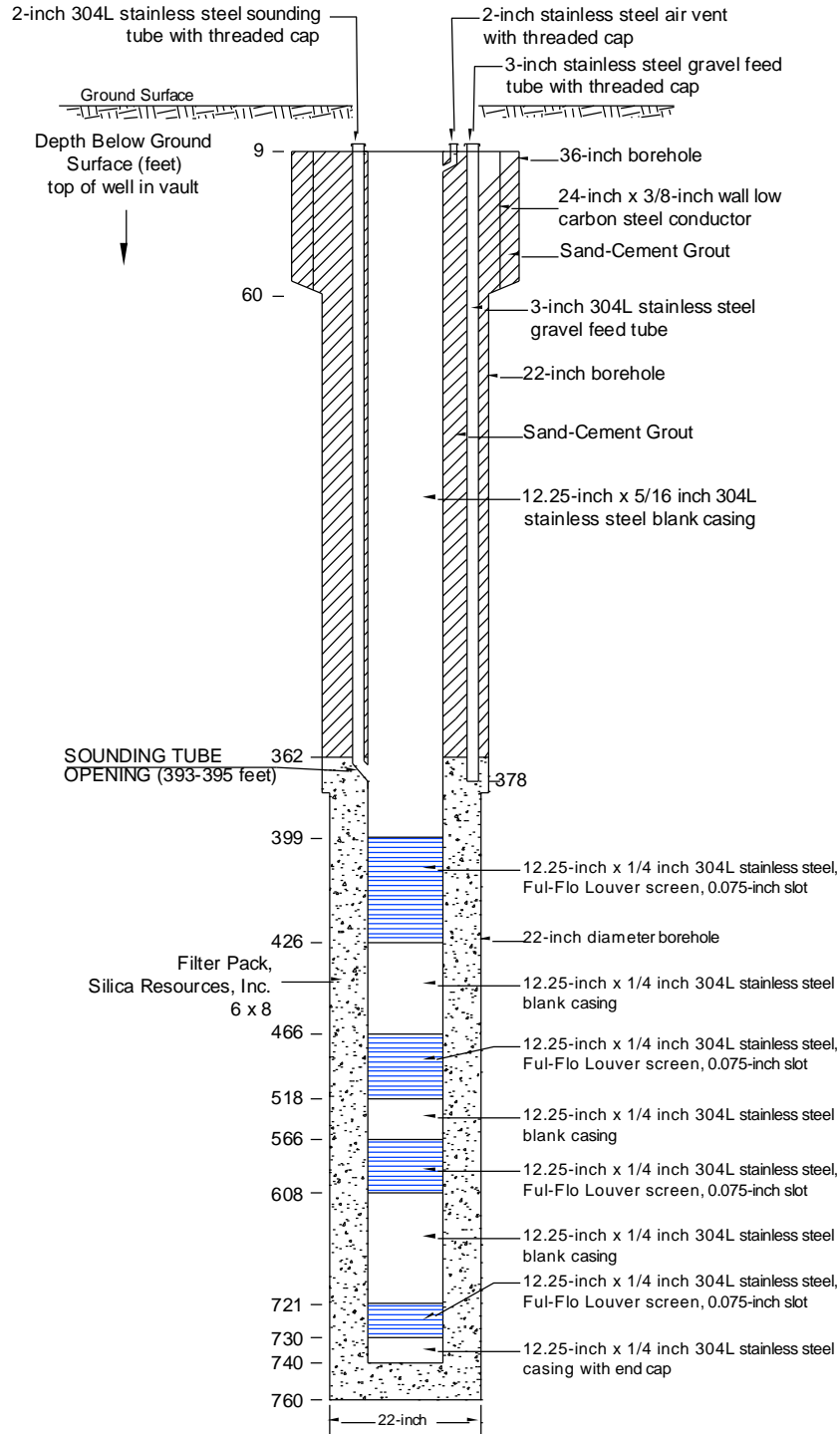
TABLE 3
WELL No. 6 CASING SCHEDULE

Item	Depth Interval¹ (feet)	Size	Type
Conductor Casing	0-53	24 x 5/16-inch	Mild Steel
Pilot Hole	60-740	17.5-inch	- - -
Final Ream	60-680	22-inch	- - -
Well Casing ²	0-385	12.25-inch x 5/16-inch	304L Stainless Steel Blank
	385-440	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	440-485	12.25-inch x 1/4-inch	304L Stainless Steel Blank
	485-650	12.25-inch x 1/4-inch	304L Stainless Steel Ful-Flo Louvers
	650-670	12.25-inch x 1/4-inch	304L Stainless Steel End Cap
Cement Seal	0-345		Sand-Cement Grout
Filter Pack	345-670		SRI 6 x 12
Sounding Tube	0-?	2-inch	304L Stainless Steel
Gravel Feed Tube	0-?	3-inch	304L Stainless Steel
Air Vent Tube	0-?	2-inch	304L Stainless Steel

Notes: 1. Depth below ground surface. Top of well casing/flange in vault is 9 feet below ground surface.
2. Screen interval depths based on As-built drawing.

As-Built Well Completion Schematic

Beverly Hills Well No. 2

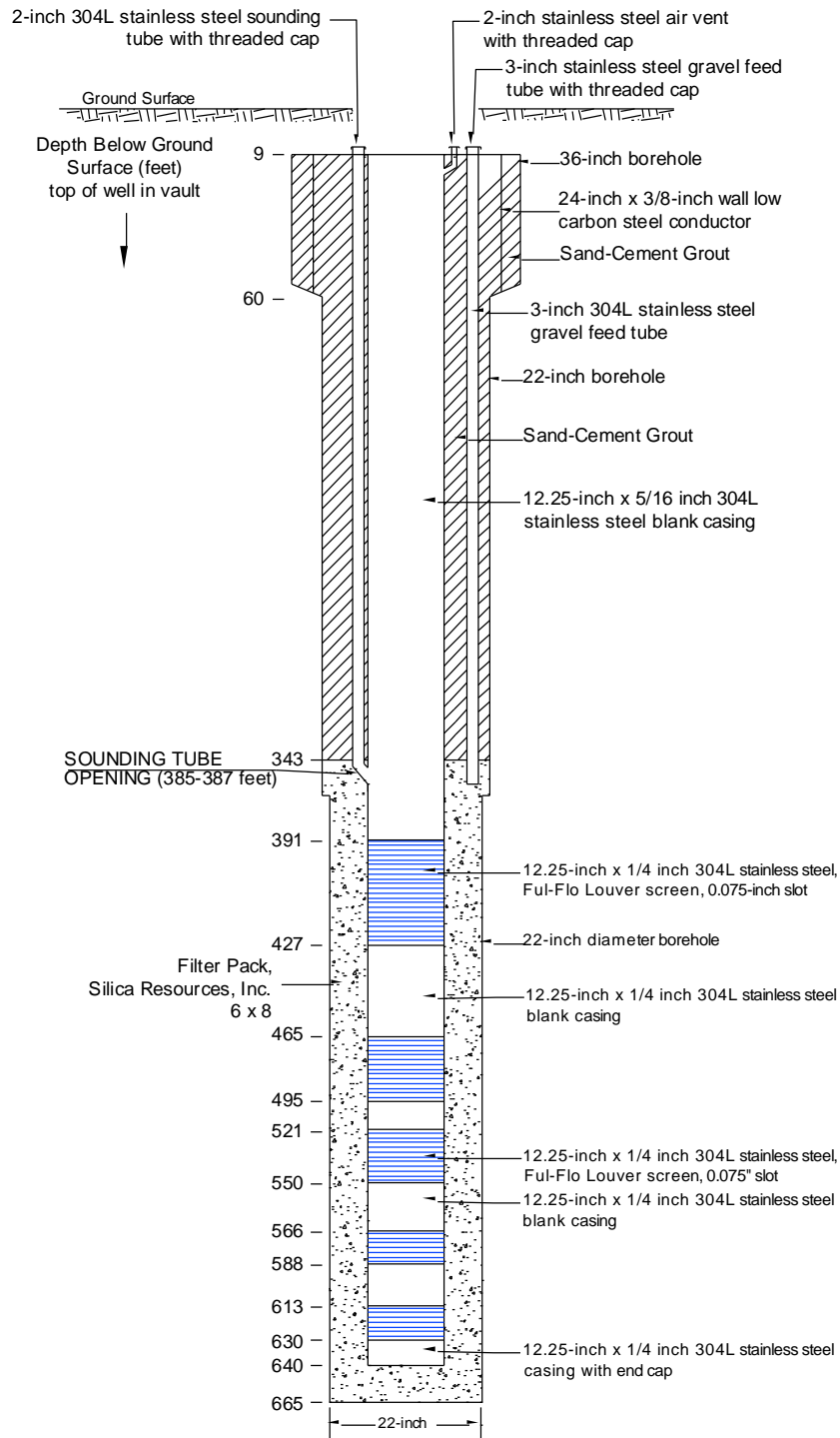


Well Contractor: Bakersfield Well and Pump Co.

Date Completed: October 1999

As-Built Well Completion Schematic

Beverly Hills Well No. 4

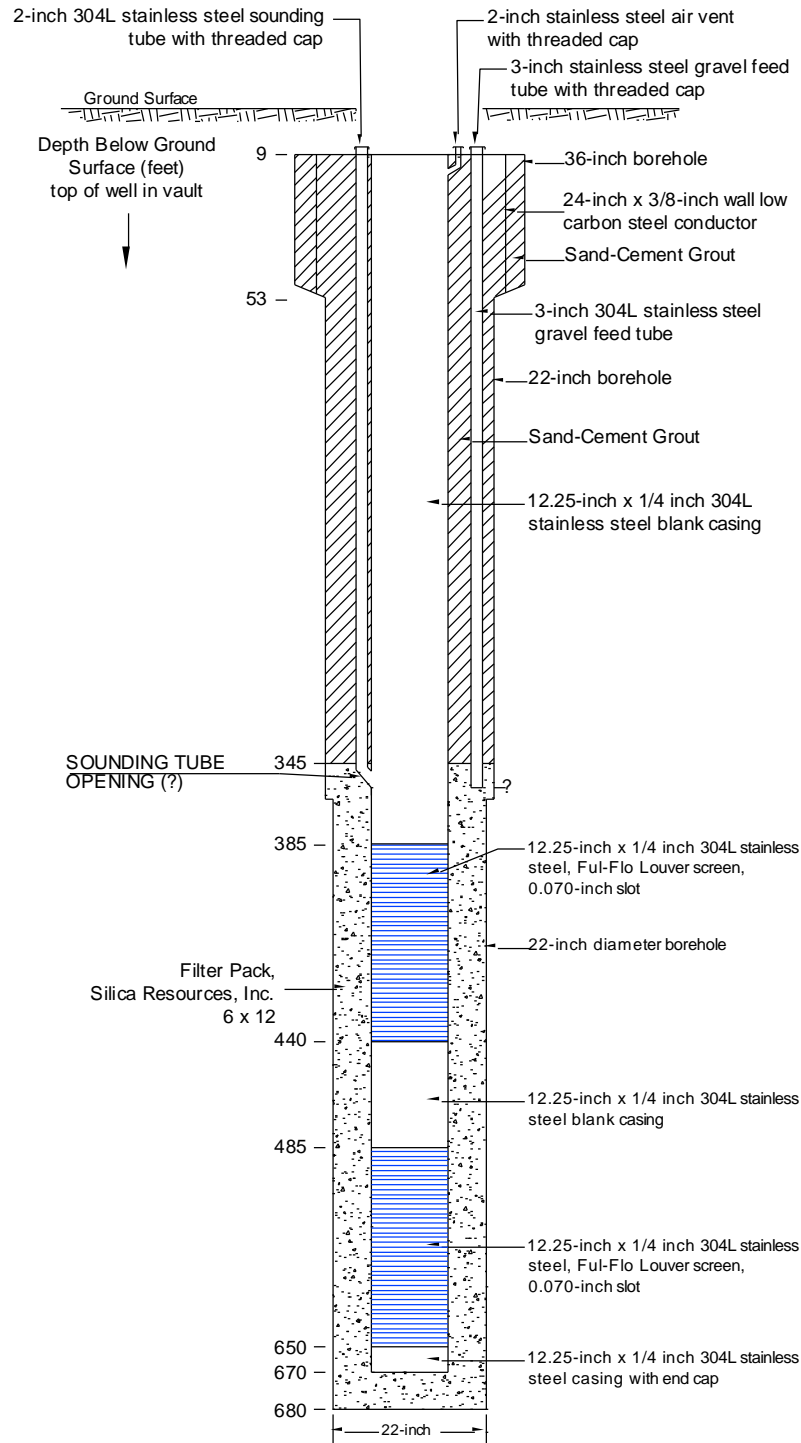


Well Contractor: Bakersfield Well and Pump Co.

Date Completed: December 1999

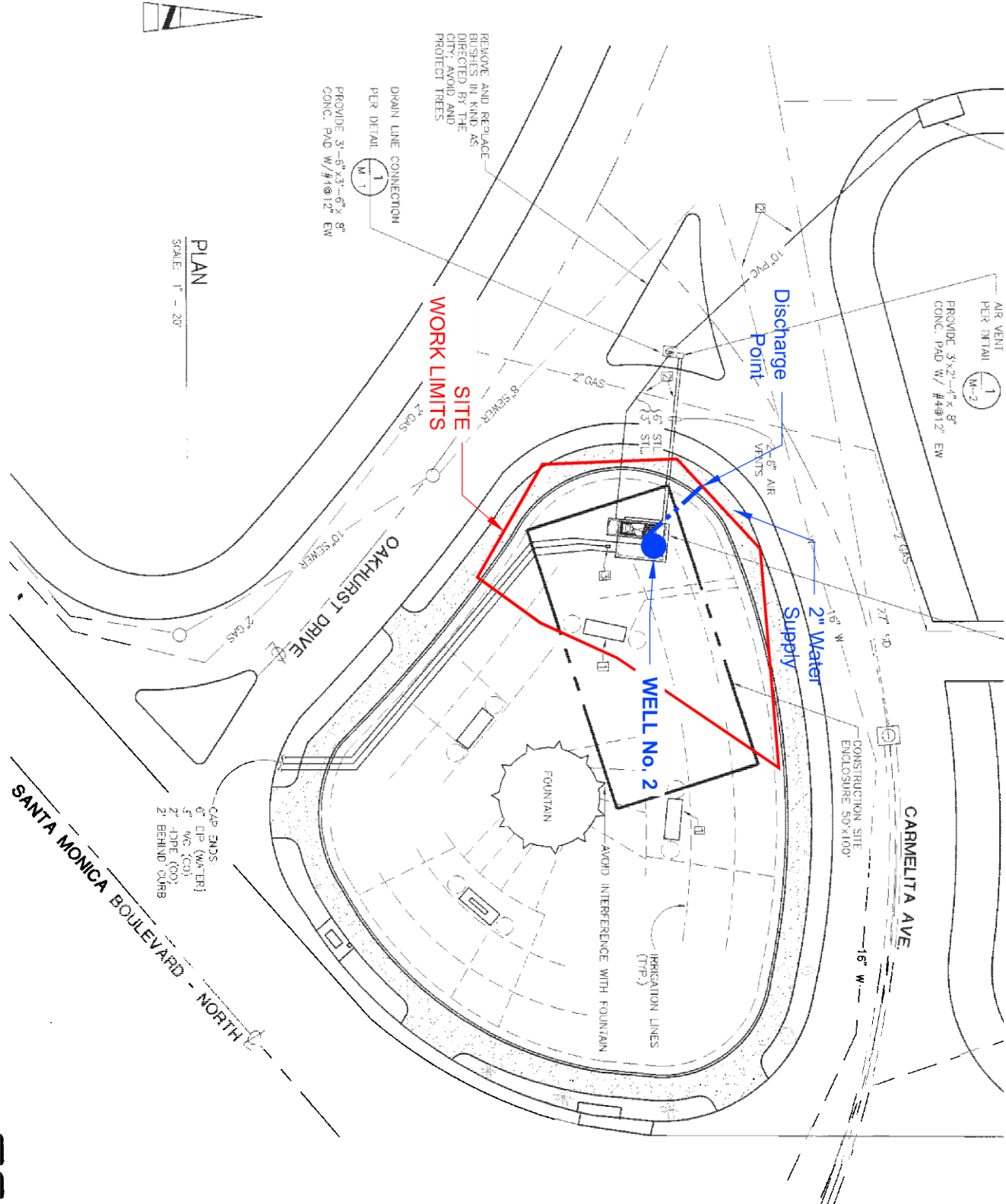
As-Built Well Completion Schematic

Beverly Hills Well No. 6

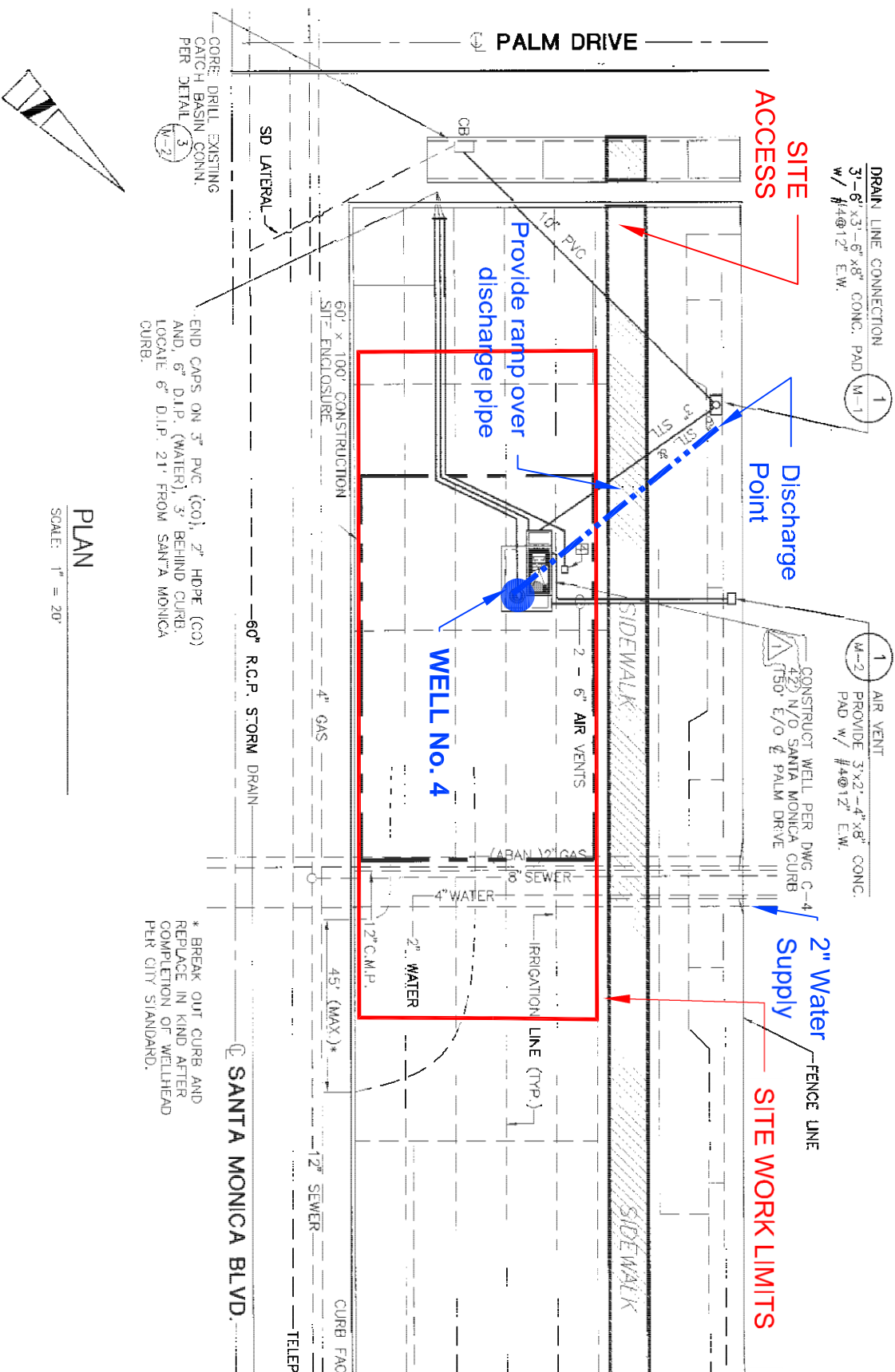


Well Contractor: Layne-Western Co., McCalla Div.

Date Completed: September 1999



PLAN
SCALE: 1" = 20'



SECTION 01146

CONSTRUCTION NOISE ABATEMENT

PART 1 - GENERAL

A. Scope

The Contractor is advised that the rehabilitation of Well Nos. 2, 4 and 6 will take place approximately 30 to 100 feet from residential properties. It shall be the Contractor's responsibility to comply with the following local noise level restrictions as defined in the City's municipal ordinance.

8 a.m. to 6 p.m.	Exceed ambient noise level at the property line by 5 dBa
6 p.m. to 8 a.m.	No Work Allowed

The above noise levels are those measured from any parcel other than the property from which the noise is being generated. No work after 6:00 p.m. will be allowed.

B. Payment

No separate payment for noise abatement will be made. Payment for noise abatement shall be included in the other unit bid items.

PART 2 - EXECUTION

The Contractor shall take all steps necessary to keep within the listed noise level requirements as defined in the City's municipal code.

END OF SECTION

MOBILIZATION, DEMOBILIZATION, AND SITE CLEAN-UP

PART 1 - GENERAL

A. Description

This section includes the mobilization and demobilization of equipment, material and personnel for each well site.

B. Related Work Specified Elsewhere

1. Noise Ordinance: See Special Provisions.
2. Protection of Site: See Special Provisions.

C. Measurement and Payment

1. Payment for mobilization shall be made at the lump sum price bid.
2. Payment for demobilization and site clean-up shall be made at the lump sum price bid. Payment will not be made until the site restoration has been approved by the Owner or the Owner's Representative.

PART 2 - EXECUTION

A. Mobilization

Mobilization shall include the purchase of Contract bonds and insurances; transportation of personnel, equipment, and operation supplies to and from the site; establishment of portable sanitary facilities, and other necessary facilities at the site; and other preparatory work at the site, as well as all work at the site necessary to conduct well rehabilitation, chemical treatment, development, and testing operations.

Mobilization shall include making and submitting a pre-mobilization video of the project site thoroughly depicting the as-is conditions of the site and facilities, including: access gates, driveway, perimeter wall/fence, structures, piping, electrical panels, etc.

Mobilization shall include moving associated well head improvements to provide access for well treatment, redevelopment and test pumping equipment. Mobilization includes providing one small, low-profile tank, and two large (21,000 gallon) storage tanks for containment of displacement fluids and for use as settling tanks during development. Contractor will be responsible for protecting and repairing all surfaces, including pavement and curbs, and landscaping.

Other preparatory work shall include traffic abatement barricades, signs, ramps, as well as all necessary soundproofing and proper equipment mufflers. No noise abatement barriers are anticipated for this project.

The mobilization phase will be deemed complete when all items necessary to conduct field operations are on site and operable. The Contractor's Field Superintendent will provide 48-hours notification to the Owner's Representative prior to the start of removal of fill from the bottom of the well. The Contractor's Field Superintendent will notify the Owner's Representative when the mobilization phase, in his terms, is complete. No

stand-by time will be allowed during the mobilization phase of the Contract.

B. Demobilization

Demobilization shall include installation of the permanent pump and operation of the pump as observed by the Owner's Representative. Demobilization includes removal of all equipment, materials, and temporary facilities installed during mobilization, well treatment and redevelopment phases of the work. Demobilization will also include restoration of the site to its original or better condition and will include those items specified in the initial site report.

C. Site Clean-up

1. Developed Site

Demobilization and site restoration from a developed site will include, but not be limited to repair of the paved and unpaved ground surface disturbed during mobilization and rehabilitation operations; repair of the concrete pump pedestal that occurs during operations; reconstruction of fences, walls, berms, drains, or other surface features; sweeping of paved areas; repair or replacement of damaged asphalt pavement or concrete curb; and replacement of bushes, trees, or ground cover, which were present prior to commencement of work.

END OF SECTION

SECTION 10020

BRUSHING

PART 1 - GENERAL

A. Scope

The Contractor will clean the entire length of the well casing below the static water level (approximately 120 feet) by brushing after chlorine is introduced into the well. The Contractor is advised that 12.25-inch diameter casing extends from the top of casing (9 feet below ground level) to the bottom of the sand cellar at depth 640 to 740 feet. Approximately 500-650 feet of casing will be brushed.

B. Payment

Payment shall be made at the hourly price bid for time spent brushing the well. No payment will be made for setting up equipment, assembling the brush, changing the brush or lowering the brush into the well. No payment shall be made to replace the brush to insure the proper brush diameter and that the brush fits tightly in the well.

PART 2 - EXECUTION

The Contractor shall introduce and disperse 10 gallons of sodium hypochlorite (30% active chlorine) throughout the well below the static water level. The Contractor then shall provide a new, heavy duty nylon-brush that fit tightly inside the 12.25-inch casing. The nylon-brush will be 10-feet long with a central section of pipe approximately 6 to 8-inches smaller in diameter than the well casing. The brush will be fitted with a swivel at the top to improve cleaning action. Brushing will be performed by using short strokes (1 to 2 feet) with a cable tool rig or pump rig. Brushing will continue for approximately 5 minutes for each 10-foot long interval of casing or screen for a total of 4 hours. Brushing should be accomplished with experienced personnel and care should be taken to not damage the well. Any fluids and debris removed from the well will be temporarily contained to allow the field geologist to observe and sample the material. Discharge on the site will not be allowed to reach the storm drain or otherwise cause a nuisance or unacceptable discharge.

END OF SECTION

SECTION 10025

REMOVE FILL

PART 1 - GENERAL

A. Scope

Following brushing, the Contractor shall air lift all fill material collected at the bottom of the well and purge the well. Approximately 30 feet of fill should be anticipated.

B. Payment

Payment shall be made at the lump sum price bid.

PART 2 - EXECUTION

The Contractor shall remove the fill by air-lifting and purge the well for 6 to 8 hours. Use of a large diameter, heavy scow will not be permitted. Fluids and debris will be temporarily contained to allow the field geologist to observe and sample the material. Fluid and debris discharged on site shall not be allowed to reach the drain inlet or otherwise cause a nuisance or unacceptable discharge. Clear fluid meeting NPDES discharge limits and free of chlorine will be discharged to the onsite drain inlet upon approval of the Owner's Representative.

END OF SECTION

SECTION 10030

ACID CHEMICAL WELL TREATMENT

PART 1 - GENERAL

A. Description

This work will consist of one acid treatment, introducing NSF approved food grade 75% phosphoric acid NW-120 (H₃PO₄) and acid enhancer NW-310 into the well adjacent to the casing and screen intervals by pumping through a drop pipe supporting a double swab. Swabbing action will dislodge scale and bacterial fouling and force the chemical through the well screen into the filter pack and formation. Following contact time, the acid will be removed by double swab and airlifting.

B. Related Work Specified Elsewhere

1. Solids and Liquid Waste Disposal, NPDES Permit (Section 01410)
2. Safety Plan (Section 01329) submitted one week prior to start of acid treatment.

C. Measurement and Payment

1. Payment for chemical well treatment shall be made at the lump sum price bid.
2. Work shall include chemical dispersal by swabbing and removal by air-lifting.

PART 2 - MATERIALS

- A. Mix NSF approved, food grade, 75 percent NW-120 liquid phosphoric acid with acid enhancer NW-310. The volume of chemical required for each well is:

Well No.	NW-120 Phosphoric Acid	NW-310 Biodispersant	Potable Water
2	240 gallons	140 gallons	1,500 gallons
4	200 gallons	120 gallons	1,200 gallons
6	200 gallons	120 gallons	1,200 gallons
total	640 gallons	380 gallons	

Total chemical required for treatment of the all three wells is 640 gallons of phosphoric acid and 380 gallons of NW-310.

PART 3 - EXECUTION

- A. Notify the City 48 hours prior to the start of acid treatment. All chemicals shall be stored on the contractor's equipment or in secondary containment vessels.
- B. Contractor shall maintain a record of chemical volumes, mixing, chemical concentrations, and pH testing/monitoring in the well. A copy of the field record shall be submitted to the City.
- C. Beginning above the top screen, introduce each batch into the well through a drop pipe supporting a 10-foot long perforated double swab tool with rubber swabs measuring approximately 12.3-inch diameter. After the chemical is

placed in the drop pipe, an appropriate volume of potable water shall be used to flush the pipe and introduce the chemical in to the well screen. After the chemical is displaced into the well screen, each interval shall be swabbed for a minimum of 20 minutes to evenly distribute the solution through the well column. Lower the swab to the next interval (not to exceed 20 feet) and place the next small batch. Following placement of the final batch, swab each interval from bottom to top. Allow the solution to remain in the well for 12 hours.

- D. Monitor the pH of the downhole solution and maintain at 3.0 or lower during the entire treatment process.
- E. Approximately 12 hours after placing the acid, the well should be thoroughly agitated by swabbing for an additional 4 to 6 hours.
- F. After the minimum contact time (12 hours) and agitation, at the direction of the geologist, the chemical should be removed from the well by double-swab and air-lifting. The perforated double swab shall not exceed 10-feet in length between two tight-fitting rubber swabs. The discharge fluids must be contained, and the chemical neutralized before disposal. At no time will the chemicals be neutralized in the well. Swabbing and air-lifting will be directed by the geologist and is estimated to require 40 to 50 hours per well. Air-lifting equipment shall be capable of a minimum of 250 gpm. Air lift the well until the pH has returned to normal (7.0 or greater), visible turbidity is zero, and the well discharge is clear. Collect and neutralize the evacuated fluid with soda ash above ground, and discharge according to the owner's NPDES Permit (copy attached)

END OF SECTION

SECTION 10035

CHLORINE CHEMICAL WELL TREATMENT

PART 1 - GENERAL

A. Description

Following acid chemical treatment, the well should be treated using a pH-adjusted chlorination treatment of 350 ppm chlorine dose in a pH range of 6.5 to 7.0. The volume of the disinfection solution should be equivalent to 3 times the standing well volume of 2,000 to 2,400 gallons, or 6,000 to 7,200 gallons. This work will consist of introducing sodium hypochlorite and NW-410 chlorine enhancer into the well adjacent to the blank casing and screen intervals through a double swab. Swabbing will force the chemical through the well screen into the filter pack and formation.

B. Related Work Specified Elsewhere

3. Solids and Liquid Waste Disposal per NPDES permit (Section 01410)
4. Safety Plan (Section 01329) submitted one week prior to start of acid treatment.

C. Measurement and Payment

3. Payment for chlorine chemical well treatment shall be made at the lump sum price bid.
4. Work shall include chemical dispersal by jetting, double swabbing and removal by air-lifting.

PART 2 MATERIALS

- A. Mix and introduce sodium hypochlorite (12 percent available chlorine) and NW-410 chlorine enhancer into the well at the following doses:

Well No.	Sodium Hypochlorite	NW-410 Chlorine Enhancer	Potable Water
2	32 gallons	68 gallons	7,200 gallons
4	27 gallons	70 gallons	6,200 gallons
6	28 gallons	50 gallons	6,200 gallons
total	87 gallons	188 gallons	

A total of 87 gallons of 12 percent sodium hypochlorite and 188 gallons of NW-410 shall be used.

PART 3 - EXECUTION

- G. Notify the City 48 hours prior to the start of chlorine treatment. All chemicals shall be stored on the contractor's equipment or in secondary containment vessels.
- H. Contractor shall maintain a record of chemical volumes, mixing, chemical concentrations, and chlorine testing/monitoring in the well. A copy of the field record shall be submitted to the City.

- C. The disinfection solution should be blended above ground as follows: fill mixing tank with potable water, add NW-410 and blend thoroughly, check pH (5.5 to 6.0), add liquid chlorine and mix, and verify pH and chlorine concentration. The chemical mixture shall be introduced into the well through a 10-foot long double swab suspended on a drop pipe, beginning at the top of the well. Disperse the disinfection solution evenly throughout the well with the double swab and lightly agitate throughout the well column. Following agitation, check the chlorine residual within the well to ensure sufficient strength is present. If the chlorine residual has diminished below 150 ppm, add additional sodium hypochlorite to raise it to that level.
- B. A small volume of chlorine solution will be placed down the sounding tube and flushed with potable water. The disinfecting agent shall be left in the well overnight (minimum 12 hours).
- E. After the minimum contact time (12 hours) and at the direction of the geologist, the chemical should be removed from the well by double-swab and air-lifting. The perforated double swab shall not exceed 10-feet in length between two tight-fitting rubber swabs (12.3-inch diameter). Begin evacuation of the well by swabbing and airlifting from the bottom, working upwards, until a minor residual (<50 ppm) is present and all debris has been evacuated from the well, as identified by visible turbidity. Swabbing and airlifting shall continue for 40 to 60 hours for each well. The discharge shall be contained in settling tanks to allow the removal of sediment (settleable and suspended) and dechlorination with sodium thiosulfate, prior to discharge in accordance with the owner's NPDES Permit. At no time will the chemicals be neutralized in the well. Swabbing and air-lifting will be directed by the geologist and is estimated to require 12 hours to remove the chlorine. Air-lifting equipment shall be capable of a minimum of 250 gpm.

END OF SECTION

SECTION 10400

WELL DEVELOPMENT

PART 1 - GENERAL

A. Description

This section covers the redevelopment of the well using double swab and air-lift, and a test pump.

B. Related Work Specified Elsewhere

1. NPDES Permit – Special Provisions and Section 01410.

C. Measurement and Payment

1. Payment for well development will be made at the unit price bid per hour.
2. Payment for containing and treating well development discharge water for proper disposal to the local storm drain system shall be included in the unit price bid per hour for well development. The contractor shall comply with the owner's NPDES discharge permit.
3. Payment for temporary discharge piping will be included in the unit price bid per hour of well development.
4. The time required for well development will be recorded by the hour with 15-minute intervals as the smallest unit of recorded time. The time recorded for payment shall commence when the equipment installed in the well is placed in operation and shall end when development, pumping or testing are stopped at the direction of the Owner's Representative. No payment will be made for running equipment into or out of the well.
5. No payment will be made for delays resulting from (1) equipment stuck in the hole; (2) equipment breakdown; (3) arranging major equipment, pumping or testing apparatus; or (4) failure to conduct the operations in a diligent and workmanlike manner by which the desired results could ordinarily be expected.

PART 2 - MATERIALS

B. Swab

Swabbing of the well shall be done with a close fitting double swab whose outside diameter of the surge blocks shall be approximately 12.3-inches. The perforated section between the surge blocks shall measure no less than 10 feet and no more than 15 feet in length. Individual perforations shall be small and distributed evenly throughout the circumference and length of the swab tool. Total open area of the perforations shall not exceed the inside cross-sectional area of the pipe.

B. Eductor Pipe

The eductor pipe used to support the double swab shall have an inside diameter that allows an air lift pumping rate of 300 gpm.

C. Drawworks Line Speed

The drawworks shall move the double swab and eductor pipe at an up and down line speed of approximately 50 to 100 feet per minute.

D. Temporary Water Containment

The Contractor shall provide adequate containment of all discharge waters to permit settlement of suspended solids to a level acceptable by the owner's representative for discharge to the local storm drain system or approved discharge point.

E. Discharge Line

The Contractor shall provide the temporary discharge piping required to convey well development water to the appropriate disposal area.

F. Test Pump and Flow Meter

The pump furnished shall be of the deep well turbine type capable of pumping up to 1,000 gallons per minute (gpm) from a depth of 340 feet. The test pump diameter shall accommodate installation of a 2-inch diameter access pipe (spinner and depth-specific sampling tools) extending below the pump suction. A satisfactory throttling device shall be provided downstream of the flow meter and manometer so that the discharge can be reduced to 300 gpm. An in-line flow meter with 6-digit straight reading totalizer and rate of flow indicator dial, which reads in gallons per minute, will be installed in the discharge pipe.

F. Test Engine

The test engine shall perform consistently and continuously without erratic or variable rpm. The test engine shall be equipped with mufflers and additional sound proofing at the engine to meet the noise reduction requirements as required by the City's municipal code. The test engine shall not expel oil, fuel or hydraulic fluids from the blow-by or exhaust.

PART 3 - EXECUTION

A. Record Keeping

1. The Contractor shall prepare a daily log documenting the start and end time of development, flow rates, field water quality parameters of discharge water (pH, temperature, electrical conductivity, turbidity, chlorine residual), and sand content.
2. A copy of the daily field log shall be submitted to the Owner at the conclusion of air lift development and after pumping development.

B. Development with Air-Lift Swab

1. The Contractor shall commence development with air-lift swab equipment within 12 hours after completion of the chlorine treatment and chlorine removal.
2. Air-lift swab development shall proceed from the top of the screen to the bottom of the screen. Swabbing shall continue for the full depth of the well.
3. The double swab shall be raised and lowered for a minimum of 20 minutes every 20 feet of screen. Simultaneously, water shall be lifted with air inside the drop pipe. After the water becomes free of sediment and there is no more movement of the gravel pack, the swab shall be lowered to the next interval.
4. The Contractor shall run clean water continuously down the gravel feed tube during the operation and add gravel as needed.
5. The Contractor shall suction bail or air-lift sediment from the bottom of the well as required.
6. It is anticipated that surging and air lifting shall continue for approximately 24 hours or until all sand and mud have been washed through screened sections of the well to the satisfaction of the Owner's Representative. Upon completion of this procedure, the well shall again be bailed or air lifted clean of all accumulated sediment to its full depth.

C. Development with Test Pump

1. Within 2 to 5 days after completion of well development using the air-lift swab, the Contractor shall commence well development by using the test pump.
2. The quantity of water being pumped from the well at commencement of development pumping shall be limited and gradually increased as the water clears. From time to time, the pump shall be stopped and the water in the pump column allowed to flow back through the pump bowls and through the screened sections of the well into the aquifers. This procedure, with increasing pumping rates, shall be repeated as development of the well continues and shall be done in a manner satisfactory to the Owner's Representative.
3. Development of the well shall be continued for approximately 24 hours or until the well produces not more than 2 parts per million of sand by volume, 15 to 20 minutes after surging at a pumping rate of 800 to 900 gpm.
4. During the development, the rate of sand production shall be measured by the Contractor using a centrifugal sand separating meter as described in the Journal of American Water Works Association, Volume 46, No. 2, February 1954. The centrifugal sand-separating meter shall be furnished by the Contractor. The results of all sand production tests shall be expressed in parts per million at 5 minute intervals and shall be provided to the Owner's Representative immediately. The final sand production test shall be conducted in the Owner's Representative's presence.
5. Clean water shall be added continuously down the gravel feed tube during development.
6. If, during the development operations, there is any indication of settlement of the gravel envelope, more gravel shall be added as needed and the quantity recorded and reported to Owner's Representative.

7. After completion of development pumping, the Contractor shall measure the depth of the well to determine the amount of sediment deposited in the bottom. If the amount of sediment is greater than 10 feet, the Contractor shall pull the pump and clean the well of all accumulated sediment and foreign material and reinstall the pump.

END OF SECTION

FLOW METER SURVEY AND DEPTH-SPECIFIC SAMPLING

PART 1 - GENERAL

A. Description

This section covers the performance of a vertical spinner flow meter survey to determine the relative production from each screen interval. The flow meter survey shall be performed during the end of the constant discharge pumping test. Depth-specific water samples shall be collected based on the results of the spinner survey.

B. Submittal

Contractor shall submit the name and qualifications of the firm retained to conduct the flow meter survey with the Bid Documents.

C. Measurement and Payment

1. Payment for the flow meter survey shall be made at the lump sum price bid and shall include the cost for pulling the pump, cleaning the well, and reinstalling the pump.
2. Payment for depth-specific water samples will be made at the unit cost bid.
3. No additional payment will be made for pump crew, pump time or idle time while the survey is being run.

PART 2 MATERIALS

- A. The spinner flowmeter equipment shall be run on a wire line and capable of both static measurements and dynamic down-well runs, to continuously measure and record vertical flow (fluid velocity) in the well. The equipment shall be equipped with a line speed indicator that is recorded on the log for each dynamic down run.

PART 3 - EXECUTION

- A. Upon completion of any required well cleaning after pumping development, the Contractor shall reinstall the pumping equipment used for well development along with 2-inch diameter access tube. The flow meter survey shall be performed during the last hours of the constant discharge pumping test.
- B. The flow meter survey shall be conducted from the base of the 2-inch access to the top of the sand cellar. The survey shall be run at a constant discharge rate that will be determined in the field by the Owner's Representative. Both static and dynamic tests shall be made from the base of the 2-inch sounding tube/temporary access tube to the bottom of the well, as directed by the Owner's Representative. Each static test shall consist of two-minute readings made at 10-foot increments. Three dynamic runs in the downward direction shall be conducted at varying line speeds selected in the field to optimize deflection on the spinner rates. The record for each test shall indicate either meter speed or percentage of total meter speed with depth. The meter used for the survey shall be calibrated within the uppermost and lowermost blank sections of the well casing.

- C. The flow meter survey shall become the property of the Owner at the time the survey is completed. The survey shall be run in the presence of the Owner's Representative. The Contractor shall provide **four (4) field copies** of the survey to the Owner's Representative immediately upon completion. The Contractor and his Subcontractor will provide an analysis of the flow data estimating relative production. Provide a profile of the relative production at minimum of 1-foot increments where zonal percentage of flow and fluid velocity can be derived over any given interval (intervals shall be determined by Owner's Representative). Provide **seven final copies** of the spinner logs and within 7-days of completion, at no additional cost. Flow meter survey measurements shall be run on digital/analog equipment. Results of the spinner survey shall be provided in the following electronic digital formats on CD/DVD: TIFF, DWG or DXF (compatible with AutoCAD) and ASCII.
- D. The Contractor shall be required to provide whatever assistance may be required to accomplish the flow meter survey.
- E. Depth-specific water samples shall be collected at depths determined by the Owner's Representative after reviewing the spinner log. The contractor shall obtain up to 2 liters of sample at each depth. The sampler shall be placed under vacuum pressure to obtain discrete samples at the specified depth. The sample equipment shall be disassembled and thoroughly cleaned prior to collecting each sample.
- F. After the flow meter survey, the Contractor shall remove all sediment from the bottom of the well and demonstrate that the well has been properly cleaned by measuring the depth of the well in the presence of the Owner's Representative.

END OF SECTION

SECTION 10410

WELL PRODUCTION AND AQUIFER TESTS

PART 1 - GENERAL

A. Description

This section covers pumping tests that include the step drawdown test with increasing discharge rate; a constant rate discharge test; and time-recovery test.

B. Measurement and Payment

1. Payment for testing will be made at the unit price bid per hour.
2. Payment for containing and treating pumping test discharge water for proper disposal to the local storm drain system or approved discharge point shall be included in the unit price bid per hour for test pumping.
3. Payment for temporary discharge piping will be included in the unit price bid for test pumping.
4. The time required for testing will be recorded at one-half hour intervals as the smallest unit of recorded time. The time recorded for payment shall commence when the equipment installed in the well is placed in operation and shall end when the operation is stopped at the direction of the Owner's Representative.
5. No payment will be made for delays resulting from (1) equipment stuck in the hole; (2) equipment breakdown; (3) arranging major drilling, pumping or testing apparatus; or (4) failure to conduct the operations in a diligent and workmanlike manner by which the desired results could ordinarily be expected.

PART 2 - MATERIALS

A. Discharge Line and Meter

The Contractor shall provide the temporary discharge piping required to convey well testing water to the appropriate discharge point as shown on the project plans. The discharge pipe shall include an in-line meter with 6-digit, straight reading totalizer, registering in units of 100 gallons with a rate of flow indicator dial which reads in gallons per minute, and is suitable for a flow range of 300 to 2000 gpm. **The flow meter shall be factory calibrated at three different rates (500, 750, and 1000 gpm) prior to use on this job. The Contractor shall furnish results of the manufacturer's calibration to the Owner's Representative prior to conducting**

the pumping tests. The discharge line shall also include a tap not more than 20 feet from the well with a valve to take water samples and measuring sand content.

C. Test Pump

The pump furnished shall be of the deep well turbine type capable of pumping up to 1000 gallons per minute (gpm) from an estimated maximum pumping level of 320 feet. A satisfactory throttling device shall be provided downstream of the flow meter so that the discharge can be reduced to 300 gpm.

D. Water Level Probe

The Contractor shall furnish an electrical depth gage capable of indicating changes in the well water level to the nearest one-hundredth foot and shall furnish and install an air line with direct reading gage calibrated in feet. The Contractor shall provide whatever assistance may be required by the Owner's Representative.

PART 3 - EXECUTION

A. General

Within 48 hours after the completion of well development with a test pump, the Contractor shall commence the well production and aquifer tests. The Contractor shall schedule all tests in advance so that the Owner's Representative can be on site throughout each testing period.

B. Step Drawdown Test

1. The well shall be "step" tested at rates of approximately 1/2, 3/4, 1, and 1-1/4 times the capacity of the well, unless otherwise directed by the Owner's Representative. The original capacity of the well was 1,000 gpm.
2. The complete test for the well is estimated to require approximately 12 hours.
3. The Contractor shall operate the pump and change the discharge rate as directed by the Owner's Representative.
4. Discharge rate from the pump shall be controlled by both a gate valve and engine throttle. The discharge shall be controlled and maintained at approximately the desired discharge for each step with an accuracy of at least plus or minus 5 percent.
5. During the test, the Contractor will record the time, pumping level, discharge rate, and rate of sand production every 15 minutes.
6. The rate of sand production will be measured by the Contractor using a centrifugal sand separating meter as described in the Journal of American

Water Works Association, Volume 46, No. 2, February 1954. Rate of sand production will be determined at 5-minute intervals. The results of all sand production tests will be expressed in parts per million at 5 minute intervals. The centrifugal sand-separating meter shall be furnished and installed by the Contractor.

C. Constant Discharge Test

1. A constant discharge test shall commence not less than 12 hours after completion of the step drawdown test. The rate of pumping shall be determined by the Owner's Representative. The Contractor shall insure that the pumping rate selected remains constant throughout the test. The test duration shall be approximately 12 hours. When the test is completed and the pump stopped, the Owner's Representative will measure recovery of the water level in the well for a period of approximately 24 hours.
2. During the drawdown and recovery tests, the Contractor will record the discharge rate, sand production rate, the time and measure the water level in the pumped well at 15 minute intervals.
3. The Contractor shall provide experienced and qualified personnel on a 24-hour basis during both the step drawdown and constant discharge pumping tests to assure proper operation of the pumping test equipment and assist Owner's Representative when necessary.
4. No payment will be made to the Contractor for pumping tests interrupted by the malfunctioning or failure of pumping equipment. If the test is interrupted, the water levels will be allowed to fully recover, after which the test will be restarted.
5. When the production tests are complete, Contractor shall remove the pump and clean the well of all accumulated sediment and foreign material. The Contractor shall demonstrate that the well has been properly cleaned by measuring the depth of the well in the Owner's presence.

END OF SECTION

SECTION 10510

VIDEO CAMERA SURVEY

PART 1 - GENERAL

A. Description

This section covers the performance of a color video camera survey over the full depth of the well. The camera survey will be run by a firm retained by the Contractor and approved by the Owner's Representative.

B. Submittal

1. The Contractor shall submit the name and qualifications of the firm retained to perform the camera survey with the Bid Documents.
2. The DVD disks shall be provided to the Owner's Representative at the time the survey is completed.

C. Measurement and Payment

1. The payment for the survey shall be at the bid lump sum price.
2. There will be no additional payment for rig time or idle time while the survey is being run.

PART 2 - MATERIALS

A. Camera

The camera used for the survey shall be equipped with centralizers and dual lens to provide both vertical (axial) and side scan without the use of mirrors. High resolution 3.5-inch diameter camera should be provided to access the open well and/or permanent 4-inch diameter sounding tube with camera port. The equipment used by the firm for the color video camera survey shall produce a recording with an automatic depth indication.

B. Digital Video Disks

The Contractor shall provide the Owner's Representative with four (4) DVD disks of the camera survey.

PART 3 - EXECUTION

- A. Prior to conducting the camera survey, all tools shall be pulled and the well allowed to remain idle for at least 24 hours. During this period and the camera survey, 15

gpm of clear water shall be run in to the well below the water surface. The camera survey shall be run for the full depth of the well. The survey shall be run in the presence of the Owner's Representative. If the water clarity prevents a clear video survey, the survey will be rerun after corrective measures are implemented by the Contractor.

- B. The Contractor shall be required to provide whatever assistance may be required to accomplish the camera survey.
- C. The video survey shall become the property of the Owner's Representative at the time each survey is completed.

END OF SECTION

SECTION 10520

WELL DISINFECTION

PART 1 - GENERAL

A. Description

This section covers the disinfection of the well using chlorine per the State of California Water Well Standards and AWWA Standard C654-13.

B. Payment

Payment shall be made at the lump sum price bid.

PART 2 - MATERIALS

The disinfectant shall be sodium hypochlorite (12.5 percent available chlorine) in liquid form, used at a dose of 1 gallon per 1,000 gallons of well volume, and pH adjustment with NW-410 at a dose of 1 gallon per 1,000 gallons of well volume.

PART 3 - EXECUTION

- A. The disinfecting agent and NW-410 shall be premixed and shall be uniformly applied throughout the entire water depth of the well using a drop pipe or perforated double swab. The dispersion of the disinfectant shall be assisted by pouring into the well a volume of water equal to the volume of water contained in the well, after the disinfectant has been emplaced. This will cause the disinfectant to flow out of the well into the area adjacent to the screen. A small volume of disinfection solution shall be placed down the sounding tube.
- C. All accessible portions of the well above the water level shall be maintained in a damp condition with water containing the required concentration of disinfecting agent for a period of not less than 20 minutes. The disinfecting agent shall be left in the well.

END OF SECTION