

CITY OF SAN FERNANDO, CA



CONTRACT DOCUMENTS FOR GLENOAKS BOULEVARD STREET SEWER AND WATER IMPROVEMENT PROJECT Job No. 7608, Plan No. P-730

Prepared by:



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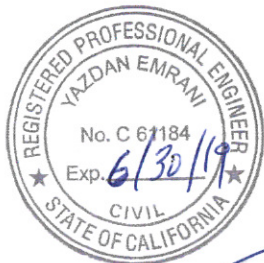
Under the Supervision of:



Ray A. Wellington, PE

RCE 25131

Date: 12/19/18



Approved By:

Yazdan Emrani, P.E., Director of Public Works/City Engineer

RCE 61184

Date: 12/20/18

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NOTICE INVITING BIDS

SEALED PROPOSALS will be received at the Office of the City Clerk, City Hall, 117 Macneil Street, San Fernando, California until **11:00 A.M. on Thursday, January 31, 2019**, and said bids will be publicly opened and declared for performing work on the following project:

GLENOAKS BOULEVARD STREET SEWER AND WATER IMPROVEMENT PROJECT JOB NO. 7608, PLAN NO. P-730

The project consists of the installation of sewer line and water lines. The work also includes manholes, laterals, sewer bypass, CCTV camera inspection, water service & meter, sewer tap, and miscellaneous PCC Concrete and other appurtenant work. The bid items, corresponding estimated quantities, and time allowed to complete the work are listed in the Contractor's Proposal. The definitions of bid items are described in the Technical Provisions.

The contract time for the project is **sixty (60) working days**.

A pre-bid meeting is scheduled for **11:00 AM on January 24, 2019 at 120 Macneil Street, San Fernando, CA 91340, PW Ops Room**. This meeting is to inform bidders of project requirements and subcontractors of subcontracting and material supply opportunities. **Bidders' attendance at this meeting is not mandatory.**

PREVAILING WAGE REQUIREMENTS: Pursuant to California Labor Code Sections 1770, 1773, 1773.1, 1773.6, and 1773.7, as amended, the applicable prevailing wages for this project have been determined. It shall be mandatory upon the contractor to whom the contract is awarded and upon any subcontractor under him to pay not less than the higher of the Federal and the State prevailing wage rates to all workers employed by them in the execution of the contract. The applicable Federal prevailing wage rates are those that are in effect ten (10) calendar days prior to bid opening; they are set forth on the U.S. Department of Labor website: <http://www.wdol.gov/wdol/scafiles/davisbacon/ca33.dvb> but are not printed in the Specifications. Lower State wage rates for work classifications not specifically listed in the Federal wage decision are not acceptable. The applicable State prevailing wage rates are set forth on the California Department of Industrial Relations website: <http://www.dir.ca.gov/DLSR/PWD> but are not printed in the Specifications; these rates are subject to predetermined increases.

The U.S. Department of Transportation (DOT) provides a toll-free hotline service to report bid rigging, bidder collusion, or other fraudulent activities. The hotline is available Mondays through Fridays between 8:00 a.m. and 5:00 p.m. eastern time, at (800) 424-9071. The hotline is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially, and caller anonymity will be respected.

Conflict of Interest: in the procurement of supplies, equipment, construction, and services by sub-recipients, the conflict of interest provisions in 24 CFR 85.36, OMB Circular A-110, and 24 CFR 570.611 shall apply. No employee, officer, or agent of the sub-recipient shall

participate in the selection, award, or administration of a contract supported by federal funds if a conflict of interest, real or apparent, would be involved.

This project is subject to the requirements of the Cargo Preference Act, as described in the Specifications.

It is the policy of the City, as directed by City Council, to encourage the use of local area businesses in construction contracts including vendors, suppliers, labor, etc.

The City reserves the right to reject any and all bids and to waive any minor irregularities in the bid documents. Bidders may not withdraw their bid for a period of ninety (90) days after date set for opening thereof.

The Contractor must follow the procedures as set forth in the Instructions to Bidders for acceptance of bids. Bids will be accepted only if submitted on a proposal form furnished by the City. Each bid must be accompanied by cash, certified check, cashier's check, or bidder's bond made payable to the City of San Fernando or issued by a surety admitted to do business in California, for an amount equal to at least ten percent (10%) of the amount bid. Such guaranty to be forfeited to the City should the bidder to whom the contract is awarded fail to enter into the contract.

Bids will be accepted only from contractors licensed in accordance with the provisions of the Business and Professional Code of the State of California. Prior to contract execution, the Contractor and his/her subcontractors shall obtain a City business license. At the time of bidding, the Contractor must possess a valid California **Class A** Contractor's License.

AB44 EFFECTIVE JULY 1, 2014. If a bidder submits a bid that includes a subcontractor who would be performing work in amount in excess of 1/2 of 1% of the bidder's total bid or in the case of bids for the construction of streets or highways, including bridges, in excess of 1/2 of 1% of the bidder's total bid or \$10,000, whichever is greater, then in addition to the subcontractor's name and business address, the subcontractor's State contractor's license number must be included as part of the information submitted for that proposed subcontractor. Failure to provide the subcontractor's license number shall render the bid non-responsive.

SB854 EFFECTIVE MARCH 1, 2015. Contractors and Subcontractors wishing to work on a public works project must be registered with the State of California, Department of Industrial Relations. All public works projects with bids submitted after March 1, 2015, or awarded on or after April 1, 2015, shall use only registered contractors and subcontractors. No bid will be accepted nor any contract entered into without proof of the Bidder's and its subcontractors' current registration with the Department of Industrial Relations. If awarded a contract, the Bidder and its subcontractors of every tier shall maintain active registration with the Department of Industrial Relations for the duration of the Project.

At the request and expense of the Contractor, securities equivalent to the five percent (5%) to be withheld from progress payments pursuant to the City's Standard General Conditions shall be deposited with the City Clerk or a state or federally chartered bank as the escrow agent, who shall pay such monies to the contractor upon satisfactory completion of the contract. Securities eligible for investment shall include those listed in Section 16430 of the

Government Code or bank or savings and loan certificates of deposit. The contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereof.

Copies of the plans and specifications, including the approved proposal form, are available on the City website, www.sfcity.org, for downloading at no charge. **In order to be eligible to submit a bid for the project, you MUST contact Patsy Orozco, Civil Engineering Assistant II, via e-mail at PAOrozco2@sfcity.org to be placed on the plan holders list.** Compact disk (CD) of the plans and specifications may be obtained for a non-refundable fee of **\$5.00** each at the Public Works Department, City Hall, 117 Macneil Street, San Fernando, California, 91340. If mailing is requested, an additional fee of **\$5.00** is required to cover postage and handling. **Any questions pertaining to the project shall be submitted by Thursday, January 24, 2019 by 4:00 p.m.**

Addenda, if any, will NOT be distributed to the planholders, and will ONLY be posted on the City website. **It shall be the Bidder's responsibility to check the City website for any addenda.**

City of San Fernando

Date: 12/20/2018

By: Yazdan Emrani, P.E.
Director of Public Works/City Engineer

Sun
12/28/18
1/3/2019
1/17/2019

INSTRUCTIONS TO BIDDERS

1. GENERAL Proposals under these Contract Documents shall be submitted on the blank forms furnished herewith. When presented, the proposal forms must be completely made out in the manner and form indicated therein and must be properly signed by the bidder. The bidder's address, telephone number, and California State Contractor's License number must be included. To be eligible to perform work, the bidder must be a state licensed contractor in good standing prior to beginning work. The City Council reserves the right to reject any bid if all the above information is not furnished.

Each proposal submitted must be presented in a sealed cover and must be filed prior to the time and at the place designated in the Notice Inviting Bids. All proposals submitted as prescribed will be publicly opened and read at the time and place designated in the Notice Inviting Bids.

Bid Quotes and Unit Price Extensions – The unit prices and the lump sum prices quoted by the bidder must be entered in the spaces provided on the Contractor's Proposal form. In case there is a discrepancy between the unit price and the item total, the unit price shall govern and will be considered as representing the Bidder's intention. The bid total will be corrected to conform to the specified unit price.

Bid Retention and Award – The City reserves the right to retain all bids for a period of ninety (90) days for examination and comparison. The City also reserves the right to waive non-substantial irregularities in any bid, to reject any and all proposals, to reject or delete one part of a proposal and accept the other, except to the extent that the bids are qualified by specific limitations, and to make award to the lowest responsible bidder as the interest of the City may require.

Communications Regarding Bid – All timely requests for information submitted in writing will receive a written response from the City. Telephone communications with City staff are not encouraged but will be permitted. However, any such oral communication shall not be binding on the City.

2. EXAMINATION OF PLANS, CONTRACT DOCUMENTS, AND WORK SITE The Contract Documents and plans, if any, are on file and available for inspection in City Hall.

The Bidders are required to carefully examine the site and the proposal, plans, Contract Documents, and contract forms. The Bidders must satisfy themselves as to the requirements of the Contract Documents and the contract; as to the location of the proposed work and by such other means as they may prefer; and as to the actual conditions and requirements of the work, and shall not, at any time after submission of the bid, dispute, complain, or assert that there was any misunderstanding in regard to the nature or amount of work to be done. It is mutually agreed that submission of a proposal shall be considered prima facie evidence that the bidder has made such examinations.

3. DISQUALIFICATION OF BIDDERS AND PROPOSALS More than one proposal for the same work from any individual, firm, partnership, corporation or association under the same or different names will not be accepted and reasonable grounds for believing that any bidder is

interested in more than one proposal for the work will be cause for rejecting all proposals in which such bidders are interested.

Proposals which show obviously unbalanced prices, and those which are incomplete or show any alteration of form or contain any additions or conditional or alternate bids that are not called for or otherwise permitted, may be rejected. Proposals that do not bear the Bidder's signature will be rejected.

4. AWARD AND EXECUTION OF CONTRACT The award of the contract, if awarded, will be made to the lowest responsive bidder whose proposal complies with all the prescribed requirements. The right is reserved, however, to reject any or all bids and to waive technical errors or discrepancies if it is deemed to best serve the interests of the City. An award will be made only until all necessary investigations are made as to the responsiveness of the low bidder.

Failure to execute a contract and file acceptable bonds as provided herein within the above timeline, not including Sundays, shall be just cause for the annulment of the award and the forfeiture of the proposal guaranty.

The Contractor will be required to obtain a City Business License prior to award of the contract.

5. SIGNATURE OF CONTRACTOR

- a. Corporation Any bids submitted by a corporation must include the name of the corporation and must be signed by the President and Secretary or Assistant Secretary, and the corporate seal must be affixed. Other persons may sign for the corporation in lieu of the above if a certified copy of a resolution of the corporate board of directors so authorizing them to do so is on file in the City Clerk's Office.
- b. Partnerships Any bids submitted by a partnership must contain the names of all persons comprising the partnership or co-partnership. The bid must be signed by all partners comprising the partnership unless proof in the form of a certified copy of a certificate of partnership acknowledging the signer to be a general partner is presented to the City Clerk.
- c. Joint Ventures Any bids submitted by a joint venture must so state that and must be signed by each joint venturer.
- d. Individuals Any bids submitted by an individual must be signed by that individual unless an up-to-date power of attorney is on file in the City Clerk's Office, in which case the person indicated in the power of attorney may sign for the individual.

The above rules also apply in the case of a fictitious firm name. In addition, however, where the fictitious name is used, it must be so indicated where the signature appears.

6. BONDS

- a. Bid Bonds Bid must be accompanied by cash, cashier's check, certified check, or

surety bond in an amount equal to ten percent (10%) of the total amount in the Contractor's Proposal. Checks and bonds shall be made payable to the City of San Fernando.

- b. Contract Bonds The Contractor simultaneously with execution of the Agreement shall furnish a surety bond in an amount equal to one hundred percent (100%) of the contract price as security for the faithful performance of this contract and a separate surety bond in an equal to one hundred percent (100%) of the contract price as security for the payment of all persons performing labor and furnishing materials in connection with this contract, as required by the terms of an Act entitled:

"An Act to secure the payment of the claim of persons employed by Contractors upon Public Works, and the claims of persons who furnish materials, supplies, teams, implements; or machinery used or consumed by such Contractors in the performance of such works, and prescribing the duties of certain public officers with respect thereto," approved May 10, 1919, as amended.

Bond Forms required are included in these specifications. Copies will be furnished to prospective bidders upon request.

Whenever any Surety or Sureties on any such bonds, or any bonds required by Law for the protection of the claims of laborers and material men become insufficient or the City Engineer has cause to believe that such Surety or Sureties have become insufficient, a demand in writing may be made of the Contractor for each further bond or bonds or additional surety, not exceeding that originally required, as is considered necessary, considering the extent of the work remaining to be done. Thereafter, no payment shall be made upon such contract to the Contractor or any assignee of the Contractor until such further bond or bonds or additional surety has been furnished.

7. RETURN OF BIDDER'S GUARANTIES Within ten (10) days after the award of the contract, the City will return the proposal guaranties accompanying those proposals which are not to be considered in making award. All other proposals which are to be held until the contract has been finally executed, will be returned to the respective bidders after award of contract.
8. CONFLICT OF INTEREST In the procurement of supplies, equipment, construction, and services by sub-recipients, the conflict of interest provisions in 24 CFR 85.36, OMB Circular A-110, and 24 CFR 570.611, respectively, shall apply. No employee, officer or agent of the sub-recipient shall participate in selection, or award or administration of a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved.

The following documents in the PROPOSAL section of these Contract Documents must be completed and submitted with the bid package:

P-1	Contractor's Proposal
P-2&3	Bid Schedule
P-4	Bidder's Bond
P-5	Contractor Information
P-6	List of References
P-7	List of Subcontractors
P-8	Minority, Women, Small Business Enterprise Form
P-9	Certificate of Secretary of Adoption of Resolution
P-10	List of Subcontractors, Suppliers, & Vendors Contacted to Receive Prices in Preparation of Bid Proposal
P-11	Non-Collusion Affidavit

CONTRACTOR'S PROPOSAL

CITY OF SAN FERNANDO
117 MACNEIL STREET
SAN FERNANDO, CALIFORNIA 91340

HONORABLE MAYOR AND
MEMBERS OF THE CITY COUNCIL:

The undersigned declares that this proposal was prepared by carefully examining the location of the proposed work, the Plans, the Specifications, and the Contract Documents entitled:

**GLENOAKS BOULEVARD SEWER AND WATER
IMPROVEMENT PROJECT
Job No. 7608, Plan No. P-730**

The undersigned hereby proposes to furnish all labor, materials, equipment, tools, transportation, and services to perform all work required and to complete said work within **sixty (60)** working days after the commencement date stated in the Notice to Proceed. All work shall be performed in accordance with the Plans, Specifications, and Contract Documents, including the Special Provisions and Technical Provisions, for the prices set forth in the bid schedule.

Dated

Bidder

Signature

Name (Print/Type)

Title

BID SCHEDULE

GLENOAKS BOULEVARD SEWER AND WATER IMPROVEMENT PROJECT

Job No. 7608, Plan No. P-730

BID SCHEDULE "A"

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ITEM TOTAL
1	Provide Construction Survey	LS	1	\$	\$
2	Re-establish Survey Monuments	EA	3	\$	\$
3	Construct 15" HDPE Sewer (Pipe Burst) Sta 10+00 to Sta 19+65 Glenoaks Blvd	LF	965	\$	\$
4	Construct 15" HDPE Sewer (Pipe Burst) Sta 19+65 to Sta 22+64 Glenoaks Blvd	LF	298	\$	\$
5	Remove & Construct 15" VCP Sewer (Open Trench) Sta 22+64 to Sta 23+14 Glenoaks Blvd	LF	50	\$	\$
6	Construct 18" HDPE Sewer (Pipe Burst) Sta 10+00 to Sta 13+46 Harding Ave	LF	346	\$	\$
7	Remove & Construct 18" VCP Sewer (Open Trench) Sta 13+46 to Sta 13+58 Harding Ave	LF	13	\$	\$
8	Construct 15" HDPE Sewer (Pipe Burst) Sta 13+58 to Sta 23+10 Harding Ave	LF	952	\$	\$
9	Construct Precast Concrete Manhole per SPPWC Std Plan 200-3	EA	1	\$	\$
10	Reconnect Sewer lateral per SPPWC Std Plan 222-2 (Pit Required)	EA	40	\$	\$
11	Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2	EA	10	\$	\$
12	Perform CCTV inspection (final)	LF	2,624	\$	\$
13	Install Sewer Bypass system	LS	1	\$	\$
14	Repair Broken Sewer Tap	LS	1	\$	\$
15	Install 1" Water Service & City Furnished Meter per City Standard Plate No. 19	EA	2	\$	\$
16	Install 3/4" Water Service & City Furnished Meter per City Standard Plate No. 19	EA	1	\$	\$
17	Provide Traffic Control Plan and Traffic Control (3% max of the total bid amount).	LS	1	\$	\$
BID SCHEDULE "A" TOTAL					\$

BID SCHEDULE "B" – ADDITIVE ALTERNATIVE

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ITEM TOTAL
4A	Construct 15" VCP Sewer (Open trench) Sta 19+65 Sta 22+64 Glenoaks Blvd	LF	298	\$	\$
6A	Construct 18" VCP Sewer (Open Trench) Sta 10+00 to Sta 13+46 Harding Ave	LF	346	\$	\$
8A	Construct 15" VCP Sewer (Open trench) Sta 13+58 to Sta 23+10 Harding Ave	LF	952	\$	\$
BID SCHEDULE "B" TOTAL					\$

Bid Schedule Total (Schedule "A"+"B")\$_____

For the purposes of determining the lowest responsible bidder, the Bid Schedule Total of Schedule "A" and "B" combined shall be considered. The City reserves the right to delete Schedule B at the time of contract award. If the City chooses to delete Schedule B, no bid price adjustment to Bid Schedule A will be allowed.

For Bid Items 4, 6, 8 and their alternative Bid Items 4A, 6A, and 8A, the City reserves the right to award any of these bid items in any combination between Schedule A and Schedule B and no price adjustment to bid items will be allowed.

The bidder acknowledges receipt of the following addendum issued for the above project. If no addendum has been received, write "None". FAILURE TO ACKNOWLEDGE RECEIPT OF ANY ADDENDA ISSUED WILL RENDER THE CONTRACTOR'S BID NON-RESPONSIVE.

List of Addendum Received:_____

The City does not expressly or by implication agree that the actual amount of work will correspond with the foregoing quantities but reserves the right to increase or decrease the amount of any class or portion of the work or to omit portions of the work as may be deemed necessary or advisable by the Engineer.

The bidder further agrees that in case of not executing the required contract with necessary bonds within ten (10) days, not including Sundays, after having received notice that the contract is ready for signature, the proceeds of the check or bond accompanying his bid shall become the property of the City of San Fernando.

By submission of the Contractor's Proposal, the bidder also certifies that the bid is a balanced bid.

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS:

that we, _____ as Principal,
and _____ as Surety,
are held and firmly bound unto the City of San Fernando in the sum of _____
(\$ _____)
to be paid to the said City of its certain Attorney, its successors and assigns; for the payment of
which sum well and truly made, we bind ourselves, our heirs, executors and administrators,
successors or assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain proposal of the
above bounden _____
to construct _____
(insert names of streets and limits to be improved) dated _____ is accepted
by the City of San Fernando, and if the above bounden his heirs, executors, administrators,
successors and assigns, shall duly enter into and execute a contract for such construction, and
shall execute and deliver the two bonds described within ten (10) days (not including Sunday)
from the date of the mailing of a notice to the above bounden _____
by and from the said City of San Fernando that said contract is ready for execution, then this
obligation shall become null and void; otherwise it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, we hereunto set our hands and seals this _____ day of
_____, 2019.

Principal

Surety

By _____

By _____

Its _____

Its _____

By _____

By _____

Its _____

Its _____

Surety signatures on this bond must be acknowledged before Notary Publics, and a sufficiently
power of attorney must be attached to the bond to verify the authority of any party signing on
behalf of a surety.

All notices and demands to the surety shall be delivered via first class mail to the following:

CONTRACTOR INFORMATION

Company Name _____

Address _____

Telephone _____ Fax _____ E-mail _____

Type of Firm: Individual () Partnership () Corporation ()

Corporation organized under the laws of the State of _____

Contractor's License Number _____ State _____ Classification _____ Expiration Date _____

DIR Registration Number _____ Expiration Date _____

Names and titles of all officers of the firm

LIST OF REFERENCES

(To be submitted by contractors who have not worked with the City of San Fernando.)

1. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____
2. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____
3. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____
4. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____
5. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____
6. NAME OF CITY OR BUSINESS _____
CONTACT PERSON AND PHONE NO. _____
TYPE/DATE OF WORK PERFORMED _____
TOTAL CONTRACT AMOUNT \$ _____

LIST OF SUBCONTRACTORS

The bidder is required to fill in the following blanks in accordance with the provisions of Section 4100 to 4108, inclusive, of the Government Code of the State of California.

Name under which subcontractor is licensed: _____

Address of office, mill or shop: _____

Specific description of subcontract: _____

License No.: _____ Amount of Subcontract: _____

DIR Registration Number: _____ Expiration Date: _____

Name under which subcontractor is licensed: _____

Address of office, mill or shop: _____

Specific description of subcontract: _____

License No.: _____ Amount of Subcontract: _____

DIR Registration Number: _____ Expiration Date: _____

Name under which subcontractor is licensed: _____

Address of office, mill or shop: _____

Specific description of subcontract: _____

License No.: _____ Amount of Subcontract: _____

DIR Registration Number: _____ Expiration Date: _____

Name under which subcontractor is licensed: _____

Address of office, mill or shop: _____

Specific description of subcontract: _____

License No.: _____ Amount of Subcontract: _____

DIR Registration Number: _____ Expiration Date: _____

MINORITY, WOMEN, SMALL BUSINESS ENTERPRISES

BUSINESS NAME: _____
ADDRESS (P.O. BOX NOT ACCEPTABLE): _____
CITY, STATE, ZIP CODE: _____
PHONE NUMBER (____) _____ CONTACT PERSON: _____

1. MINORITY OWNED

Composition of ownership (more than 50% of ownership of the organization):
Please check one of the following:

_____ Black American _____ Asian/Pacific American
_____ Native American _____ Hispanic American _____ Other ethnicity

2. WOMEN OWNED

More than 50% of this business is owned by women:

_____ Yes _____ No

3. SMALL BUSINESS ENTERPRISE

This business enterprise collects \$1,000,000 or less in gross revenue per year.

_____ Yes _____ No

Does your firm intend to use subcontractors or independent contractors for this project?

_____ Yes _____ No

If yes, all others must fill out the bidder's application also.

Has this business been certified by any other agency as a minority/women owned enterprise or small business enterprise?

_____ Yes _____ No

If yes, please list name(s) and telephone number(s) of certifying agencies.

Is this a joint venture proposal?

_____ Yes _____ No

CERTIFICATE OF SECRETARY OF ADOPTION OF RESOLUTION

I, _____ (insert name of Secretary), do hereby certify that I am the Secretary of _____ (insert name of corporation) a California corporation, and do hereby certify that the following resolution is a full, true and correct copy of a resolution passed by the Board of Directors of said corporation at a meeting thereof held on the _____ day of _____, 2019 (insert proper date), in accordance with the bylaws of said corporation, and that said resolution has not to the date of this certificate been in any manner amended, modified, revoked, rescinded or annulled, and the same is now in full force and effect.

"RESOLVED, that any of the following officers of this corporation, _____, _____ President
_____, Vice President and
_____, secretary
(insert names of officers and capacity where not shown), (any two acting together) (any one acting alone) (strike out inapplicable portion), be and they are hereby authorized to execute and deliver in the name of and for and on behalf of this corporation, any and all bids, authorizations, contracts, bonds and agreements of any nature or sort whatsoever.

BE IT FURTHER RESOLVED, that any and all persons, firms, corporations and other entities, including public entities, shall be entitled to rely on the authority of (any one of such officers) (any two of such officers acting together) (strike out inapplicable portion), above named, to bind this corporation by the execution and delivery of any such bids, authorizations, contracts, bonds and agreements.

BE IT FURTHER RESOLVED, that the authority herein contained shall remain effective until the person, corporation, or public entity relying upon the authority herein contained, receives written notice to the contrary signed by duly authorized officers of this corporation, that all previous authorizations theretofore given with respect to the matters herein contained are revoked. That the revocation of the authority herein contained shall not affect the validity of any instrument herein referred to signed by any person or persons at the time authorized to act."

IN WITNESS WHEREOF, the undersigned has hereunto set (his/her) hand as Secretary and affixed the seal of this corporation this _____ day of _____, 2019.

Secretary

Affix Seal

**LIST OF SUBCONTRACTORS, SUPPLIERS, & VENDORS CONTACTED TO
RECEIVE PRICES IN PREPARATION OF BID PROPOSAL**

1. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____
2. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____
3. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____
4. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____
5. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____
6. NAME & LOCATION OF BUSINESS _____

CONTACT PERSON AND PHONE NO. _____
ITEM OR TYPE OF WORK PROPOSED _____
PRICE OR AMOUNT \$ _____

**GLENOAKS BOULEVARD SEWER AND WATER
IMPROVEMENT PROJECT
Job No. 7608, Plan No. P730**

P-11



CONSTRUCTION CONTRACT/AGREEMENT

Name of Contractor: _____
Glenoaks Boulevard Sewer and Water Improvement Project
Job No. 7608, Plan No. P-730

THIS AGREEMENT, made and entered into this _____ day of _____, 2019, by and between CITY OF SAN FERNANDO, a municipal corporation of the State of California, hereinafter referred to as "CITY" and _____ "CONTRACTOR."

WITNESSETH:

That the CITY and the CONTRACTOR, for the consideration hereinafter named, mutually agree as follows:

1. The complete contract consists of the Contract Documents which includes all of the following documents incorporated herein by this reference: Approved **Glenoaks Boulevard Sewer and Water Improvement Project, Project No. 7608, Plan No. P-730**, Notice Inviting Bids, Instructions to Bidders, Contractor's Proposal, Contract/Agreement, Special Provisions, Technical Provisions, and all modifications and amendments thereto.

2. CONTRACTOR shall perform everything required to be performed, shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services required for the following work of improvement: **Glenoaks Boulevard Sewer and Water Improvement Project, Project No. 7608, Plan No. P-730** (the "Work of Improvement") all in accordance with the Contract Documents and Contractor's Proposal dated _____.

CONTRACTOR agrees to perform all the work and furnish all the materials at his own cost and expense necessary to construct and complete in a good and workman-like manner and to the satisfaction of the City Engineer of the CITY, the Work of Improvement in accordance with the plans, specifications, and Contract Documents (the "Specifications") therefore prepared by City's Engineering Department and adopted by the City Council.

3. CITY agrees to pay and CONTRACTOR agrees to accept in full payment for this Work of Improvement the stipulated sum of _____ (\$_____).

CITY agrees to make monthly payments and final payment in accordance with the method set forth in the Specifications.

4. CONTRACTOR agrees to commence construction of the Work of Improvement within ten (10) days after issuance of a Notice to Proceed, and to continue in a diligent and workman-like manner without interruption, and to complete the construction thereof within **sixty (60)** working days from the date the Notice to Proceed is issued.

CONSTRUCTION CONTRACT/AGREEMENT

Glenoaks Boulevard Sewer and Water Improvement Project, Job No. 7608, Plan No. P-730

5. Time is of essence of this Contract, and it is agreed that it would be impracticable or extremely difficult to ascertain the extent of actual loss or damage which the CITY will sustain by reason of any delay in the performance of this Agreement. It is, therefore, agreed that CONTRACTOR will pay as liquidated damages to the CITY the following sum: **One thousand six hundred Dollars (\$1,600.00)** for each day's delay beyond the time herein prescribed for finishing work. If liquidated damages are not paid, as designated by the CITY, the CITY may deduct the amount thereof from any money due or that may become due the CONTRACTOR under this Agreement in addition to any other remedy available to CITY. The CONTRACTOR shall not be assessed liquidated damages for any delay caused by the failure of a public utility to relocate or remove an existing utility required for the performance of this Contract.

6. The CONTRACTOR will pay, and will require all subcontractors to pay, all employees on the work of improvement a salary or wage at least equal to the prevailing salary or wage established for such work as set forth in the wage determinations for this work. Travel and subsistence pay shall be paid in accordance with Labor Code Section 1773.8. The CONTRACTOR shall forfeit to the CITY, as penalty, Fifty Dollars (\$50.00) for each calendar day or portion thereof for each worker paid (either by him or any subcontractors under him) less than the prevailing rate described above on the work provided for in this Agreement, all in accordance with Section 1775 of the Labor Code of the State of California. CONTRACTOR, by executing this Agreement, hereby certifies that it shall adopt the current general prevailing Federal and/or State rates of wages applicable to the Work of Improvement.

7. The CONTRACTOR or SUBCONTRACTOR shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract, or such other remedy as City deems appropriate.

8. Attention is directed to Section 7108.5 of the California Business and Professions Code, which requires a prime CONTRACTOR or SUBCONTRACTOR to pay any SUBCONTRACTOR not later than 10 days of receipt of each progress payment, unless otherwise agreed to in writing. In addition, Federal Regulation (49 CFR 26.29) requires a prime CONTRACTOR or SUBCONTRACTOR to pay a SUBCONTRACTOR no later than 30 days of receipt of each payment, unless any delay or postponement of payment among the parties takes place only for a good cause and with the prior written approval of the CITY. Section 7108.5 of the California Business and Professions Code also contains enforcement actions and penalties. These requirements apply to both DBE and non-DBE subcontractors.

9. Federal Regulation (49 CFR 26.29) requires the following method be used in federal-aid contracts to ensure prompt and full payment of any retainage kept by the prime CONTRACTOR or SUBCONTRACTOR to a SUBCONTRACTOR:

The CITY may hold retainage from the prime CONTRACTOR and provide for prompt and regular incremental acceptances of portions of the contract, pay retainage to prime CONTRACTORS based on the acceptances, and include a contract clause obligating the prime contract and subcontractors to pay all retainage owed to all SUBCONTRACTORS for satisfactory completion of the accepted work within 30 days after receipt of the retainage. This clause must require the prompt release of retainage payments from the prime CONTRACTOR to the SUBCONTRACTOR within a

CONSTRUCTION CONTRACT/AGREEMENT

Glenoaks Boulevard Sewer and Water Improvement Project, Job No. 7608, Plan No. P-730

specified number of days after the SUBCONTRACTOR'S work is satisfactorily completed.

In the above method, a SUBCONTRACTOR'S work is satisfactorily completed when all tasks called for in the contract have been accomplished and documented as required by the CITY. The work of a SUBCONTRACTOR covered by that acceptance is deemed to be satisfactorily completed, when the CITY has made an incremental acceptance of a portion of the contract work. Federal Regulation (49 CFR 26.29) also requires that any delay or postponement of payment among the parties may take place only for good cause, must have the prior written approval of the agency, and that appropriate means of enforcement such as those contained in Section 7108.5 of the California Business and Professions Code must be included in the contract.

10. In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and the CONTRACTOR shall not require more than eight (8) hours in a day from any person employed by him hereunder, except as provided in the Labor Code of the State of California. The CONTRACTOR shall adhere to Article 3, Chapter 1, Part 7 (Sections 1810, et seq.) of the Labor Code of the State of California, and it is agreed that the CONTRACTOR shall forfeit to the CITY as a penalty the sum of Fifty Dollars (\$50.00) for each worker employed in the execution of this Contract by the CONTRACTOR or any subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in violation of that article.

11. CONTRACTOR, by executing this Agreement hereby certifies:

"I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract."

12. CONTRACTOR shall, prior to the execution of this Contract, furnish two bonds approved by the CITY, one in the amount of One Hundred Percent (100%) of the Contract price, to guarantee the faithful performance of the work, and one in the amount of One Hundred Percent (100%) of the Contract price to guarantee payment of all claims for labor and materials furnished. This Contract shall not become effective until such bonds are supplied to and approved by the CITY. CONTRACTOR shall, prior to the release of the performance and payment bonds or the retention payment, furnish a warranty performance and payment bond equal to at least ten percent of the final contract price or \$1,000, whichever is greater.

IN WITNESS WHEREOF, the said CONTRACTOR and the CITY ADMINISTRATOR and CITY CLERK of the CITY have caused the names of said parties to be affixed hereto, each in triplicate, the day and year first above written.

CONTRACTOR

CONSTRUCTION CONTRACT/AGREEMENT

Glenoaks Boulevard Sewer and Water Improvement Project, Job No. 7608, Plan No. P-730

BY _____

Title

BY _____

Title

CITY OF SAN FERNANDO
A Municipal Corporation

ALEXANDER P. MEYERHOFF
CITY MANAGER

ATTEST:

ELENA G. CHAVEZ
CITY CLERK

APPROVED AS TO FORM:

RICK R. OLIVAREZ
CITY ATTORNEY
OLIVAREZ MADRUGA, P.C.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that we, _____
as Principal, and _____ as Surety,
are held and firmly bound unto the CITY OF SAN FERNANDO, hereinafter called the Owner, in the sum of
_____ (\$ _____)
for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors,
administrators and successors, jointly and severally, firmly by these presents.

The conditions of this obligation are such that whereas the Principal entered into a contract, attached
hereto, with the Owner dated _____ for _____
_____.

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants,
terms, conditions and agreements of said contract during the original term thereof, and any extensions
thereof that may be granted by the Owner with or without notice of the Surety, and during the life of any
guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings,
covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract
that may hereafter be made, then this obligation shall be void; otherwise this obligation shall remain in
full force and virtue.

Further, the said Surety, for value received, hereby stipulates and agrees that no change, extension of
time, alteration or modification of the contract documents or of the work to be performed thereunder
shall in any way affect its obligations on this bond; and it hereby waives notice of any and all such
changes, extensions of time; and alterations or modifications of the contract documents and/or of the
work to be performed thereunder.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals the _____ day of _____, 2019, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body.

(Principal)

ATTEST:

(Address)

(By)

(Title)

ATTEST:

(Address)

(By)

(Title)

(To be filled in by Surety)

Rate of premium on this bond is \$ _____ per thousand.

Total amount of premium charge is \$ _____.

Surety signatures on this bond must be acknowledged before Notary Publics, and a sufficiently power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

All notices and demands to the surety shall be delivered via first class mail to the following:

PAYMENT (LABOR AND MATERIAL) BOND

KNOW ALL MEN BY THESE PRESENTS: that we, _____
as Principal, and _____ as Surety,
are held and firmly bound unto the CITY OF SAN FERNANDO, hereinafter called the Owner, in the sum of _____ (\$_____) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The conditions of this obligation are such that whereas the Principal entered into a contract, attached hereto, with the Owner dated _____ for _____.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of each contract that may hereafter be made, then this obligation shall be void, otherwise this obligation shall remain in full force and virtue.

The condition of this obligation is such that, if said Principal or his or its subcontractors, or the heirs, executors, administrators, successors or assigns thereof, shall fail to pay any of the persons named in Section 3181 of the Civil Code of the State of California for any materials, provisions, provender or other supplies used in, upon, for or about the performance of the work or labor performed by any such claimant or any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18806 of the Revenue and Taxation Code, with respect to such work and labor, then said Surety will pay for the same, in the amount not exceeding the sum set forth hereinabove and also, in case suit is brought upon the bond, will pay a reasonable attorney's fee to be fixed by the court. This bond shall insure to the benefit of any and all persons named in the aforesaid Civil Code Section 3131 so as to give a right of action to them or their assigns in any suit brought upon the bond.

Further, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder shall in any way affect its obligations on this bond; and it hereby waives notice of any and all such changes, extensions of time; and alterations or modifications of the contract documents and/or of the work to be performed thereunder.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals the _____ day of _____, 2019, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body.

(Principal)

ATTEST:

(Address)

(By)

ATTEST:

(Address)

(By)

(Title)

(To be filled in by Surety)

Rate of premium on this bond is \$ _____ per thousand.

Total amount of premium charge is \$ _____.

Surety signatures on this bond must be acknowledged before Notary Publics, and a sufficiently power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

All notices and demands to the surety shall be delivered via first class mail to the following:

WARRANTY PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that _____ as Principal, hereinafter called Contractor, and _____, licensed and domiciled in the state of California as Surety, hereinafter called Surety, are held and firmly bound unto CITY OF SAN FERNANDO as Obligee, hereinafter called Owner, in the amount of _____ (\$ _____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, _____ as Contractor, has by written agreement dated _____, 2019, entered into a contract with Owner for Glenoaks Boulevard Sewer and Water Improvement Project, Job No. 7608, Plan No. P-730 in accordance with Drawings and Specifications contained in a written and executed contract, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

WHEREAS, said contract provides that the Principal shall furnish a bond which shall remain in force for a period of one year after the date of the notice of completion and which shall be conditioned to guarantee against all defects in workmanship and materials which shall become apparent during said period.

NOW THEREFORE, the condition of this obligation is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notices of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions, or;
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

The transaction of insurance as evidenced by this bond is agreed by all parties to have taken place in the State of California in conformance with the laws therein, the Surety hereby accepts jurisdiction for adjudication of all claims in the state wherein the claims have occurred.

This bond is for the protection of the owner and gives no protection to any claimant other than those provided for by statute in the state wherein the claim occurs. The owner hereby agrees that no payments shall be made in excess or advance of any work specifically performed under the contract without the express written consent of the Surety.

For claims regarding non-payment for services provided or materials supplied under the contract, a claimant is defined herein as one having a direct contract with the Principal and/or subcontractor of the Principal. No suit or action shall be commenced hereunder by any claimant unless claimant shall:

1. Notify the Surety of the direct contract with the Principal or Subcontractor of the Principal within 30 days of entering into such contract and;

2. Notify the Surety of any demands for payment under such direct contracts concurrently with the Principal and/or Subcontractor of the Principal and;
3. Notify the Surety by certified mail within 15 days of any payment not made when due, or within 30 days of demand.

As the purpose of this bond is to warrant work previously performed by the Principal in the contract specified herein, the Owner shall notify Surety immediately by certified mail upon demand for work to be performed under this bond.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals the _____ day of _____, 2019, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by each party's undersigned representative, pursuant to authority of its governing body.

(Principal)

ATTEST:

(Address)

(By)

ATTEST:

(Address)

(By)

(Title)

(To be filled in by Surety)

Rate of premium on this bond is \$ _____ per thousand.

Total amount of premium charge is \$ _____.

Surety signatures on this bond must be acknowledged before Notary Publics, and a sufficiently power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

All notices and demands to the surety shall be delivered via first class mail to the following:

GENERAL PROVISIONS

PART I

The documents that control construction, work performed, and materials furnished hereunder are the Contract Documents. The Contract Documents include the Notice Inviting Bids, Contractor's Proposal, Contract/Agreement, Bonds, Specifications, and the documents in the Appendix, if any, all of which are hereby incorporated and made a part of these Contract Documents. The Specifications include the Standard Specifications, these Special Provisions which supplement or modify the Standard Specifications, Plans, Standard Plans, and the Technical Specifications.

The Standard Specifications is the latest edition of the Standard Specifications for Public Works Construction, including supplements, written and promulgated by the Southern California Chapter of the American Public Works Association and the Southern California Districts of the Associated General Contractors of California, and the American Water Works Association (AWWA) Standards.

In case of conflict between documents, the precedence of documents shall follow Subsection 2-5.2 of the Standard Specifications, except that the Technical Provisions precede the Special Provisions. However, for any other precedence of documents, the Technical Provisions shall be considered part of the Special Provisions.

For the convenience of the Contractor, the section and subsection numbering system used in these Special Provisions corresponds to that used in the Standard Specifications.

SECTION 1 - TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

Subsection 1-2 Terms and Definitions

Add the following to the provisions of Subsection 1-2, "Terms and Definitions":

The Standard Specifications, Standard Plans, and Manual of Traffic Controls, latest edition of each, of the State of California, Department of Transportation, and the Los Angeles County Department of Public Works Standard Plans, the City of San Fernando Standard Plans, and the American Water Works Association (AWWA) are incorporated herein by reference and are hereby accepted as Reference Specifications. These Reference Specifications are intended to govern certain construction materials, methods, and details except as modified herein or are inconsistent with the provisions herein. In case of conflict between the Reference Specifications and the Technical Provisions, the Technical Provisions shall govern. In case of a conflict between drawings and Technical Provisions, Technical Provisions shall prevail.

SECTION 2 - SCOPE AND CONTROL OF THE WORK

Subsection 2-1 Award and Execution of the Contract

Add the following to the provisions of Subsection 2-1, "Award and Execution of the Contract":

By mutual consent in writing of the parties signatory to the contract, alterations or deviations, increase or decreases, additions or omissions, in the plans and specifications may be made and the same shall in no way affect or make void the contract.

Subsection 2-4 Contract Bonds

Add the following to the provisions of Subsection 2-4, "Contract Bonds":

The performance bond shall remain in effect at least until the date of substantial completion/notice of completion, except as otherwise provided. The contractor warrants and guarantees to the City that all work will not be defective. The contractor shall furnish a warranty performance and payment bond equal to at least one hundred percent of the final contract price or \$1,000, whichever is greater, before the contract performance and payment bonds can be released or the retention payment paid. The warranty performance and payment bond shall be in effect until at least one year after the date of the notice of completion, except that utility work shall require it to be in effect for three years.

Subsection 2-5 Plans and Specifications

Add the following to the provisions of Subsection 2-5, "Plans and Specifications":

All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made of any plan or drawing after the same has been approved by the Engineer, except by written direction of the Engineer. Should it appear that the work to be done, or any matter relative thereto is not sufficiently detailed or explained in these Specifications, Special Provisions, Technical Provisions, or Plans, the contractor shall apply to the Engineer for such further explanations as may be necessary and shall conform to such explanation or interpretation as part of the original specifications. In the event of doubt or questions relative to the true meaning of the specifications, reference shall be made to the City Council, whose decision thereon shall be final.

Record Drawings:

All corrections on record drawings shall be done in red ink. Record drawings shall be a control set of the construction plans kept on the site for daily recording of "as built" conditions. Show dimensioned location of all buried facilities, such as drains, sumps, pipe, valves, electrical conduit, and irrigation wire.

Dimensions must be taken from above ground permanent, architectural objects, not plants or irrigation heads. All dimensions, notes, etc., shall be legible.

Record drawing shall be reviewed prior to all progress payment requests and submitted prior to final inspection.

Subsection 2-9 Surveying

Add the following:

The Contractor shall preserve all benchmarks, monuments, survey marks, centerline ties and stakes and, in case of their impending removal or destruction by his/her operations he/she shall be responsible for notifying the City Engineer **prior** to their removal. Failure to provide such

notification will result in the Contractor being liable for all costs associated with their replacement.

2-9.1 Permanent Survey Markers. Subsection 2-9.1 is hereby deleted and replaced with the following:

The Contractor shall retain a Licensed Land Surveyor, or a Registered Civil Engineer authorized to practice land surveying within the State to Reset Survey Monuments. The Contractor is responsible for the filing and recording of the Survey Monuments.

2-9.2 Survey Service. Subsection 2-9.2 is hereby deleted and replaced with the following:

The Contractor shall retain a Licensed Land Surveyor, or a Registered Civil Engineer authorized to practice land surveying within the State to provide construction staking. The Contractor is responsible for the accuracy of surveying adequate for construction.

2-9.5 Measurement and Payment. The following section is hereby added:

Unless otherwise specified, full compensation for Construction Survey, including furnishing all labor, materials, tools, equipment, surveyor, supervision, and incidentals for doing all the work involved shall be considered as included in the other items of work.

Payment for monumentation restoration shall be paid at the contract unit price bid per intersection, including furnishing all labor, materials, tools, equipment, surveyor supervision, filing and recordation and other incidental for doing all the work involved and no separate payment shall be made thereof.

Subsection 2-10 Authority of the Board and the Engineer

Add the following to the provisions of Subsection 2-10, "Authority of the Board and the Engineer":

The Engineer shall retain all written protests filed, and, upon completion of the work, shall submit all such protests to the City Council, together with a copy of the Engineer's prior written decisions for consideration by the City Council at the time of final acceptance of the work. The Contractor or its representative may appear and be heard by the City Council concerning any such protests. In connection with acceptance of the work and final payment under the Contract, the City Council shall make its determination with respect to each protest filed with the Engineer. The decision of the City Council shall be final.

Subsection 2-11 Inspection

Add the following to the provisions of Subsection 2-11, "Inspection":

Inspection work requested by the contractor outside of the prescribed working hours shall be paid by the contractor at the City's overtime rate.

SECTION 3 - CHANGES IN WORK

Subsection 3-3 Extra Work

Add the following to the provisions of Subsection 3-3.1, "General":

The contractor shall proceed with extra work only upon written order from the Engineer. For such extra work the contractor shall receive payment as agreed upon in writing, or he shall be paid on force account. The contractor shall not exceed any of the quantities in the proposal unless prior authorization from the engineer is obtained in writing.

3-3.2.3 Markup.

3-3.2.3.1 Work by Contractor.

Replace the entire paragraph 3-3.2.3.1 Work by Contractor, with the following:

The following percentages shall be added to the Contractor's costs and shall constitute the markup for all overhead, insurance of any type and profits on extra work performed by the Contractor:

- | | |
|--|-----|
| (1) Labor | 15% |
| (2) Materials..... | 10% |
| (3) Equipment Rental | 10% |
| (4) Other Items and Expenditures | 10% |

To the sum of the costs and markups provided for this subsection, one percent shall be added as compensation for bonding. For all negotiated Change Orders the allowance for overhead and profit shall include full compensation for superintendence, insurance premiums, taxes, field office expense, extended overhead, home office overhead, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for in this Article.

3-3.2.3.2 Work by Subcontractor.

Delete the entire subsection 3-3.3.3.2 Work by Subcontractor and replace with the following:

When a subcontractor performs all or any part of the extra work, the markup established in subsection 3-3.2.3.1 shall be applied to the subcontractor's actual cost of such work, and shall constitute its only payment for all overhead, insurance of any type and profits. The Contractor shall receive an additional markup, not to exceed five (5) percent, for all its overhead, insurance of any type and profit on the "extra work" performed by the Subcontractor.

Subsection 3-5 Disputed Work

Add the following to the provisions of Subsection 3-5, "Disputed Work":

- A. In accordance with Public Contract Code Section 20104, and for the purposes of Paragraphs B only, the term "Defined Claim" shall mean a separate demand by the Contractor to the Owner of a value of \$375,000 or less, for any of the following: (a) a time extension, (b) payment of money or damages arising from work done by the Contractor pursuant to the Contract Documents and payment of which is not otherwise expressly provided for or the Contractor is not otherwise entitled to, or (c) an amount of payment which is disputed by the Owner.
- B. RESOLUTION OF DEFINED CLAIMS Pursuant to Sections 20104 et seq., of the Public Contracts Code, the provisions of this Paragraph B shall apply to all "Defined Claims," as such term is defined in Paragraph A (i.e., claims that are in the amount of \$375,000 or less).

Filing and Response to Defined Claim

The Defined Claim shall be in writing, include the documents necessary to substantiate the Defined Claim, and be filed with the Owner on or before the date of the final payment for the work.

If the Defined Claim is less than \$50,000, the new Owner shall respond in writing to the Defined Claim within 45 days of its receipt; or the Owner may request in writing within 30 days of receipt of the Defined Claim any additional documentation supporting the Defined Claim or relating to defenses or claims the Owner may have against the Contractor, and in such event the Owner's response shall be submitted to the Contractor within the later of 15 days after the receipt of the further documentation, or the time taken by the Contractor in producing the additional information.

If the Defined Claim is over \$50,000, the Owner shall respond in writing to the Defined Claim within 60 days of its receipt, or the Owner may request in writing within 30 days of receipt of the Defined Claim any additional documentation supporting the Defined Claim or relating to defenses or claims the Owner may have against the Contractor, and in such event the Owner's response shall be submitted to the Contractor within the later of 30 days after the receipt of the further documentation, or the time taken by the Contractor in producing the additional information or requested documentation.

Meet and Confer Regarding Defined Claim

If the Contractor disputes the Owner's written response, or if the Owner fails to respond within the prescribed time, to the Defined Claim, the Contractor may notify the Owner in writing within 15 days and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of the demand, the Owner shall schedule a meet and confer conference within 30 days. If the claim or any portion thereof remains in dispute following the meet and confer conference, the Contractor may file a claim pursuant to Government Code Section 900, et seq. For purposes of this Paragraph B, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits the Defined Claim until the time such Defined Claim is denied, including any period of time utilized by the meet and confer conference.

Procedures for Civil Actions Filed to Resolve Defined Claims

The following procedures shall apply to any civil action filed pursuant to this Paragraph B:

Non-Binding Mediation Within 60 days, but no earlier than 30 days, following the filing of responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator and shall be commenced within 30 days of the submittal and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.

Judicial Arbitration If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Section 1141.10, et seq., of the Code of Civil Procedure, notwithstanding Code of Civil Procedure Section 1141.11. The civil discovery procedures of Code of Civil Procedure Section 2016, et seq., shall apply, consistent with the rules

pertaining to judicial arbitration. In addition to the provisions of Code of Civil Procedure Section 1141.10, et seq., (a) arbitrators shall, upon stipulation of the parties, be experienced in construction law, and (b) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees, also pay the attorney's fees on appeal of the other party.

Interest on Award of Judgment In any suit filed pursuant to Paragraph (G)3.2, the Owner shall pay interest at the legal rate on any arbitration award or judgment, which interest shall begin to accrue on the date the suit is filed in a court of law.

- C. RESOLUTION OF CLAIMS OTHER THAN DEFINED CLAIMS The provisions of this Paragraph C shall apply to all claims that are not "Defined Claims," as such term is defined in Paragraph A (i.e., claims that are in excess of \$375,000.00).

Written Claim

If the Contractor is not satisfied with any action by the City Council to resolve the protest of any claim other than a Defined Claim, it shall file with the City Council, within fifteen (15) days after such determination, a written claim which shall comply with the requirements for a claim under Division 3.6 of Title 1 (commencing with Section 810) of the California Government Code. The City Council shall take action with respect to any such claim as provided in Division 3.6 of Title 1 of the Government Code. Denial of such claim by the City Council shall be a prerequisite to the institution of any legal proceeding challenging the action of the City Council. If the Contractor fails to file a claim within the time specified herein, it shall be deemed satisfied with the action of the City Council with respect to its protests, and such failure to file a claim shall be deemed to be a waiver of all claims and demands arising out of or relating to this Contract.

Limitation Period

Demand for Arbitration of any claim other than a Defined Claim shall be served upon the Owner within the time limits set forth in Division 3.6 of the California Government Code for commencement of legal proceedings against a local public agency.

Arbitration

Except as provided to the contrary herein, arbitration of any claim other than a Defined Claim may be initiated by the Contractor and shall be conducted in accordance with the provisions of California Code of Civil Procedure Sections 1280, et seq. The parties hereto agree that there shall be a single neutral Arbitrator who shall be selected in the following manner: (1) The Demand for Arbitration shall include a list of five names of persons acceptable to the Contractor to be appointed as Arbitrator. The Owner shall determine if any of the names submitted by Contractor are acceptable and, if so, such person will be designated as Arbitrator; (2) In the event that none of the names submitted by Contractor are acceptable to Owner or if for any reasons the Arbitrator selected in Step (1) is unable to serve, the Owner shall submit to Contractor a list of the five names of persons acceptable to Owner for appointment as Arbitrator to Contractor who shall in turn have 10 days in which to determine if one such person is acceptable; (3) If after Steps (1) and (2) the parties are unable to mutually agree upon a neutral Arbitrator, the matter of selection of an Arbitrator shall be submitted to the Los Angeles County Superior Court pursuant to Code of Civil Procedure Section 1281.6.

SECTION 4 - CONTROL OF MATERIALS

Subsection 4-1.3 Inspection Requirements

Add the following to the provisions of Subsection 4-1.3, "Inspection Requirements":

At the option of the Engineer, the source of supply of each of the materials shall be approved by the Engineer before delivery is started and before such material is used in the work. Representative preliminary samples of the character and quality prescribed shall be submitted by the contractor or producer of material to be used in the work, for testing or examination as desired by the Engineer. All tests of industry materials furnished by the contractor shall be made in accordance with commonly recognized industry standards or special methods and tests as prescribed in these specifications.

The Contractor shall furnish such samples of materials as are requested by the Engineer, without charge. No material shall be used until it has been approved by the Engineer. Samples will be secured and tested whenever necessary to determine the quality of material.

SECTION 5 - UTILITIES

Subsection 5-1 Location

Add the following to the provisions of Subsection 5-1, "Location":

Utilities for the purpose of these Special Provisions shall be considered as including but not limited to; pipelines; conduits; transmission lines; appurtenance of both public utilities and private industries, business, or individual; storm drains; sanitary sewers; and street lighting conduits.

The City has endeavored to locate and indicate on the drawings all underground utilities, facilities, and obstructions within the limit of the work under this contract or so nearly adjacent thereto as to interfere with the execution of the work. However, the accuracy and completeness of the utilities location indicated on the plans is not guaranteed. Sewer service lines, gas service connections, and street lights and traffic signal conduits may not be shown on the plans.

The contractor is responsible to determine the exact location of utilities and its service connections during construction. The contractor shall notify the City of the exact location of any utility or service connection which is not shown or incorrectly shown on the plans.

The contractor shall be expected to maintain liaison with the affected utility company representatives, and shall notify them prior to beginning of the job and each time the particular utility is or could possibly be affected at least 24 hours in advance:

1.	Verizon Company	818-365-3128
2.	Edison Company	800-611-1911
3.	Southern California Gas Company	818-701-3342
4.	San Fernando Water Department	818-898-1293
5.	L.A. City Municipal Services	800-342-5397
6.	L.A. Metropolitan Water Dist.	626-844-5610
7.	Time Warner Cable	818-700-6100

- 8. Pacific Pipeline Co.
- 9. Frontier

800-987-4737
818-365-3128

SECTION 6 - PROSECUTION, PROGRESS, AND ACCEPTANCE OF THE WORK

Subsection 6-1 Construction Schedule and Commencement of the Work

Add the following to the provisions of Subsection 6-1, "Construction Schedule and Commencement of the Work":

Construction work is limited to normal working hours unless prior written approval is obtained from the Engineer. Normal working hours for construction are between 7 a.m. and 4 p.m.

The Contractor shall begin work within three (3) days of the commencement date stated in the Notice to Proceed and shall diligently prosecute the same to completion before the time required to complete the work stated in the Contractor's Proposal expires.

Subsection 6-6 Delays and Extensions of Time

Add the following to the provisions of Subsection 6-6, "Delays and Extensions of Time":

The Contractor shall not be assessed with liquidated damages nor the cost of engineering and inspection during any delay in the completion of the work caused by Acts of God or of war, acts of the City, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather or delays of subcontractors due to such causes, provided that the Contractor shall within ten (10) days from the beginning of any such delay notify the Engineer in writing of the cause of delay, who shall ascertain the facts and the extent of the delay, and his findings of the facts thereon shall be final and conclusive.

Subsection 6-7 Time of Completion

Add the following to the provisions of Subsection 6-7, "Time of Completion":

Where a single shift is worked, eight (8) consecutive hours between 7 a.m. and 5 p.m. shall constitute a day's work at straight time for all workers. Forty (40) hours between Monday, 7 a.m., and Friday, 5 p.m. shall constitute a week's work at straight time. Holidays as herein referred to shall be deemed to be:

- | | |
|---------------------------|--------------------------|
| ▶ New Year's Day | ▶ Labor Day |
| ▶ Martin Luther King Day | ▶ Veterans Day |
| ▶ Washington's Birthday | ▶ Thanksgiving Day |
| ▶ Cesar Chavez's Birthday | ▶ Day after Thanksgiving |
| ▶ Memorial Day | ▶ Christmas |
| ▶ Independence Day | |

Subsection 6-8 Completion, Acceptance and Warranty

Add the following to the provisions of Subsection 6-8, "Completion, Acceptance and Warranty":

Final inspection and recommendation of completion by the Engineer does not constitute acceptance of the project. The contractor remains responsible for the project until acceptance of the work by the City Council.

Subsection 6-9 Liquidated Damages

Add the following to the provisions of Subsection 6-9, "Liquidated Damages":

It is agreed by the parties to the contract that liquidated damages for work under this contract is the sum of One Thousand Six Hundred (\$1,600.00) per day for each and every day's delay beyond the time prescribed to complete the work. Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, Contractor agrees that the City of San Fernando may deduct the amount thereof from any money due or that may become due the Contractor under the contract.

It is further agreed that in case the work called for under the contract is not finished and completed in all parts and requirements within the time specified, the City Council shall have the right to extend the time for completion or not, as may seem best to serve the interest of the City; and if it decides to extend the time limit for the completion of the contract, it shall further have the right to charge to the Contractor, his heirs, assigns or sureties; and to deduct from the final payment for the work, all or any part, as it may deem proper, of the actual cost of engineering, inspection, superintendence, and other overhead expenses which are directly chargeable to the contract, and which accrue during the period of such extension, except that the cost of final surveys and preparation of final estimates shall not be included in such charges.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

Subsection 7-2 Labor

Add the following to the provisions of Subsection 7-2, "Labor":

Attention is directed to the provisions in Sections 1777.5 (Chapter 1411, Statutes of 1968) and 1777.6 of the Labor Code concerning the employment of apprentices by the contractor or any subcontractor under him.

Section 1777.5, as amended, requires the contractor or subcontractor employing tradesmen in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the contract. The ratio of apprentices to journeymen in such cases shall not be less than one to five except:

1. When unemployment in the area of coverage by the joint apprenticeship committee has exceeded an average of 15 percent in the 90 days prior to the request for certificate, or
2. When the number of apprentices in training in the area exceeds a ratio of one to five, or
3. When the trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis statewide or locally, or
4. When the contractor provides evidence that he employs registered apprentices on all of his contracts on an annual average of not less than one apprentice to eight journeymen.

The contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

The contractor and any subcontractor under him shall apply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

Subsection 7-2.2 Prevailing Wages

Add the following to the provisions of Subsection 7-2.2, "Prevailing Wages":

Eight hours constitutes a legal days' work. The contractor shall forfeit, as a penalty to the City of San Fernando, \$50.00 for each workman employed in the execution of the contract by the contractor is required or permitted to work more than eight hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of the Labor Code, and in particular, Sections 1810 to 1815, thereof, inclusive, except that work performed by employees of contractors in excess of eight hours per day, and 40 hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight hours per day at not less than one-and-one-half times the basic rate of pay as provided in said Section 1815.

The contractor shall comply with Labor Code Section 1775 in accordance with said Section 1775, the contractor shall forfeit as a penalty to the City of San Fernando, \$50.00 for each calendar day or portion thereof, for each workman paid less than the stipulated prevailing rates for such work or craft in which such workman is employed for any work under the contract by him or by any subcontractor under him in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each workman for each calendar day or portion thereof for which each workman was paid less than the stipulated prevailing wage rate shall be paid to each workman by the contractor.

In accordance with the provisions of Section 1770 to 1777 inclusive, of the Labor Code of the State of California, the City Council of San Fernando has adopted the general prevailing rates of per diem wages applicable to the work to be done as have been determined by the Director of the Department of Industrial Relations for the State of California.

Subsection 7-3 Insurance

Add the following to the provisions of Subsection 7-3, "Insurance":

The public liability insurance shall include protection from claims caused by automobiles, trucks, or other vehicles of the contractor or any subcontractor while in use both within and outside the contract premises. The property damage insurance shall cover damage or destruction of any and all property other than that which is owned, leased, or in the care, custody or control of the Contractor or any subcontractor, with the liability limit applying to any one (1) accident, disaster

or claim. All coverage provided by Contractor shall be considered primary and shall be completely exhausted before City coverage, if any and to be considered secondary, is exercised.

By appropriate endorsement, such policies of insurance required shall name the City of San Fernando as additionally insured with the Contractor with respect to the construction project described in these specifications and shall provide that such insurance coverage shall not be canceled or reduced without thirty (30) days prior written notice to the City of San Fernando. Said endorsement shall be a separate document. Certificates of the insurance carried evidencing such insurance coverage shall be delivered to the City of San Fernando concurrently with the execution of the contract by the Contractor.

Subsection 7-5 Permits

Add the following to the provisions of Subsection 7-5, "Permits":

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

Pursuant to State Bill 854, the following new requirements apply to all public works projects:

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded. The website for contractor registration with the Department of Industrial Relations (DIR) is <https://efiling.dir.ca.gov/PWCR>; the annual non-refundable fee, valid July 1 through June 30 (state fiscal year), is \$300.

Contractors who are awarded a public works project must submit electronic payroll records to the DIR's Compliance Monitoring Unit (CMU) in addition to providing wet-ink original copies to the City or its designated labor compliance enforcement officer.

Subsection 7-8.1 General

Add the following to the provisions of Subsection 7-8.1, "Cleanup and Dust Control":

All excess dirt and construction debris shall be hauled away from job site each day.

Subsection 7-9 Protection and Restoration of Existing Improvements

Add the following to the provisions of Subsection 7-9, "Protection and Restoration of Existing Improvements":

Existing improvements damaged or removed without written authorization shall be replaced by the contractor at no cost to the City. The contractor shall leave the work area in the same or better condition as compared to before beginning contract work.

Subsection 7-10 Safety

7-10.1 Traffic and Access. Subsection 7-10.1 is hereby added to Subsection 7-10. The Contractor shall notify the occupants of all affected properties at least 48 hours prior to any temporary obstruction of access. Vehicular access to property line shall be maintained, except as required for construction for a reasonable period of time. No overnight closure of any driveway will be allowed, except as permitted by the Engineer.

At least one 12-foot wide traffic lane shall be provided for each direction of travel on all streets at all times, except as permitted by the Engineer. The traffic lanes shall be maintained on pavement and shall remain unobstructed.

Clearances from traffic lanes shall be 5 feet to the edge of any excavation and 2 feet to the face of any curb, pole, barricade, delineator, or other vertical obstruction.

One 4-foot wide paved pedestrian walkway shall be maintained in the parkway area on one side of each street.

All drop-offs on the pavement over 1 inch in height that are perpendicular to the direction of traffic, including driveway approach, and will remain overnight shall be ramped with temporary AC pavement. The cost to construct temporary AC pavement shall be included in price paid for other items of work, and no additional payment thereof.

All open trenches shall be covered with non-skid steel plates or temporary asphalt pavement before and after work hours, unless otherwise directed by the Engineer.

7-10.2 Street Closures, Detours, Barricades. Subsection 7-10.2 is hereby added to Subsection 7-10 Street closures will not be allowed, except as specifically permitted by the Engineer.

In the event that any street must be closed, request must be received by the Engineer for approval and the following parties shall be notified at least 48 hours in advance.

- | | | |
|----|-------------------------|--------------|
| a. | Public Works Department | 818-898-1293 |
| b. | Police Department | 818-898-1267 |
| c. | Fire Department | 818-989-8561 |
| d. | Mauran Ambulance | 818-365-3182 |

The Contractor shall prepare any traffic control or detour plans that may be required as directed by the Engineer.

Lane transitions shall conform to the California MUTCD latest edition, "Transition Area."

Temporary traffic channelization shall be accomplished with delineators. Temporary striping will not be allowed unless specifically permitted by the Engineer. The Contractor shall prepare any plans that may be required for temporary striping to the satisfaction of the Engineer. In no event will temporary striping be allowed on finished pavement surfaces which are to remain.

The Contractor shall schedule an employee to police the temporary delineators and barricades within the travel way during weekday, nonworking hours and over Saturdays, Sundays, and holidays. Any corrective work required to be done by AGENCY forces shall be back charged to

the Contractor based on the actual costs, plus AGENCY overhead and withheld from the final payment.

At least 7-working days prior to commencing work, the Contractor shall submit his final construction schedule to the Engineer for approval. This schedule shall allow affected people ample "on-street" parking within a reasonable distance from their homes and businesses. Requests for changes in the schedule shall be submitted by the Contractor to the Engineer for approval at least 48 hours prior to the scheduled operations on the streets affected.

A STREET SHALL NOT BE SCHEDULED FOR SURFACING ON TRASH PICKUP DAY.

All work shall be scheduled so that all areas are open to traffic between 4p.m. and 7a.m. the following day.

Traffic shall be directed through the project with warning signs, cones and flag persons in a manner that provides maximum safety for traffic and the workers, and the least interruption of the work.

7-10.6 Protection of the Public. Subsection 7-10.6 is hereby added to Subsection 7-10 of the Standard Specifications as follows:

It is part of the service required of the Contractor to make whatever provisions are necessary to protect the public. The Contractor shall use foresight and shall take such steps and precautions as his operations warrant to protect the public from danger, loss of life, or loss of property which would result from interruption or contamination of public water supply, from interruption of other public service, or from the failure of partly completed work or partially removed facilities. Unusual conditions may arise on the work which will require that immediate and unusual provisions be made to protect the public from danger or loss or damage to life and property due directly or indirectly to prosecution of work under this contract.

Whenever, in the opinion of the Engineer, an emergency exists against which the Contractor has not taken sufficient precaution for the public safety, protection of utilities and protection of adjacent structures or property which may be damaged by the Contractor's operations and when, in the opinion of the Engineer, immediate action shall be considered necessary in order to protect the public or property due to the Contractor's operations under this contract, the Engineer will order the Contractor to provide a remedy for the unsafe condition. If the Contractor fails to act on the situation within a reasonable time period, the Engineer may provide suitable protection to said interests by causing such work to be done and material to be furnished as, in the opinion of the Engineer, may seem reasonable and necessary.

The cost and expense of said labor and material, together with the cost and expense of such repairs as are deemed necessary, shall be borne by the Contractor. All expenses incurred by the AGENCY for emergency repairs will be deducted from the progress payments and the final payment due to the Contractor. However, if the AGENCY does not take such remedial measures, the Contractor is not relieved of the full responsibility for public safety.

Temporary "No Parking" signs shall be posted at least 24 hours, but no more than 48 hours, in advance of the work. The signs shall be placed no more than 76 meters (250 feet) apart on each side of the street and at shorter intervals if conditions warrant. Signs shall be posted only for the areas necessary to accomplish the work. The Contractor shall provide the signs and will be responsible for adding the dates and hours of closure to the signs, removal of the signs, and

furnishing and placing of barricades, if necessary, for posting of signs. All signs shall be removed within 48 hours after the effective date.

Payment for all the provisions under Section 7-10 Safety shall be included in the lump sum price bid for traffic control and no separate payment will be allowed thereof.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

No field offices for AGENCY personnel shall be required; however, the AGENCY's personnel shall have the right to enter upon the project at all times and shall be admitted to the offices of the Contractor if so provided by the Contractor for his own personnel.

SECTION 9 - MEASUREMENT AND PAYMENT

Subsection 9-3 Payment

Add the following to the provisions of Subsection 9-3, "Payment":

It is mutually agreed between the parties to the contract that no certificate given or payments made under the contract, except the final project acceptance, shall be conclusive evidence of the performance of the contract, either wholly or in part, against any claim of the party of the first part, and no payment shall be construed to be an acceptance of any defective work or improper materials.

The Contractor further agrees that the payment of the final amount due under the contract, and the adjustment and payment for any work done in accordance with any alterations of the same, shall release the City of San Fernando, City Council, and the Engineer from any and all claims of liability on account of work performed under the contract or any alteration thereof.

Subsection 9-3.2 Partial and Final Payment

Add the following to the provisions of Subsection 9-3.2, "Partial and Final Payment":

The City shall, once in each month, cause an estimate in writing to be made by the Engineer of the total amount of work done and the acceptable materials furnished and delivered by the Contractor on the ground and not used, at the time of such estimate; and the value thereof. The City of San Fernando shall retain five percent (5%) of such estimated value of the work done and fifty percent (50%) of the value of the materials so estimated to have been furnished and delivered and unused as aforesaid as part security for the fulfillment of the contract by the Contractor, and shall monthly pay the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the contract. No such estimate or payment shall be required to be made, when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the contract, or when in his judgment, the total value of the work done since the last estimate amounts to less than Three Hundred Dollars (\$300.00).

The Contractor may be required to submit updated work schedules and current record drawings (as-built) with requests for progress payments.

TECHNICAL PROVISIONS
PART 2
CONSTRUCTION MATERIALS

SECTION 200 – ROCK MATERIALS

200-2 UNTREATED BASE MATERIALS

200-2.1 General. Untreated base shall be crushed miscellaneous base.

200-2.2 Crushed Aggregate Base.

200-2.2.3 Quality Requirements. The minimum R-value requirement will not be waived.

SECTION 201 - CONCRETE, MORTAR, AND RELATED MATERIALS

201-1 PORTLAND CEMENT CONCRETE

201-1.1 Requirements

201-1.1.1 General. The same brand type, source of cement, and aggregate shall be used for all portland cement concrete.

201-1.1.2 Concrete Specified by Class and Alternate Class. Concrete used for sewer manholes shall be Class 560-C-3250.

Fly ash shall not be used.

201-4.1.1 General. Concrete curing compound shall be Type 2 for all underground structures.

SECTION 203 - BITUMINOUS MATERIALS

203-6 ASPHALT CONCRETE

203-6.1 General. Asphalt concrete material used for remove and replace repairs within the roadway shall be Class and Grade C2-PG 64-10.

203-6.4 Asphalt Concrete Mixtures

203-6.4.1 General. Acceptance as used in this Subsection 203-6.4 shall mean acceptance of material after spreading only. Acceptance of material in production shall be subject to all quality requirements based on sampling and testing as specified.

SECTION 206 - MISCELLANEOUS METAL ITEMS

206-2.5 Standard Manhole Step. Subsection 206-2.5 is hereby added to Section 206.

Manhole steps shall be constructed as specified in the Los Angeles County Department of Public Works Standard Plan No. 2015-1.

206-3.3.2 Manhole Frame and Cover Sets. Sewer manhole frame and cover sets shall be constructed as specified in the SPPWC Standard Drawing No. 210-2.

Sewer manhole frame and cover shall be the "locking type" as manufactured by Alhambra Foundry Company, NEEMA Foundry, or equal. All requirements of the specifications will be subject to sampling and testing per Section 4 of the Standard Specifications.

SECTION 207 - PIPE

207-8 Vitrified Clay Pipe (VCP)

207-8.1 General. All vitrified clay pipe and fittings shall be the type designated as "extra strength."

207-8.2.1 General. The words "extra strength" or the symbol "E'S" shall be clearly marked on all pipe and fittings to identify the class of pipe.

207-17 PVC Plastic Pipe. Section 207-17.1 General is modified as follows:

Polyvinyl chloride plastic pipe shall meet the applicable requirements of ASTM D1784, D2241, D3034 and F679. It shall also be of sufficient dimensional relationship to minimize elongation while remaining flexible during proper handling and installation without kinking, splitting, rupture or breaking while being pulled into the insertion or access pit and through the burst host pipe annulus behind the bursting head. The minimum wall thickness of the pipe shall meet minimum DR 18 criteria. All piping shall conform to cell classification 12454 per ASTM D1784 and have an inner wall of light color. The pipe shall be homogeneous throughout and shall be free of visible cracks, holes, blisters, foreign material, or other deleterious faults.

207-17.3 Joining Systems. Section 207-17.3 is replaced with the following:

All new PVC replacement pipe shall be assembled and joined at the project site using the butt-fusion method to provide a strong leak proof joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures shall be used in strict compliance with the manufacturer's specifications and recommendations.

207-25 HDPE High Density Polyethylene Pipe. Subsection 207.25 is hereby added to Section 207.

Polyethylene plastic pipe shall be high-density polyethylene pipe conforming to the applicable requirements of ASTM F714 Polyethylene (PE) Plastic Pipe (SDR-

PR) based upon 'iron pipe' diameter or AWWA C906, ASTM D1248 and ASTM D3350. It shall also be of sufficient dimensional relationship to minimize elongation while remaining flexible during proper handling and installation without kinking, splitting, rupture or breaking while being pulled into the insertion or access pit and through the burst host pipe annulus behind the bursting head. The minimum wall thickness of the pipe shall meet minimum 17 SDR of pipe. All piping shall conform to minimum cell classification of 345434 D or E (inner wall of light color). The pipe shall be homogeneous throughout and shall be free of visible cracks, holes, blisters, foreign material, or other deleterious faults.

207-25.3 Joining Systems. Section 207-25.3 is hereby added to Section 207.

All new HDPE replacement pipe shall be assembled and joined at the project site using the butt-fusion method to provide a strong leak proof joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures shall be used in strict compliance with the manufacturer's specifications and recommendations.

TECHNICAL PROVISIONS

PART 3

CONSTRUCTION METHODS

SECTION 300 - EARTHWORK

300-1 CLEARING AND GRUBBING

300-1.1 General.

The last paragraph of Subsection 300-1.1 is hereby deleted and replaced with the following:

Tree branches which hang within 13.5 feet above finished roadway grade or within 9 feet above finished sidewalk or parkway grade shall be removed to the branch collar in accordance with the current pruning standards of the International Society of Arboriculture (ISA). The Contractor shall remove additional tree branches, under the direction of the Engineer, in such a manner that the tree will present a balanced appearance. No paint or tree sealant shall be applied to the resulting scars. All pruning shall be done under the supervision of an ISA Certified Arborist in the City's employ.

The following is hereby added to Subsection 300-1.1:

All the root pruning required to place or replace walks, curbs, curbs and gutters, or other permanent facilities shall be limited to the minimum amount necessary to set forms.

All roots two (2) inches and larger shall be cut with sharp tool such as axe or chainsaw. No roots shall be broken off by trenching or other heavy equipment.

No root shall be removed within a five (5) foot diameter of the tree trunk measured at 4 feet, 9 inches above grade without the express written permission of the AGENCY. Any such root removed without the AGENCY's written permission may create a hazardous condition for which the Contractor shall be liable.

Should the Contractor create a hazardous condition in the sole judgment of the Engineer, the Contractor shall remove the tree and replace it with a specimen of the same species and value at the Contractor's expense.

All significant root pruning (3-inch diameter and larger) shall be performed under the direct supervision of an ISA Certified Arborist in the Contractor's employ.

300-1.3 Removal and Disposal of Materials

300-1.3.2 Requirements. The text of Subsection 300-1.3.2(a), (b) and (c) of the Standard Specifications is hereby deleted.

300-2 UNCLASSIFIED EXCAVATION

300-2.1 General. Unclassified excavation shall consist of all excavation, including roadways, bituminous pavement, and concrete pavement, curb, walk, gutters, cross gutters, driveways, and access ramps.

300-2.1.1 Requirements. Subsection 300-2.1.1 is hereby added to Section 300 of the Standard Specifications as follows:

1. Bituminous Pavement. Bituminous pavement shall be removed to neatly sawed edges. Saw cuts shall be to a minimum depth of 3 inches. Where only the surface of existing bituminous pavement is to be removed, the method of removal shall be approved by the Engineer, and a minimum laying depth of 1 inch of new pavement material shall be provided at the join line. Where bituminous pavement adjoins a trench, the edges adjacent to the trench shall be saw cut to neat straight lines before resurfacing to ensure that all areas to be resurfaced are accessible to the rollers used to compact the subgrade or paving materials.

Bituminous pavement on curb and gutter, sidewalk or drive approaches shall be removed by heating with a torch to soften the pavement without creating smoke. Softening shall be performed until the bituminous material can be easily scraped away down to the underlying PCC surface. The blade used for scraping shall be maintained straight along its edge and clean. Bituminous material shall be scraped in this manner until it is completely removed.

2. Concrete Curb, Walk, Gutter, Cross Gutters, Driveways, and Access Ramps. Concrete shall be removed to neatly sawed edges with saw cuts made to a minimum depth of 1½-inches. Concrete sidewalk, or driveway to be removed shall be neatly sawed in straight lines either parallel to the curb or at right angles to the alignment of the sidewalk. No section to be replaced shall be smaller than 30 inches in either length or width. If the saw cut in sidewalk, access ramp, or driveway would fall within 30 inches of a construction joint, expansion joint, or edge, the concrete shall be removed to the joint or edge, except that where the saw cut would fall within 12 inches of a score mark, the saw cut shall be made in and along the score mark. Curb and gutter shall be sawed to a depth of 1½-inches on a neat line at right angles to the curb face.

300-2.7 Selected Material. The text of Subsection 300-2.7 of the Standard Specifications is hereby deleted and replaced with the following:

Selected materials encountered in the excavations within the project limits that meet the specifications for base material, trench bedding or backfill, topsoil, or other specified materials shall be used as shown on the Plans, in the Specifications, or as directed by the Engineer. Topsoil excavated may be considered only for the purpose of backfilling areas to be planted.

300-2.9 Payment.

The first sentence of Subsection 300-2.9 of the Standard Specifications is hereby deleted and replaced with the following:

Payment for unclassified excavation performed as part of the work for "remove and construct" bid items, including removal of extra AC thickness shall be paid for as part of the work for that item, and no additional compensation will be allowed.

300-4 UNCLASSIFIED FILL

300-4.9 Measurement and Payment. The text of Subsection 300-4.9 of the Standard Specifications is hereby deleted and replaced with the following:

Full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in unclassified fill construction shall be considered as included in the price paid for "remove and construct" bid item and shall include full compensation for the cost of all grading, shaping, compacting or consolidating and extra fill, if required, or other work that is required under this subsection. No additional payment will be made for unclassified fill.

SECTION 301 – SUBGRADE PREPARATION, TREATED MATERIAL, AND PLACEMENT OF BASE MATERIALS

301-1 SUBGRADE PREPARATION

301-1.3 Relative Compaction. The first paragraph of Subsection 301-1.3 of the Standard Specifications is hereby deleted and replaced with the following:

When pavement is to be placed directly on subgrade material or when base or subbase material, curb, gutter, alley pavement, driveways, or sidewalks are to be placed on the subgrade material, the top 6 inches of such subgrade material shall be compacted to a relative compaction of 90 percent.

SECTION 302 - ROADWAY SURFACING

302-5 ASPHALT CONCRETE PAVEMENT

302-5.1 General. The last sentence of Subsection 302-5.1 of the Standard Specifications is hereby deleted and replaced with the following:

Cracks, joints, and holes to be filled shall be cleaned after cold milling.

AC for AC pavement repairs and for PCC pavement repairs shall be placed the same day as removals are performed.

302-5.4 ASPHALT TACK COAT

Asphalt tack coat material shall be Thermoplastic Polymer Modified HPS No Track Tack (No Track Tack) by Paramount Petroleum, or an approved equal.

This item shall consist of full coverage of No Track Tack to be applied as tack coat between all contact surfaces for overlay and patch repairs. The Material is to be applied at 325 to 425 degrees F with a distributor truck at typical application rates of 0.08 to 0.15 gal/square yard. The exact application rate will be determined by surface conditions at time of application.

The Thermoplastic Polymer Modified HPS No Track Tack shall meet the following criteria:

Test	Method	Typical Properties	Specification
Digested whole tire rubber		2	1-3
Softening Point Degree F	D36	165	160 Min
Penetration @ 77 Deg. F 100g, 5 sec, Dmm	D-5	16	10 Min
Brookfield Viscosity @ 275 Deg. F cPs*	D4402	975	3000 Max
Brookfield Viscosity @ 350 Deg. F cPs*	D4402	185	300 Max

*BKF LV II, spdI #21 @ 20 RPM

The tack coat shall be applied to the existing pavement on the areas to receive the ARHM or AC, or slurry where specified. The Engineer shall approve the exact rate and number of applications. Two heavy coats of SS 1h shall be applied to vertical joints for patching. All contact surfaces with new asphalt shall be painted tack coat immediately before the asphalt concrete is placed.

The tack coat shall be applied as specified in Subsection 302-5.4 of the Standard specifications and these special Provisions. Thermoplastic

Polymer Modified No Track Tack shall be applied only when the existing surface is dry and the atmospheric temperature is 50 deg. F and rising. NO material shall be applied when rain is imminent.

The Thermoplastic Polymer Modified No Track Tack shall be heated slowly to 325-425 degrees F. At no time shall the product be heated above 450 degrees F. The product shall be applied through a distributor truck equipped with a heating unit and shall maintain tack coat at or above 325 degrees F. It shall be equipped with a full circulating spreader bar and pumping system capable of applying the Thermoplastic Polymer Modified No Track Tack material within + 0.01 gallons per square yard tolerance of specified application rate and give uniform covering of the surface to be treated. The distributor shall also include a tachometer, pressure gauge, and volume measuring device and thermometer. The application rates shall be 0.15 gallons per square yard for all ARHM or AC overlay and slurry seal (where specified) or as otherwise directed by the Engineer. If the pavement temperature reaches over 130 degrees F, the application rate will be reduced to minimum 0.08 gallons per square yard on overlay applications.

Paving asphalt shall not be applied until the preparation of the existing surface has been completed and thoroughly cleaned, and then only so far in advance of placing the asphalt concrete overlay as permitted by the Engineer. The No Track Tack shall not be left exposed overnight.

Existing concrete curb faces and all concrete not to be overlaid shall be protected against disfigurement from the asphalt tack coat. Residue of the material shall be removed from concrete surfaces to return the concrete to its original condition unless otherwise directed by the Engineer.

Excessive tracking of tack coat onto adjacent pavements will require immediate clean-up. If significant amounts of asphalt tack coat are tracked onto existing adjacent pavements, the contractor shall be required to clean it off to the satisfaction of the City Engineer or provide a slurry seal to restore the pavement at their own expense. This shall apply to the entirety of asphalt haul routes to and from the project sites.

On all vertical joints of AC patching, apply SS-1H tack coat uniformly in two coats of .20 gallons per square yard each with full "break" in between, or .20 gallons per square yard of HPS No Track Tack uniformly in one coat. Tack coat shall not be applied when the temperature of the surface to be tacked is below 40° F in the shade. A tack coat shall be applied at the following:

1. Pavement joints;
2. Areas where new pavement meets existing pavements;
3. Areas where lift sections from pavement placed on different days meet;

4. Trenches;
5. Areas where existing striping has been sandblasted; and
6. Raised valves and manhole covers.

302-5.5 Distribution and Spreading. Contractor shall provide 20-foot long automatic screed control on both sides of the paving machine for all paving with paving machine, as directed by Engineer.

The asphalt concrete as delivered shall be deposited directly into the hopper of the spreading and finishing machine. Truck transfer and bottom-dump trucks are not allowed.

Each paving machine used will require a paving foreman for each machine along with a full set of rollers as specified and two rakers and one shoveler laborer at a minimum.

302-5.6 Rolling. Rolling along a joint shall be such that the widest part of the roller is on the hot side of the joint.

Rubber tire rollers shall be used on any leveling course.

Three rollers shall be provided for installation of AC greater than 200 tons per hour, regardless of thickness.

302-5.7 Joints. Join lines between successive runs shall be within 6 inches of lane lines or center of street or a minimum of 14 feet outside of the outer most lane line or center of street, or 5 to 6 feet from a lane line or center of street and within a lane. The joint pattern for all pavement layers shall be submitted in writing to the Engineer for review and approval 2 weeks in advance of the first lift of pavement to be placed. No exceptions to the specified requirements for joints shall be anticipated, and the Engineer's decision shall be final.

302-5.8 Manholes (and Other Structures). Asphalt-rubber hot mix (ARHM) Class C or D, shall be used as final cap around adjusted manholes.

Manholes shall be constructed or modified in accordance with the L.A. County Engineer standards. Manholes shall be pre-cast concrete per SPPWC Standard Plan No. 200-2.

302-5.9 Measurement and Payment.

Compensation to provide all the equipment to the site and operated as specified, including all rollers specified regardless of rolling pattern elected by Contractor, shall be considered included in the bid item price for AC or ARHM material.

Measurement and Payment for Asphalt Tack Coat shall be considered as included in the contract prices bid for items requiring its use and no additional compensation shall be allowed therefor.

SECTION 306 - OPEN TRENCH CONDUIT CONSTRUCTION

306-1 General. Add the following

306-1.1 Trench Excavation

306-1.1.1 General.

Excavations for appurtenant structures, such as but not limited to manholes, transition structures, junction structures, vaults, valve boxes, catch basins, thrust blocks, and boring pits shall, for the purpose of shoring and bracing, be deemed to be in the category of trench excavation.

Excavation shall include the removal of all excess excavated materials and all water and materials of any nature, which interfere with the construction work.

When the actual elevation or position of any existing pipe, conduit, or other underground appurtenances cannot be determined without excavation, the Contractor shall excavate and expose the existing improvement at the location shown on the Plans. The Engineer shall be given the opportunity to inspect the existing improvement when it is exposed. Any adjustments in line or grade, which may be necessary to accomplish the intent of the Plans, shall be made. Such excavation shall be considered as part of the excavation necessary for the work.

Removal and replacement of curb or curb and gutter shall be minimum 8 feet in length and shall span to any existing crack or joint within 8 feet of the minimum length span. If joins between existing and replaced spans are made with a dowel epoxied in place or with an epoxy joint, then the existing adjacent minimum length to crack or joint may be reduced to 3 feet.

306-1.1.2 Maximum Length of Open Trench.

Except by permission of the Engineer, the maximum length of open trench where prefabricated pipe is used shall be the distance necessary to accommodate the amount of pipe installed in a single day.

306-1.1.5 Removal and Replacement of Surface Improvements. Bituminous pavement and other surface improvements removed in connection with construction shall be removed in accordance with Subsection 300-2 of the Standard Specifications and these Special Provisions and reconstructed in accordance with Section 302 or Subsection 303-5 of the Standard Specifications.

306-1.1.6 Bracing Excavations.

(a) General.

Within this section the term 'Department' when referenced means the State of California, Department of Industrial Relations.

The Contractor shall be fully responsible for securing the design and the furnishing and installing, of adequate shoring, fencing and covers to protect all excavations from slides, cave-ins, and the public from hazard conditions. The excavations and shoring's; therefore, shall be such as to protect all existing improvements and utilities from any damage and to be fully compatible with all requirements for traffic and access and the safe performance of the work.

Except as otherwise specified herein below, excavations 5 or more feet in depth shall be shored such that the sides will be supported in accordance with the requirements set forth in LACDPW Standard Plan 3090-1. Where the use of shields are proposed in lieu of shoring, their use shall be in accordance with Standard Plan 3090-1 and shall be subject to restrictions shown thereon. The restrictions on the use of shields, when a utility is in Zone A, as shown on the Standard Plan, may be waived provided that: (1) the Contractor submits written approval from the owner of the utility for his proposed construction method; and (2) the Contractor complies with any support or protection method the utility company requires and submits utility requirements to the Department for enforcement.

Shoring systems and shields shall be designed by a Civil or Structural Engineer registered as such by the State of California. The design shall be based on "Kw" values and soil parameters not less than those specified in the Special Provisions plus a uniform surcharge of at least 72 p.s.f. from the walls of the trench. If these items are not included in the Special Provisions, they shall be determined by the designer of the shoring system. Structural steel design shall be in accordance with the current edition of the AISC Manual for Steel Construction. Timber design shall be in accordance with National Specification for Stress-Grade Lumber and Its Fastenings. Allowable stresses specified in the listed publications may be increased by one-third. The maximum allowable timber flexural stress shall not exceed 2,000 pounds per square inch. This includes the one-third increase.

Unattended excavations shall have public protection measures as shown on LACDPW Standard Plan 6008-1.

Excavations 5 or more feet in depth for catch basin and connector pipe may be shored with a support system designed in accordance with the criteria set forth on LACDPW Standard Plan 3090-1 or with a system that meets the requirements in Paragraph 1541 of the Construction Safety Orders of the State of California, Department of Industrial Relations, except that where aluminum rails or walers are

used for hydraulic shoring, they shall be heavy duty. Use of shields shall be as specified above. If the support system is designed in accordance with LACDPW Standard Plan 3090-1, the plans shall be prepared by a Civil or Structural Engineer, registered as such in the State of California. The design shall be based on "Kw" values not less than those specified in the Special Provisions or, if they are not included in the Special Provisions, they shall be determined by the designer of the shoring system.

Excavations less than 5 feet in depth need not be shored unless they are made at the locations or in the types of soil where hazardous ground movement is encountered, in which case the excavations shall be shored as specified hereinabove.

The criteria given on LACDPW Standard Plan 3090-1 and in the Special Provisions are MINIMAL for the conditions shown thereon. In addition to shoring the excavations as specified above, it shall be the Contractor's responsibility to provide any and all additional shoring required to support loads which may exceed those derived by using the criteria set forth on said plans. It shall also be the Contractor's responsibility to provide adequate shoring for the protection of existing improvements in the vicinity of any excavation. The design and details of the shoring system, as submitted, shall reflect the additional shoring necessary to provide for these loads and the required protection. The Contractor shall be solely responsible for any damages which may result from his failure to provide adequate shoring to support the excavations under any and all of the conditions of loading which may exist or which may arise during the construction of the project.

The provisions of this subsection shall not apply to the support of excavations required for tunneling, boring, jacking, or other similar underground excavations. However, shoring for jacking pits or similar open excavations used in connection with such work shall be governed by the requirements included in these provisions. Support of excavations for tunnels shall be in accordance with the Special Provisions and support of excavations for boring, jacking, or other similar underground excavations shall be in accordance with the Tunnel Safety Orders of the State of California, Department of Industrial Relations. Design calculations and details for the excavation support system for tunnels, including pilot tunnels utilized in jacking operations, shall be submitted to the Department for acceptance. Details of the submittal shall be the same as outlined herein below for open cut shoring systems.

Prior to the beginning of work, the Contractor shall designate, in writing, to the Department someone whose responsibility it is to supervise the installation and removal of sheeting, shoring, and bracing.

The Contractor's attention is directed to the provisions of the paragraph entitled "Examination of Site, Plans, and Specifications" in the Instructions to Bidders. The Contractor shall make no claim against the Department for extra compensation for changes in the method of shoring excavations, which may be required because of lack of knowledge of the character of the project work.

Prior to beginning excavations requiring shoring, as specified hereinabove, the Contractor shall prepare and submit to the Department for review details of his proposed shoring system on reproducible drawings and three prints each of data sheets showing the reaches, design criteria, calculations, sketches, sequence of placement and removal, and other data required in order to shore the excavation for the appropriate cases of shoring expected to be used on this project. Drawing and calculations shall bear an original Signature of the Registered Engineer.

Where shields are to be used, the reproducible shield plans shall include a typical cross section of the proposed conduit showing adjacent utilities. If a previously approved shield is to be used, submittal of calculations for the shield are not required if the current calculated load does not exceed the load for which the shield was previously approved. If it is requested that the limitation on the use of shields in the vicinity of existing utilities be waived, the submittal also shall include the written statements from the affected utility companies and reproducible drawings and calculations of the required utility support.

The submitted drawings should be of the same format shown on LACDPW Standard Plan 3091-1. In particular, the sheets shall indicate the methods of sheeting, shoring, and bracing which will be used, applicable reaches, and the installation and removal sequence. The sheets shall also show the positioning of said sheeting, shoring and bracing with respect to the planned location of the proposed structures. Existing improvements, which may be affected by the proposed excavation, shall also be shown. The drawings shall include a statement to the effect that in preparing the shoring details the proposed construction procedures were considered and the details hereon are compatible with these procedures. It is the Contractor's responsibility to submit to the Department all test data and calculations required to substantiate the load supporting ability of special components of shoring systems, such as screw jacks, speed shores, etc.

Drawings and supporting data shall be transmitted by letter to the Department for acceptance at least 21 days before accepted drawings will be required for commencing the work. The initial

submittal shall include the required data for the entire project. Partial submittals will not be processed.

A detailed review of the submitted plans will be performed by the Department. The review will be for the purpose of determining that the following items have been considered and are in accordance with the stated criteria. The items are:

- (1) Soil Loads.
- (2) Surcharge Loads, including effect of existing improvements.
- (3) Method of Analysis.
- (4) Allowable Stresses, including soil stresses where applicable.
- (5) Protection of Existing Improvements.
- (6) Feasibility of Construction.
- (7) Delineation of Criteria.
- (8) Calculations.
- (9) Statement of Applicable Reaches.
- (10) Original Signature of Designer

If the submitted plans are in conformance with the shoring criteria and the project specifications, the Department will sign the submitted drawings. The original will be forwarded by letter to the Contractor.

As construction progresses, should a type of soil be encountered which requires a different method of shoring of greater strength than previously accepted by the Department, or should a situation or condition arise which in the opinion of the Engineer and/or California Division of Occupational Safety and Health requires additional shoring, then the Contractor shall submit for acceptance revised shoring details, and work in the affected excavations shall be discontinued until the revised shoring details have been accepted. The preparation and furnishing of such revised details shall be done as specified above for the Contractor's proposed method of sheeting, shoring and bracing for the project excavations. All of the above-specified provisions concerning submittal by the Contractor, commencement of work on sheeting, shoring and bracing by the Contractor, and action to be taken by the Engineer and the Contractor shall apply in the event a different type of additional sheeting, shoring, and bracing is required beyond that originally contemplated by the Contractor.

Acceptance of the Contractor's submitted plans shall not be construed to invalidate other provisions of these Specifications, which may be affected by the accepted method of shoring such as, but not limited to, the requirements concerning street closures, detours, barricades, and utilities. In this connection, and particularly

where excavation walls are sloped, the Contractor is reminded of his responsibility for maintaining access, for maintaining the number and width of traffic lanes specified, and for performing exploratory excavations for and the protection and maintenance, in place, of existing improvements.

Acceptance of shoring for excavations with either vertical or sloping banks shall not be construed to have altered any pay lines shown on the drawings.

Attention is directed to the trench width, "W," distances on LACDPW Standard Plan 3080-2. The design of the conduit and the shoring is based on this maximum width. If the trench width exceeds the maximum design width, the pipe bedding, pipe D-Load and the shoring shall be redesigned. The Contractor shall be responsible for any additional costs due to the increased trench width.

If excavations are supported employing used materials, such materials shall be free from defects, which may impair their protective function. Used materials, which are damaged or are otherwise defective to the extent that they will not safely perform their intended function, shall not be used in supporting excavations. It shall be solely the Contractor's responsibility to furnish sheeting, shoring, and bracing of such grades and stresses as specified on the submitted drawings.

The limits of the excavation shall be within the right-of-way shown on the contract drawings unless the Contractor obtains permission from the adjacent property owners to extend the excavation into their property. Such permission shall be stated in writing and forwarded to the Department with the shoring plans.

(b)Vertical Shores for Supporting Trench Excavations.

H-beams, piles, or other similar supports for excavation shall be placed in holes drilled to the bottom of the excavation and then driven the remainder of the required depth. Drilled holes shall be filled with jetted sand with a sand equivalent of 30. Where sonic pile hammers or other similar devices are approved by the Engineer, the vertical supports may be driven the entire depth.

In lieu of the above method, vertical support may be placed in holes drilled to the full depth required and backfilled to subgrade. Backfill shall be trench backfill slurry. However, where the in-situ material is granular and free-draining, the backfill may be sand meeting the requirements of 200-1.5. Slurry shall be placed 72 hours prior to excavating and sand shall be flooded 24 hours prior to excavating. Calculations for embedment depth shall be based on beam width, not hole diameter.

When driving the vertical supports, as well as when drilling the holes, the Contractor shall take care to avoid damage to any and all existing improvements and utilities.

At locations where the drilling of such holes is impractical because of the existence of running sand, rocks, or other similar conditions, and provided impracticability is demonstrated to the satisfaction of the Engineer by actual drilling operations by the Contractor, the Department may, upon request of the Contractor, approve, in writing, the use of means other than drilling for the purpose of placing the vertical supports. Such other means, however, must be of a nature, which will accomplish, as nearly as possible, the purpose of drilling, namely, the prevention of damage to existing surface or subsurface improvements, both public and private. Unless otherwise specified, all costs for this work shall be included in the price bid for the Shoring of Excavations pay item.

The above specifications shall not apply to driven sheet piling where such piling is necessary, because of the type of material being excavated, to adequately and safely support the excavation.

Immediately after the drilling for or extraction of a pile, the Contractor shall place a steel cover over the hole which shall be left in place until the pile is inserted or the hole is filled, as applicable. The cover shall be heavy enough to withstand traffic, be anchored to prevent lateral movement, and weigh a minimum of 75 pounds. Drilling or pile extraction will not be permitted until covers are on the site and available for immediate use.

The minimum required depth of penetration below the bottom of the excavation for vertical shores requiring soil pressure for stability shall be determined using soil resistance based on the following equations, the resultant of which shall be applied at a distance X below the bottom of the excavation:

Case No.	Equation	X- Ft.	Min. D- F
1	$F_p = E (D-D_1)^2$	2D/3	D1 + 2'
2	$F_p = A (D)^2$	2D/3	2'
3	$F_p = A (D)^2 + B (D) (D/2) + \{D(0.167) / [1 + (B/AD)]\}$		2'
4	$F_p = A (D-D_1)^2$	2D/3	D1 + 2'

Where

- Fp = Resultant force in pounds per foot of width of vertical shore.
- D = Minimum depth of penetration in feet below the bottom of the excavation.
- D1 = Distance in feet between bottom of excavation and point of zero pressure.
- X = Distance in feet between bottom of excavation and line of action of Fp
- A, B, & E = Soil parameters for continuous abutting vertical shores. (Values may be doubled for single or spaced vertical shores).

Applicable Case No. D1 and soil parameters are to be used in conjunction with LACDPW Standard Drawing No. 3090-1 and are provided in the Special Provisions. In cases where this information was not available at the time of preparation of the Special Provisions, it may be obtained by calling the LACDPW at (626) 458-7810. It should be noted that this type of system is subject to the restriction that the distance from the bottom of the excavation to the lowest strut shall not exceed 15 feet. It should be further noted that this information is not applicable to the design of cantilevered shoring or sheet piling. If soil data is not provided in the Special Provisions, it may be obtained as noted above.

(c)Payment. Payment for shoring of open excavations will be made under the applicable item of work for which shoring is required. Any jacking shall be included in the prices bid for the applicable items. No change will be made in the amount to be paid for the shoring of open excavations as a result of any required revisions in the shoring details.

306-1.2 Installation of Pipe.

306-1.2.1 Bedding. The last two paragraphs of Subsection 306-1.2.1 are hereby deleted and replaced with the following:

The trench bottom shall be graded to provide a smooth, straight, firm and stable foundation at every point throughout the length of the pipe. At each joint in the pipe, the bedding shall be recessed in such manner as to relieve the bell or coupling from all loads and to ensure continuous bearing along the pipe barrel. The recess shall be large enough to allow jointing of the pipe without foreign material entering the pipe. If any trench, through the neglect of the Contractor, is excavated below the grade required by the Plans, Standard Specifications, and/or these Special Provisions, it shall be refilled to grade with additional bedding. The excess excavation and the additional bedding shall be at no expense to the Agency.

Additional bedding shall be crushed aggregate base in accordance with Section 200-2 of the Standard Specifications and these Special Provisions.

306-1.2.2 Pipe Laying. The last sentence of the second paragraph, and the ninth, tenth, and last paragraph of Subsection 306-1.2.2 are hereby deleted and replaced with the following:

Any adjustments in line or grade, which will be necessary to accomplish the intent for the Plans, shall be made. In the event obstructions are encountered during the progress of the work, which requires deviation from the line and grade shown on the Plans, the Engineer shall have the authority to change the Plans and order the necessary deviation from the line or grade. Contractor shall not make any deviation from the specified line or grade without approval by the Engineer.

All surface or groundwater shall be prevented from entering the pipe and shall be removed from the trench in an approved manner.

306-1.3 Backfill and Densification.

306-1.3.1 General. The seventh and eighth paragraphs of Subsection 306-1.3.1 are hereby deleted and replaced with the following:

Rocks greater than 4 inches in any dimension will not be permitted in backfill placed between 1 foot above the top of any pipe and 1 foot below pavement subgrade.

Trench crossing on major utility line (more than 12-inch diameter) shall be backfilled with mechanically mixed slurry of one sack of Portland cement and 1 cubic yard of sand.

306-1.3.2 Mechanically Compacted Backfill. The third paragraph of Subsection 306-1.3.2 is hereby deleted and replaced with the following: Material for mechanically compacted backfill shall be placed in lifts, which prior to compaction shall not exceed 6 inches in depth.

306-1.3.4 Backfilling Narrow Trenches. The entire Subsection 306-1.3.4 is hereby deleted and replaced with the following:

306-1.3.4 Compaction Requirements. Except as specified otherwise, trench backfill shall be densified to the relative compaction requirements of 90 percent. Compaction to 95 percent is required under future pavement through the top 6 inches.

306-1.4 Testing Pipelines

306-1.4.7 Video Inspection. Subsection 306-1.4.7 is hereby added to Section 306 as follows:

The Contractor shall hire an independent video inspection service, approved by the Engineer, to perform a recorded video inspection of the newly constructed sewer mains to determine if the work was completed per the contract documents. The CCTV inspection must be accomplished by trained operator(s) certified in accordance with National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) and using established PACP coding and observations.

Prior to video inspection, the following work must be completed:

1. All sewer pipelines are installed and backfilled.
2. All structures are in place, all channeling is complete, pipelines are accessible from structures, and all active and open service lateral connections have been re-installed as required.
3. All other underground facilities, utility piping, and conduits are installed, and their trenches compacted.

When the above work has been completed, the Contractor shall notify the Engineer 48 hours in advance of the date for video inspection. During this inspection, the Contractor or his authorized representative shall be present to observe the video pictures as provided by the video camera. A videotape of the inspection shall be produced.

The recorded video inspection shall be completed within 10 days of accomplishing the above work.

The following observations shall be considered defects in construction of the sewer pipelines and will require corrections prior to final acceptance:

1. Off-grade - 0.08 foot, or over, deviation from grade.
2. No joint separations.
3. No misaligned joints.
4. Chips in pipe ends - None more than 1/4 inch deep.
5. Cracked or damaged pipe or evidence or presence of an external object bearing upon the pipe (rocks, roots, etc.).
6. Dropped joints.
7. Infiltration or filtration in excess of maximum permissible as specified in Subsection 306-1.4.2 or 306-1.4.3 of the Standard Specifications.
8. Debris or other foreign objects in the line.
9. Other obvious structural and/or maintenance deficiencies.

The Contractor and Engineer shall be notified, in writing, by the video inspection service of any deficiencies revealed by the inspection that will require repair, following which the Contractor shall excavate and make the necessary repairs in the presence of the Engineer. All repairs shall be made prior to commencing any work in the next area or construction zone.

The personnel making the inspection shall maintain a continuous log of the inspection. This log shall identify the pipe run being inspected by manhole to manhole pipe identification, by the footage recorded and as measured from the center of the starting manhole and by a description of the object or condition observed in the pipeline. Each log shall be marked with the date of the inspection run. Each entry on the log shall be consecutively numbered for positive identification in subsequent correspondence or references.

Upon the completion of the entire project (manhole to manhole run), the Contractor or his authorized representative shall sign under the last entry of the log sheet to certify that he was present as an observer during the inspection. After this signature, the Contractor shall be delivered duplicate or reproduced copies of the log. The Engineer shall be given the original log. The Engineer shall also be given a videotape or digital copy on a CD of the CCTV inspection.

The following listed conditions or objects shall be entered in the log in order encountered during the inspection:

1. The presence of any debris or foreign objects in the pipe, indicating inadequate construction.
2. Improperly made pipe joints and the observed results of such, inadequately butted, offset, or other defect. Offsets at joints shall be within tolerances as elsewhere specified herein.
3. Unsatisfactory conditions of pipe alignment.
4. Defective pipe grade conditions where water stands or flow velocities are unacceptable due to variations in pipe grade.
5. Location, quadrant or entry and condition of all service connections to the pipe.
6. Any cracks, breaks, or other defects in the pipe, even though such may have been patched prior to backfill and compaction.

Upon completion of the video inspection, the Engineer shall review the logged results to certify that all requirements have been met and the work is acceptable.

In the event that a complete manhole-to-manhole inspection cannot be made because of obstruction in the pipe, a re-inspection shall be scheduled when the Contractor has removed or corrected such obstructions.

Those portions of the pipeline system that have been corrected shall be repeated until all deficiencies observed by video inspection have been corrected to the complete satisfaction of the Engineer. The cost of re-inspection of defective work shall be the responsibility of the Contractor.

If upon exposing the pipeline it is found that reported defects do not actually exist, the Agency shall reimburse the Contractor for his cost of excavation, backfill, and re-compaction, but only if the Engineer is present at the time of excavation and verifies the adequacy of the installation.

Payment. Payment for video inspection service shall be on the contract unit price for the item of work.

306-1.5 Trench Resurfacing.

306-1.5.1 Temporary Resurfacing.

Payment for all temporary resurfacing placed and maintained until the permanent resurfacing is placed, will be considered to be included within the bid item for which excavation was performed.

306-1.5.2 Permanent Resurfacing.

Since the use of pipe bursting as a method for installing the increased pipe size (for capacity) and in combination with local sub-surface soil conditions may result in some amount of ground (surface) heaving or settling that exceeds that which may be considered allowable by the Engineer, such heaving or settlement of the ground surface during or following construction will not be otherwise allowed. The contractor is solely responsible for the costs for removing; stabilizing and repairing any heaved or settled surface area to the standards of the City and the satisfaction of the Engineer.

Payment for all permanent resurfacing will be considered to be included within the bid item for which pavement removal and excavation was performed.

306-1.6 ABANDONMENT OR REMOVAL OF CONDUITS AND STRUCTURES

When in the course of the work it is necessary to remove any interfering existing facilities (sewer pipelines, etc.) they shall be removed in their entirety and disposed of in accordance with the waste materials classification within which they are categorized. When such removal of existing facilities results in voids and/or disruption of the supporting subgrade upon which the new constructed materials are to be placed, suitable material shall be placed and compacted to a relative compaction of 90 percent.

306-1.7 REMODELING EXISTING SEWER FACILITIES.

The Contractor shall prevent mainline sanitary sewage from out-letting into trenches by means of a pump by-pass system between operating manholes as approved by the Engineer.

306-1.8 PIPE BURSTING METHODS

Definition and Description: Pipe bursting is a trenchless technology whereby reconstruction of the existing sanitary sewer is done by insertion of liner pipe within the bore of the existing pipe that is enlarged by breaking and expanding the old (existing) pipe into the surrounding soil and/or backfill materials surrounding the pipe. Use of this method for pipe replacement involves the insertion of a static, hydraulic or pneumatic hammer device, suitably sized, to break (crush) the existing pipe by using a modified boring knife with a flared plug that fractures the existing pipe material. Forward progress of the device may be aided by hydraulic or mechanical equipment as the device passes through the existing pipe. Replacement pipe is either pulled or pushed into the expanded bore hole. This method minimizes the amount of open trench and overlying surface disruption in order to replace/enlarge the existing pipeline.

CROSS REFERENCES: 7-8.5 Sanitary Sewers; 7-8.6 Water Pollution Control; 500-1.2.4 Sewer Bypassing and Dewatering, Appendix II - Geotechnical Investigation Report, and Appendix III - Sanitary Sewer Overflow Response Plan.

306-1.9.1 General.

When it becomes necessary to perform work on an existing sewer mainline or private sewer lateral, the Contractor shall control sewer line flows at all times during the work to prevent the discharge of sewage into the work area. Seepage of sewage through any open trench into the ground shall be prohibited. The Contractor shall divert main line or lateral flows by pumping as necessary to prevent any prohibited discharge.

306-1.9.2 Sewer Bypassing.

306-1.9.2.1 Mainline Flows. The Contractor shall be responsible for continuity of sanitary sewer service to each connected facility during execution of the work. Prior to any work on the City's sewer collection

system, including but not limited to work on mainlines, force mains, manholes or connections to trunk sewer pipelines, the Contractor shall prepare and submit to the Engineer for approval a comprehensive Sewer Bypass Plan (SBP) detailing the exact methods and procedures to be used for full flow diversion. The SBP shall include, but not be limited to, the following elements:

- Written procedures for bypass operations, including approximate peak flows.
- Specific location and configuration of pumping equipment for each bypass.
- Approximate pipe alignment for each bypass including vehicle access provisions.
- Whether pumping configuration plans provide for automatic flow regulation or continuous monitoring by the Contractor. The Engineer may require that the pumping system be continuously manned during operation. The SBP shall specify that the operator of the pump is qualified, as determined by the Engineer.
- Shop drawings for the bypass piping system and pump(s) indicating peak bypass capacity.
- The location of nearby storm drain inlets and methods and configurations of covering and sandbagging these drainage facilities to ensure that in the event of a sewer spill, no sewage enters the storm drain system or exits the immediate vicinity and is instead collected by portable pumps.
- Provisions for stopping work and/or providing additional standby pumping capacity if significant abnormal rainfall occurs or is predicted during the Contract period.
- Methods for expediting the construction to minimize pumping time.
- Spill response and notification procedures including 24-hour emergency phone numbers.

The Contractor shall base its full flow bypass system design on expected flow data and shall clearly indicate the rated bypass pumping capacity proposed. The primary bypass system shall be designed to handle 120% of the peak flow. A "backup" bypass pumping system shall also handle 120% of the peak flow. Both systems shall be combined for immediate switch over for emergency or testing. The pumping bypass system shall be manned continuously by an experienced operator while it is in operation as required by the Engineer. A minimum of 8 hours of emergency fuel storage is required on-site. When first in operation, the pumping system shall be tested in the presence of the Engineer.

The approved SBP shall remain on-site during all portions of the work. Specific notification requirements and procedures shall be confirmed at the project pre-construction meeting.

The Contractor is solely responsible for any releases of raw sewage due to failure of any component of the bypass pumping system, including backup containment measures. The Contractor shall reimburse the City

for any and all costs such as assistance in cleanup and traffic control in case of sewer spill in conjunction with this work, fines by other government agencies and water quality testing costs. The Contractor shall sign a statement acknowledging receipt of the latest version of the City's Sanitary Sewer Overflow Response Plan (see Appendix III).

The cost for preparation and implementation of the SBP shall be included in the bid item for sewer bypass system, and no additional compensation shall be provided therefor.

306-1.9.2.2 Sewer Lateral Flows. The Contractor shall control intermediate sewer lateral flows, to the extent possible, by notifying all residents or businesses connected to intermediate laterals of intended hours of work in the area, and of the need to curtail water usage during those hours. The Contractor shall notify residents and businesses in writing at least forty-eight (48) hours before proceeding with any work that might require restricted water usage and shall inform the local water district of such notification. The water closure and notice must be approved by the Engineer prior to distribution. The Contractor shall arrange for water meter closures, if approved by the Engineer, to control intermediate lateral flows.

In case sewer service to a residence or business cannot be shut down, bypass pumping will be necessary. This may be performed by pumping sewage through individual private property sewer cleanouts. If there is no accessible on-site sewer cleanout, the Contractor shall construct an accessible sewer cleanout along the existing sewer lateral, or pump sewage to the nearest downstream manhole, as approved by the Engineer. The Contractor shall not disrupt sewer flow for any restaurant, hotel, or major business facility having a fairly continuous sewage discharge, as determined by the Engineer. For any laterals with flows exceeding ten (10) gallons per minute, the Contractor shall prepare a SBP as described in Subsection 306-9.2.1.

If a sewage backup occurs and enters buildings, the Contractor shall be responsible for cleanup, repair, property damage and other related costs.

306-1.9.3 CCTV Inspection and Documentation.

During 2004-2005, the Agency obtained Closed Circuit Television (CCTV) Investigation files (tapes) of the capacity deficient pipe segments. If the Engineer accepts these records as suitable proof of existing sewer system conditions, then an initial CCTV inspection may not be necessary to define the pipeline conditions and the locations of existing service laterals.

However, should the Agency consider those earlier records as insufficient to assess the existing system conditions, then an initial (CCTV) digital video inspection of the existing sewer mainline will be required prior to replacing the mainline with the specified larger diameter pipe size shown on the plans. This pre-installation inspection will document the pipeline

condition and define the existing operating sewer laterals that must be reconnected to the larger diameter replacement sewer pipeline. A post-installation CCTV inspection will also be required to determine if the installation work and service lateral reconnections were completed per the contract documents.

The Contractor shall be responsible for inspecting, confirming the inside diameter, and determining the condition of each manhole-to-manhole segment to be replaced. The Contractor shall perform a video inspection after the mainline replacement is completed. The video inspection shall be completed in the same direction each time and shall be done with a CCTV color camera recorded in Digital Video format. A pivot head camera shall be used for all pipelines that are 8-inches in diameter or greater to allow detailed lateral inspection. A copy of the video inspection videotapes/digitally recorded CD's from all CCTV operations shall be provided to the Engineer for review prior to pipeline replacement.

Inspection. When obstructions are identified in the pipe, such as roots, debris, rocks, and bulky materials, these must be removed prior to pipe bursting and pulling the replacement pipe. When the depth of flow in the sewer reach being televised is above the maximum allowable for clear video inspection, the Contractor shall reschedule the inspection for non-peak nighttime hours at no additional cost to the City. The maximum depth of flow for television inspection for the respective pipe sizes as measured in the manhole is as follows.

Pipe Size in Inches	Maximum Depth of Flow
8	1.60"
10	2.00"
12	3.00"
15	3.75"
18	4.50"

For pipe sizes between tabulated values, the maximum depth of flow for the next larger pipe size shall apply.

Whenever non-remote powered and controlled winches are used to pull the video camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two manholes of the reach being inspected to ensure that adequate communication exists between members of the crew.

The importance of accurate distance measurements is emphasized. Footage measurements shall begin at the centerline of the upstream manhole unless otherwise authorized. Footage measurements shall be shown on the video data view at all times.

CCTV Inspection Video. The Contractor shall provide a digital video of the CCTV inspections with a narrative describing the findings as detailed below:

The video shall include the following opening text: site location, time, and date. A voice narrative commenting on the above data shall accompany the text screen. Continuously displayed on the monitors and recorded on the video shall be reach I.D. number, manhole location, the direction of the survey, pipe size, pipe material, identified fault conditions and a continuous read-out of the camera distance from the starting manhole.

The video will be captured and compressed so as to reduce file size as much as possible while still providing a smooth, clear video. The video shall be at 30 frames per second. The compression shall be in Windows Media Video Format (.wmv).

The compression shall not significantly degrade the still frame quality of the video or audio signal from the original source video, as judged in a side-by-side viewing under normal viewing conditions.

Digital Video output shall be made on external, high speed USB hard drives with at least 200 GB, which is divided into "chapters" by individual sewer reaches. At the completion of the contract work, the City shall retain possession of the hard drive.

CCTV Inspection Digital Photos. The Contractor shall provide digital photos in JPEG format of significant defects and representative pipeline conditions, captured during the CCTV televising. An average of four (4) photos for each section of pipeline between manholes will be taken, with at least one (1) photo taken for each pipeline. The Digital photo files shall be annotated with reach I.D. number and footage of the associated observation. All files shall be stored on external, high speed USB hard drive with at least 200 GB.

Video Captured Mode: Field, Frame, or Multi-Frame

Resolution: Minimum of 640 x 480 Image Format: JPEG

Typical Image File Size: 50K- JPEG

Color Image

Annotation: Observation, Reach I.D. Number, and Footage

CCTV Inspection Log. Observations and comments for the CCTV inspections shall also be recorded into an inspection log associated with the digital video. This information shall include but not be limited to the following: Pipeline reach I.D. from upstream to downstream manhole, location of defects in feet from upstream manhole, description of the defect, location of house sewers, and other pertinent information. Inspection Log shall be submitted in Microsoft Access database format on external, high speed USB hard drive with at least 200 GB.

306-1.9.4 Service Lateral Reinstatement

The Contractor shall not reinstate those laterals determined by the City to be dead, abandoned, plugged or not in active service as determined during the initial video inspection of the pipe lines to be replaced.

The laterals not to be reinstated will be determined by the City after review of the Contractor-supplied video files made prior to installation. This criteria does not apply to service laterals on mainlines within the County of Los Angeles area jurisdiction as indicated on the respective plan sheets.

The Contractor shall be responsible for expeditious reconnecting service laterals to the mainline replacement pipe. In the interest of expediting service lateral reconnections to the new mainline, the contractor shall accomplish a partial pavement removal and excavation of materials overlying the service lateral's points of connection prior to bursting of the existing sewer pipe and pulling of the new replacement pipe through the annuls created by the bursting head tool. Reconnections of service laterals shown on the plans shall be completed by one of the following methods.

External Excavation and Connection

Excavation shall be hand and/or mechanical equipment to the location of the service connections tie-in, cutting the existing pipe and replacement pipe material, and installing a saddle acceptable to the Engineer. The excavation process shall be completed by mechanical means as defined in the project documents or by hand digging as required.

The existing service lateral shall be reconnected using replacement pipe or equivalent diameter and a connector coupling suitable for the pipe materials involved. Connection shall be to a clean-cut undamaged point of connection of the existing service lateral.

A minimum of two (2) lineal feet of the exposed service lateral or any damaged non-serviceable extent of the lateral pipe shall be replaced with new material.

Reconnection of existing services shall be made after the replacement pipe has been installed and successfully tested. It is the Contractor's responsibility to make sure that all active service connections are reconnected.

Contractor must maintain driveway access during the installation of sewer laterals.

306-1.9.5 Removal or Cutting of Plastic Pipe to allow for pipe bursting of the sewer.

The pipe that is scheduled to be replaced between manholes MH 65 and MH 72 is identified to have received Insituform pipe lining. The Contractor is responsible to clean and televise the pipeline segment and cut and/or remove the existing liner in conjunction with the installation of the new pipe via pipe bursting.

The Contractor shall provide the means, method, equipment and labor to cut or remove the plastic pipe to allow for the successful pipe bursting of the sewer pipeline. The means or method utilized shall not disturb the surrounding soil or host pipe to the degree where it will affect the installation and operation of the new pipe to be installed. Removal of the existing liner will only be allowed if cutting followed by a successful bursting and liner pipe installation result is not possible.

During liner removal or cutting effort the Contractor may encounter conditions that inhibit removal or proper cutting of the pipe. When these conditions stop the advancement of the bursting head, the Contractor shall request the Engineer's approval to remove the obstruction. Once approved, the Contractor shall perform all work necessary to remove the obstruction and allow for the resumption of progress on the liner removal or cutting effort. Pipeline segments with existing conditions that prevent removal or cutting of the liner pipe by conventional methods shall be evaluated on a case by case basis.

306-1.9.6 Insertion or Receiving Excavations (Pits)

Locate such pits so that the total number is minimized, and footage of liner pipe installed in a single pull is maximized.

Perform work in accordance with OSHA standards. Comply with Section 306-1.1 – Trench Excavation.

Perform excavation and backfill in accordance with requirements of Sections 300-2 Unclassified Excavation, and 300-4 Unclassified Fill.

SECTION 900 – REPLACEMENT OF MAINLINE SEWER PIPES BY PIPE BURSTING

Since sewer products are intended to have a minimum 50-year design life, and in order to minimize the Agency's risk, only proven products with substantial successful long-term track records will be approved. Additionally, the pipeline replacement Contractor/Subcontractor must have actual experience with the pipe bursting and/or open trench methods, equipment, materials and pipe joining (fusion) equipment and materials to be used in the project work.

Proof of such work experience and product qualification submittal must be submitted with the Contractor's bid.

Reference Specifications, Codes, and Standards. The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail. The latest edition of the following reference shall be used.

ASTM D1248 Polyethylene Plastics Molding and Extrusion Materials

ASTM D1784 Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

ASTM D2122 Determining Dimensions of Thermoplastic Pipe and Fittings

ASTM D2241 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)

ASTM D2412 Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

ASTM D3034 Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

ASTM D3350 Polyethylene Plastics Pipe and Fittings Materials

ASTM F679 Standard Specification for Poly (Vinyl Chloride) (PVC) Large Diameter Plastic Gravity Sewer Pipe and Fittings

ASTM F714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter

ASTM F2620 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings

Products and Contractors

Products and Contractors seeking approval must meet all of the following criteria to be deemed Commercially Acceptable for the work to be performed under this specification:

Product Qualifications

For a product to be considered Commercially Proven, a minimum of 250,000 linear feet or 1,000 line sections of successful wastewater collection system installations in the U.S. must be documented to the satisfaction of the Engineer to assure commercial viability. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State having a documentable history of performance. Such product experience qualifications shall be filed at the time of the bid with the Agency.

The pipe production shall have ISO 9000 Certification or equal for its quality control and assurance programs. Proof of certification shall be required for approval of the Contractor and shall be submitted with the bid.

Contractor Qualifications and Performance

1. The Contractor shall be certified by the manufacturer of the proposed pipe bursting system as a fully trained user of the pipe bursting system. Operation of the pipe bursting system shall be performed by trained and experienced personnel who have participated in training conducted by a qualified representative of the pipe bursting system manufacturer, and in the actual use of the pipe bursting system on similar construction projects. The Contractor must provide certificates of training for any

employee directly involved in the supervision and operation of the pipe bursting system.

2. HDPE or PVC pipe jointing shall be performed by personnel trained in the use of butt-fusion equipment and the manufacturer recommended methods for new pipe connections. Personnel directly involved with installing new pipe shall have received training in the proper methods for handling, fusing of pipe joints and experienced with installing the type of pipe utilized. Such training shall have been conducted by a qualified representative of the fusion equipment manufacturer. Installation of other pipe materials shall be performed by personnel qualified by the specific product manufacturer and experienced in such work of installation.
3. For a Contractor to be considered as project qualified, for pipe bursting and open trench construction, the Contractor must satisfy all insurance, financial, and bonding requirements of the Agency, and present experience as follows: a) for the majority pipe bursting alternative, the contractor must have successfully accomplished a minimum of 50,000 feet of sewer pipe replacement-up sizing by pipe bursting and 8,000 feet of open trench replacement-up sizing, or b) for the majority open trench alternative, the contractor must have successfully accomplished a minimum of 50,000 feet of sewer pipe replacement-up sizing by open trench placement method and 28,000 feet of sewer replacement-up sizing by pipe bursting methods. The sewer pipe replacement experience must involve pipe diameters from 8-inch to 24-inch, including joining of butt-fused HDPE or PVC pipe of the products bid herein. The required experiences can be that of the prime contractor and the named subcontractor specified for performing the respective type of sewer replacement work in the bid submittal. ***Acceptable documentation of these minimum installation experiences must be submitted to the City with the bid documents.***
4. The Contractor shall have ISO 9000 Certification or equal documentation for quality control and assurance programs for its operations. ***Proof of certification/documentation shall be required for approval of the Contractor and shall be submitted with the bid.***

Contractor Submittals

The Contractor shall submit the following items in compliance with the specifications, codes, and standards referenced herein for review and approval by the City. *Review and approval of items 1 thru 3 below, by the Agency, shall be accomplished prior to the award of contract.* Review and approval of the remaining item submittals, by the Agency, shall be obtained prior to ordering pipe materials and/or the start of the pipe replacement process.

1. Certifications from the pipe material manufacturer of training in the proper method for handling and installing new sewer pipe to be installed under this specification.

2. Certifications of training by the pipe bursting systems manufacturer stating that the operators have been fully trained in the use of the pipe bursting equipment by an authorized representative of the equipment manufacturer.
3. Certifications of training by the pipe fusion equipment manufacturers that the operators have been fully trained in the use of the fusion equipment by an authorized representative of the equipment manufacturer.
4. Detailed construction procedures, and layout plans to include sequence of construction.
5. Locations, sizes and construction methods for the service reconnection pits.
6. Methods of construction, reconnection and restoration of existing service laterals.
7. Detailed descriptions of the methods of modifying existing manholes.
8. Detailed procedures for the installation and bedding of the new pipe in the launching and receiving pits.
9. Sewer bypass plans (SBP) and methods and list of equipment to be utilized.
10. Description of the method to remove and dispose of the existing/host pipe, as required.
11. The safety plan in conformance with the Contract Documents and OSHA regulations.
12. Manufacturer's technical data showing complete information on material composition, physical properties and dimensions of the new pipe and fittings. Manufacturer's recommendations for transport, handling, storage, and repair of pipe and fittings shall be included.
13. Traffic control plans.
14. Project schedule.
15. All necessary shop drawings applicable to the work.
16. Contingency plans for the following potential conditions:
 - a. Unforeseen obstruction(s) causing burst stoppage, such as unanticipated change(s) in host pipe material, repair section(s), concrete encasement(s) or cradle(s), buried or abandoned manhole(s) or changes in direction not depicted on maps provided by the Contracting Authority.
 - b. Substantial surface heave occurs due to the depth of the existing pipe vs. the amount of upsizing

- c. Damage to existing service connections and to the replacement pipeline's structural integrity and methods of repair.
- d. Damage to other existing utilities.
- e. Loss of and return to line and grade.
- f. Soil heaving or settlement.

Delivery, Storage and Handling of Pipe Materials

The Contractor shall transport, handle, and store pipe and fittings as recommended by the materials manufacturer.

New pipe and fittings that are damaged before or during installation shall be repaired or replaced, as recommended by the manufacturer or required by the Engineer. The costs of such repair or replacement shall be borne by the Contractor and be accomplished prior to proceeding with the project.

The Contractor shall deliver, store and handle other materials as required to prevent damage. Materials that are damaged or lost shall be repaired or replaced by the Contractor at no additional expense to the Agency.

Methods of Pipe Bursting

The most commonly used methods for pipe bursting are static and impact force. Static systems are hydraulic, while impact systems generally involve a combination of pneumatic and hydraulic technology. The main difference between methods is the manner in which the force is generated and transferred to the host pipe during the bursting operation.

The pipe bursting tool shall be designed and manufactured to force its way through existing pipe materials by fragmenting the pipe and compressing the old pipe sections into the surrounding soil as it progresses. The bursting unit shall generate sufficient force to burst and compact the existing pipeline. See manufacturer's specifications for what size tool should be used in what diameter of pipe, as well as parameters of what size tool for percentage of upsize allowed.

The pipe bursting tool shall be pulled through the sewer by a winch or rod located at the upstream manhole. The bursting unit shall pull the polyethylene (PE) pipe with it as it moves forward. The bursting head shall incorporate a shield/expander to prevent collapse of the hole ahead of the new pipe insertion. The pipe bursting unit shall be remotely controlled.

The bursting action of the tool shall increase the external dimensions sufficiently, causing breakage of the existing pipe at the same time expanding the surrounding ground sufficiently to pull or pull/push in the new pipe.

Locating Utilities

The Agency shall provide the Contractor with copies all documents relating to the location of utilities adjacent to the pipe to be replaced or upsized. The Contractor shall,

prior to starting work, verify the location of all adjacent utilities (potholing as necessary). The minimum clearance from other utilities shall be approximately two feet or as otherwise dictated by the materials involved or the owning entity. The Agency may at its discretion reduce the minimum clearance.

The Contractor shall expose all interfering and crossing utilities by spot excavating at the planar intersection of the pipe and removing the soil from around the utility. The cost of exposing these utilities shall be as incorporated in the contracted items of work.

Sub-Surface Conditions

The Contractor shall verify the Agency's available information in the field. All additional subsurface investigations deemed necessary by the Contractor to complete the work shall be included in the Bid Proposal at no additional cost to the Agency. Copies of all reports and information obtained by the Contractor shall be provided to the Engineer.

A minimum amount of ground heaving may be allowed, as determined by the Engineer, if soil conditions are not favorable to the planned up-sizing of the sewer pipe. Unless otherwise noted in the contract documents, settlement or heaving of the ground surface during or after construction will not be allowed. The Contractor is solely responsible for the costs for repairing any surface heaving or settlement.

Locating Service Connections

The Contractor shall locate and expose all sewer service connections prior to new mainline pipe insertion to expedite reconnection. The Contractor shall exercise due diligence in excavating the existing pipe sufficiently to allow for uniform circumferential expansion of the existing pipe through the service connection pit. Upon commencement of the bursting process, pipe insertion shall be continuous and without interruption from one entry point to another, except as approved by the Engineer. Upon full completion of insertion and relaxation of the new pipe, the Contractor shall expedite the reconnection of services to minimize any inconvenience to the customers.

Pipe Joining

The polyethylene pipe (HDPE) or polyvinyl chloride pipe (PVC) shall be assembled and joined at the site using the butt-fusion method to provide a leak proof joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures shall be used in strict compliance with the manufacturer's recommendations.

Fusion shall be performed by technicians certified by a manufacturer of pipe fusion equipment.

The butt-fused joint shall be true alignment and shall have uniform rollback beads resulting from the use of proper temperature and pressure. The joint shall be allowed adequate cooling time before removal of pressure. The fused joint shall be watertight and shall have tensile strength equal to or greater than that of the pipe. All joints shall be subject to acceptance by the Engineer prior to insertion.

The Contractor shall cut out and replace defective joints at no additional cost to the Agency. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness (ASTM

585), shall not be used and must be removed from the site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, any section of the pipe having other defects such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness or any other defect of manufacturing or handling as determined by the Agency shall be discarded and not used.

Terminal sections of pipe that are joined within the insertion pit shall be connected with a mechanical coupling (e.g. a full circle stainless repair clamp), Electro Fusion Couplings (e.g. Central Plastics or equivalent) or a non-shear restraint coupling. All connections shall be in conformance with the manufacturer's installation procedures.

Bypassing of Flows

The Contractor shall be responsible for continuity of sanitary sewer service to each facility connected to the section of sewer main during the execution of the work and shall also bypass the main sewer flow around the pipe to be replaced, or into adjacent sanitary sewers, if available. The pumps and the bypass lines shall be of adequate capacity and size to handle all flows without sewage backup to private property. The Contractor shall be solely responsible for clean-up, repair, property damage costs and claims resulting from failure of the flow diversion system.

The Contractor, at the sole discretion of the Engineer, may plug the main line sewer at an existing upstream Manhole or by any other method specified in the contract documents and approved by the Engineer.

The Contractor shall submit to the Agency specifications for all pumping equipment to be used on the job (including all sizing calculations) and a list of all backup pumping equipment to be held in reserve on the job site. The pumps and by-pass lines shall be of adequate capacity and size to handle all flows.

All costs for by-pass pumping, required during installation of the pipe shall be included in the sewer bypass system bid item or work.

Lubrication

Lubrication on the new pipe being installed shall be used if in the opinion of Contractor such lubrication is necessary to ensure the successful completion of the job. The Contractor shall use a lubricant approved by the Engineer.

Service Lateral Reconnection

The installed pipe shall be allowed the manufacturer's recommended amount of time, but not less than four (4) hours, for cooling and relaxation due to tensile stressing prior to any reconnection of service lines. Following the suitable relaxation period, the Contractor shall reconnect all service connections as approved by the Engineer.

Service connections shall be reconnected to the pipe by using connectors approved by the pipe manufacturer and in conformance with the specified installation procedure. Service connections shall be wrap type around saddle connections (e.g. FERNCO or equivalent), Cast Iron w/ Gasket, T Connection (e. g, Inserta-T or equivalent or Electro Fusion (e.g. Central Plastics, Phillips Driscopipe, Plexco or equivalent)

Connections to the existing service lateral shall be made using flexible couplings. All flexible couplings shall conform to ASTM C425. Joint deflection limits and lateral connections shall meet the maximums indicated in ASTM C12 and C425.

The slope of the existing lateral toward the newly installed sewer main shall be maintained at the existing percent. For reconstructed laterals, a minimum slope of two percent (2%) or as specified by the Agency is required.

Connection of the new service lateral to the mainline shall be accomplished by means of a compression-fit service connection. The service connection shall be specifically designed for connection to the sewer main being installed and shall be Inserta Tee as manufactured by Fowler Manufacturing Co or equivalent and installed using procedures and equipment as referenced in manufacturer's written installation instructions.

Connection Types Available for All Mainlines

TYPES	GASKETTED BELLSDR 35	GASKETTED BELLIPS/SCH 40
PVC Hub	ASTM D3034 SDR 35	ASTM D3034 SDR 26
Rubber Boot	ASTM C443	ASTM C443
Band	301 SS	301 SS
Screw	305 SS	305 SS
Housing	301 SS	301 SS
Gasket	ASTM F477	ASTM F477

Restoration

Restoration of Manholes

The Contractor shall restore all manholes and associated surface areas to their original condition or as required by the Engineer and specified in the description of work

Prior to restoring manholes the installed pipe shall be allowed the manufacturer's recommended amount of time, but not less than four (4) hours, for cooling and relaxation due to tensile stressing prior to the sealing of the annulus or backfilling of the insertion pit. Sufficient excess length of new pipe, but not less than two (2) to four (4) inches, shall be allowed to protrude into the manhole to provide for occurrence. Restraint of pipe ends shall be achieved by means of Central Plastics Electro Fusion coupling or equivalent. The electro fusion couplings shall be slipped over pipe ends against manhole wall and fused in place. Installation of electro fusion couplings shall be done in accordance with the manufacturers recommended procedures.

Following the relaxation period, the newly installed pipe shall be restrained and sealed at the Manhole in accordance with the manufacturers recommended procedures and with a material approved by the Engineer.

Restoration of the bottom of the Manhole shall be done as follows:

- a. For restorations less than or equal to three inches grout shall be used. The grout design mix shall meet or exceed 500 psi (3,447 kPa) compressive strength at 28 days. The Contractor may, with the approval of the Engineer, incorporate grout additives to

improve flow properties, provided that the minimum compressive strength requirements are met.

b. For restorations greater than three inches concrete shall be used. Concrete shall be as specified in the Contract Documents.

Restoration of Pits

The Contractor shall restore all lateral, launching and receiving pits and associated surface areas to their original condition or as required by the Engineer and specified in the description of work.

Prior to backfilling lateral and launching pits the Contractor shall ensure that the new pipe is properly supported and on the required grade. Suitable material, approved by the Engineer, shall be used immediately under the new pipe as support in order to avoid sagging after backfill and compaction.

Field Testing

The Contractor shall after the existing sewer is completely replaced perform an internal inspection with a television camera and videotape. The finished tape shall be continuous over the entire length of the sewer between two manholes or as specified by the Engineer.

The newly installed pipe shall be visibly free of defects, which may affect the integrity or strength of the pipe, and of any obstructions to flow capacity. If in the opinion of the Engineer such defects exist, the pipe shall be repaired or replaced at the Contractor's expense.

Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness shall not be used and must be removed from the site.

CCTV Inspections

The Contractor shall perform post construction internal television inspections as required by these specifications. Each reach of sewer shall have audio description with appropriate stationing of services indicated. The data and stationing are to be on the video. All such inspections shall be performed by personnel trained in locating breaks, obstacles and service connections by closed circuit color television.

Post construction video tapes (records) are to be submitted to the Agency for review prior to final payment. Should any portion of the inspection tapes be of inadequate quality or coverage, as determined by the Engineer, the Contractor will have that portion video taped at no additional expense to the Agency. All original video tapes remain property of the Agency. The Contractor may, at the discretion of the Agency retain second copy.

Warranty

The Contractor shall provide a warranty to be in force and effect of a period of one year from the date of final acceptance of the work. The warranty shall cause the Contractor to repair or replace the liner pipe should failure result from faulty materials or installation.

BID ITEM DESCRIPTIONS

GENERAL

The Contract payment for the specified items of work as set forth in the Bid Schedules shall be full compensation for furnishing all labor, materials, methods or processes, implements, tools, equipment and incidentals and for doing all work involved as required by the provisions of the Contract Documents for a complete in place and operational system.

- A. Unless otherwise specified in the Specifications, quantities of work shall be determined per each, or from measurements or dimensions in a horizontal plane. All materials shall be measured on the basis of "in place" quantities and paid for using the units listed in the bid schedule.
- B. Except as noted, the Engineer will make field measurements of unit price items in order to determine the quantities of the various items as a basis for payment. On all unit price items, the contractor will be paid for the actual amount of the work performed in accordance with the contract documents, as computed from field measurements.
- C. Work or quantities not listed in the description of bid items are considered incidental to other construction and will not be separately measured or paid for. Compensation for such work and/or material shall be included in the prices paid for other items of work.

BID ITEMS: BID SCHEDULE "A"

Bid Item 1 - Provide Construction Survey: Payment for this item shall include full compensation for all labor, materials, tools, equipment and incidentals required to provide construction survey as noted on the specifications. This bid item will be paid for per Lump Sum.

Bid Item 2 - Re-establish Monuments: Payment for this item shall include full compensation for all labor, materials, tools, equipment and incidentals required to re-establish existing monuments as noted on the plans and in the specifications. This bid item will be paid for per Each.

Bid Item 3 – Construct 15" HDPE Sewer (Pipe Burst) Sta 10+00 to Sta 19+65 Glenoaks Blvd: Pipeline construction items of work will be paid at the contract unit price per foot installed of the pipe specified, and shall include full compensation for furnishing all labor, materials, tools, equipment and back up equipment necessary for pipe bursting, pipe placement; transportation and technical competence, saw cutting, excavation, shoring and backfilling per the manufacturers' instructions and/or per the Contract Documents; **cutting and/or removing pipe lining**; replacement of any pavement markers and striping; temporary by-passing of other utility services; cleanup, off-site disposal of all refuse and excess material; de-watering as necessary, shoring, temporary and permanent restoration of surfaces and pavement and all appurtenant work.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 4 – Construct 15" HDPE Sewer (Pipe Burst) Sta 19+65 to Sta 22+64

Glenoaks Blvd: Pipeline construction items of work will be paid at the contract unit price per foot installed of the pipe specified, and shall include full compensation for furnishing all labor, materials, tools, equipment and back up equipment necessary for pipe bursting, pipe placement; transportation and technical competence, saw cutting, excavation, shoring and backfilling per the manufacturers' instructions and/or per the Contract Documents; replacement of any pavement markers and striping; temporary by-passing of other utility services; cleanup, off-site disposal of all refuse and excess material; de-watering as necessary, shoring, temporary and permanent restoration of surfaces and pavement and all appurtenant work.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 5 – Remove & Construct 15" VCP Sewer (Open Trench) Sta 22+64 to Sta 23+14 Glenoaks Blvd:

The price per linear foot (LF) for pipe and conduit in place shall be considered full compensation for all wyes, tees, bends; the removal of interfering portions of existing sewers; the removing and disposal of abandoned conduit and structures; the excavation of the trench; shoring or sheeting or shielding; potholing; the control for ground and surface waters; the preparation of sub-grade; potholing; placing and joining pipe; bedding, backfilling (including anchor blocks, slope anchors and backfill stabilizers) and compacting the trench; temporary resurfacing; removal and replacement of interfering surface improvements (including but not limited to saw cutting and removal of permanent AC pavement, the removal and replacement of PCC pavement, stamped concrete, concrete pavers, brick pavers, hard-scape, irrigation, landscape, drainage facilities, planters, driveway pavement, gates and fences); replacement of any pavement markers and striping; temporary by-passing of utility services; cleanup; and all other work necessary to install the pipe or conduit, complete in place.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 6 – Construct 18" HDPE Sewer (Pipe Burst) Sta 10+00 to Sta 13+46

Harding Ave: Pipeline construction items of work will be paid at the contract unit price per foot installed of the pipe specified, and shall include full compensation for furnishing all labor, materials, tools, equipment and back up equipment necessary for pipe bursting, pipe placement; transportation and technical competence, saw cutting, excavation, shoring and backfilling per the manufacturers' instructions and/or per the Contract Documents; replacement of any pavement markers and striping; temporary by-passing of other utility services; cleanup,

off-site disposal of all refuse and excess material; de-watering as necessary, shoring, temporary and permanent restoration of surfaces and pavement and all appurtenant work.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 7 – Remove & Construct 18" VCP Sewer (Open Trench) Sta 13+46 to Sta 13+58 Harding Ave: The price per linear foot (LF) for pipe and conduit in place shall be considered full compensation for all wyes, tees, bends; the removal of interfering portions of existing sewers; the removing and disposal of abandoned conduit and structures; the excavation of the trench; shoring or sheeting or shielding; potholing; the control for ground and surface waters; the preparation of sub-grade; potholing; placing and joining pipe; bedding, backfilling (including anchor blocks, slope anchors and backfill stabilizers) and compacting the trench; temporary resurfacing; removal and replacement of interfering surface improvements (including but not limited to saw cutting and removal of permanent AC pavement, the removal and replacement of PCC pavement, stamped concrete, concrete pavers, brick pavers, hard-scape, irrigation, landscape, drainage facilities, planters, driveway pavement, gates and fences); replacement of any pavement markers and striping; temporary by-passing of utility services; cleanup; and all other work necessary to install the pipe or conduit, complete in place.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 8 – Construct 15" HDPE Sewer (Pipe Burst) Sta 13+58 to Sta 23+10 Harding Ave: Pipeline construction items of work will be paid at the contract unit price per foot installed of the pipe specified, and shall include full compensation for furnishing all labor, materials, tools, equipment and back up equipment necessary for pipe bursting, pipe placement; transportation and technical competence, saw cutting, excavation, shoring and backfilling per the manufacturers' instructions and/or per the Contract Documents; replacement of any pavement markers and striping; temporary by-passing of other utility services; cleanup, off-site disposal of all refuse and excess material; de-watering as necessary, shoring, temporary and permanent restoration of surfaces and pavement and all appurtenant work.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 9 – Construct Precast Concrete Manhole per SPPWC Std Plan 200-3: This item shall be paid for at the contract unit price per Each (EA). The contract price per each shall include all labor, materials, equipment, and tools necessary to perform the work, complete in place, and no additional compensation will be made therefor.

Bid Item 10 – Reconnect Sewer lateral per SPPWC Std Plan 222-2 (Pit Required): The contract unit price for Reconnect Sewer Lateral shall include all materials, labor, equipment, and supplies necessary for the complete installation, including replacement of up to six (6) feet of existing service lateral for external connections, removing and reconstruction 4-inch PCC sidewalk, restoration of existing landscaping and irrigation system, complete, in place, and accepted, and no additional compensation shall be allowed therefor.

Bid Item 11 – Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2: Payment for manhole construction will be made per each (EA) manhole installed or modified as set forth in the Bid Schedule. Payment shall include compensation for furnishing all labor, materials, tools, and equipment necessary to construct or modify existing manholes. Items shall include covers, rims, collars, cone and draft sections, bases, steps, water sealers (if applicable), temporary line stopping or flow diversions (if necessary), backfilling, compacting, basing and paving around the manhole, and other work or appurtenances as shown on the plans and drawings complete in place.

Bid Item 12 – Perform CCTV inspection (Final): This item shall be paid for at the contract unit price per Linear Foot (LF) and shall include all labor, materials, equipment, and tools necessary to perform the work and no additional compensation will be made therefor. Measurement may be made on either the footage counter of the tape, or the footage counter on the cable, and shall be based on the actual length of pipe televised.

Bid Item 13 – Install Sewer Bypass System: Payment for this item shall be at the contract bid price per Lump Sum (LS) and shall be complete per plan including all appurtenances and related materials for installation of sewer bypass system and no other payment shall be made therefore.

Bid Item 14 – Repair Broken Sewer Tap: Payment for this item shall be at the contract bid price per Lump Sum (LS) and shall be complete per plan including all appurtenances and related materials for repair of broken sewer tap and no other payment shall be made therefore.

Bid Item 15 – Install 1" Water Service & Meter per City Standard Plate No. 19: Payment for this item shall include full compensation for all labor, materials, tools, equipment and incidentals required for constructing 1" Water Services in accordance with the plans, specifications and City Standard Plate No. 19. Included in this bid item shall be all excavation, trench preparation, pneumatic piercing/horizontal directional drilling, bedding, fittings, backfill, compaction, testing, disinfection, connection to new/existing water meter inside new/existing meter box, and other work required to result in a complete and operating water service. Where new water meters and water meter boxes are indicated on the plans, or as directed by the Engineer, the City will provide the new meter and meter box to the Contractor at no cost. This bid item will be paid for Per Each.

Bid Item 16 – Install 3/4" Water Service & Meter per City Standard Plate No. 19: Payment for this item shall include full compensation for all labor, materials, tools, equipment

and incidentals required for constructing 3/4" Water Services in accordance with the plans, specifications and City Standard Plate No. 19. Included in this bid item shall be all excavation, trench preparation, pneumatic piercing/horizontal directional drilling, bedding, fittings, backfill, compaction, testing, disinfection, connection to new/existing water meter inside new/existing meter box, and other work required to result in a complete and operating water service. Where new water meters and water meter boxes are indicated on the plans, or as directed by the Engineer, the City will provide the new meter and meter box to the Contractor at no cost. This bid item will be paid for Per Each.

Bid Item 17 – Provide Traffic Control Plan and Traffic Control (3% Max of the Total Bid Amount): Payment for this item shall include full compensation for all labor, materials, tools, equipment and incidentals required to place, remove, store, maintain, move to new locations, replace, and remove the components of the traffic control system, including stationary mounted construction area signs, solar powered arrow boards, changeable message signs, as well as flagging and temporary traffic delineators/stripping for the project in accordance with of these Specifications. This bid item will be paid for by Lump Sum, prorated, based on percentage of contract work completed.

BID ITEMS: BID SCHEDULE "B"

Bid Item 4A – Construct 15" VCP Sewer (Open Trench) Sta 19+65 to Sta 22+64 Glenoaks Blvd: The price per linear foot (LF) for pipe and conduit in place shall be considered full compensation for all wyes, tees, bends; the removal of interfering portions of existing sewers; the removing and disposal of abandoned conduit and structures; the excavation of the trench; shoring or sheeting or shielding; potholing; the control for ground and surface waters; the preparation of sub-grade; potholing; placing and joining pipe; bedding, backfilling (including anchor blocks, slope anchors and backfill stabilizers) and compacting the trench; temporary resurfacing; removal and replacement of interfering surface improvements (including but not limited to saw cutting and removal of permanent AC pavement, the removal and replacement of PCC pavement, stamped concrete, concrete pavers, brick pavers, hard-scape, irrigation, landscape, drainage facilities, planters, driveway pavement, gates and fences); replacement of any pavement markers and striping; temporary by-passing of sewer or utility services; cleanup; and all other work necessary to install the pipe or conduit, complete in place.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 6A – Construct 18" VCP Sewer (Open Trench) Sta 10+00 to Sta 13+46 Harding Ave: The price per linear foot (LF) for pipe and conduit in place shall be considered full compensation for all wyes, tees, bends; the removal of interfering portions of existing sewers; the removing and disposal of abandoned conduit and structures; the excavation of the trench; shoring or sheeting or shielding; potholing; the control for ground and surface waters; the preparation of sub-grade; potholing; placing and joining pipe; bedding, backfilling (including anchor blocks, slope anchors and backfill stabilizers) and compacting the trench; temporary resurfacing; removal and replacement of interfering surface improvements (including but not limited to saw cutting and removal of permanent AC pavement, the removal and replacement

of PCC pavement, stamped concrete, concrete pavers, brick pavers, hard-scape, irrigation, landscape, drainage facilities, planters, driveway pavement, gates and fences); replacement of any pavement markers and striping; temporary by-passing of sewer or utility services; cleanup; and all other work necessary to install the pipe or conduit, complete in place.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.

Bid Item 8A – Construct 15" VCP Sewer (Open Trench) Sta 13+58 to Sta 23+10

Harding Ave The price per linear foot (LF) for pipe and conduit in place shall be considered full compensation for all wyes, tees, bends; the removal of interfering portions of existing sewers; the removing and disposal of abandoned conduit and structures; the excavation of the trench; shoring or sheeting or shielding; potholing; the control for ground and surface waters; the preparation of sub-grade; potholing; placing and joining pipe; bedding, backfilling (including anchor blocks, slope anchors and backfill stabilizers) and compacting the trench; temporary resurfacing; removal and replacement of interfering surface improvements (including but not limited to saw cutting and removal of permanent AC pavement, the removal and replacement of PCC pavement, stamped concrete, concrete pavers, brick pavers, hard-scape, irrigation, landscape, drainage facilities, planters, driveway pavement, gates and fences); replacement of any pavement markers and striping; temporary by-passing of sewer or utility services; cleanup; and all other work necessary to install the pipe or conduit, complete in place.

Pipe shall be measured along the longitudinal axis between the ends as laid, shall include the actual pipe in place and shall exclude the inside dimensions of the Manholes.

Replacement and modification of the Manhole inverts and bottoms shall be considered as part Bid Item 11 Modify MH base and seal pipe joins, conform to SPPWC Std Plan 208-2, and no additional compensation will be allowed.