

CITY OF ALAMEDA

SPECIFICATIONS AND PLANS

FOR

CYCLIC SEWER REPLACEMENT

PROJECT, PHASE 15

NO. P.W. 03-18-10

MANDATORY PREBID MEETING:
LOCATION:

July 19, 2018, 11:00 a.m.
City Hall West
950 W. Mall Square, Conference Room 156
Alameda, CA 94501

BID DUE DATE:
LOCATION:

July 26, 2018 by 2:00 p.m.
Public Works Department
950 W. Mall Square, Room 110
Alameda, CA 94501

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CITY ENGINEER'S APPROVAL

THE PROJECT SPECIFICATIONS CONTAINED HEREIN, FOR THE CYCLIC SEWER REPLACEMENT PROJECT, PHASE 15, NO. P.W. 03-18-10, HAVE BEEN APPROVED BY THE CITY ENGINEER IN ACCORDANCE WITH CITY OF ALAMEDA ORDINANCE NO. 3154 AND CALIFORNIA GOVERNMENT CODE 830.6.



Scott Wikstrom, P.E. *CS6266*
City Engineer
City of Alameda, CA

6/29/2018

Date

CITY OF ALAMEDA, CALIFORNIA

SPECIFICATIONS, SPECIAL PROVISIONS AND PLANS
FOR
PUBLIC WORK

SECTION I. PROPOSAL AND CONTRACT REQUIREMENTS

A. GENERAL INFORMATION. The City of Alameda will receive sealed bid at the time and place specified in the advertisement calling for bids for:

CYCLIC SEWER REPLACEMENT PROJECT, PHASE 15
NO. P.W. 03-18-10

Electronic specifications and bidder's forms for bidding this project can only be obtained at the City of Alameda website, <http://alamedaca.gov/business/bids-rfps>, www.cityofalamedaca.gov/Business/Bids-RFPs, or by calling (510) 747-7900. There is no cost for the specifications. **It is the responsibility of each prospective bidder to check the website periodically for updates, such as Addenda.**

B. EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND SITE OF WORK. The bidder is required to examine carefully the site and the proposal, plans, specifications and contract forms for the work contemplated, and it will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, the special provisions and the contract.

C. DESIGNATIONS. As used herein "City" shall mean the City of Alameda; "Council" or "City Council" shall mean the Council of the City; "City Manager" shall mean the City Manager of the City; "Engineer" or "City Engineer" shall mean the City Engineer or City Engineer's designee of the City; "Director" shall mean the Public Works Director of the City; and "Contractor" shall mean the bidder who is awarded the contract for the work.

D. PROPOSAL FORM. All bids must be made upon blank forms which are included in these specifications. (Exhibit A)

All bids must give the prices proposed, **both in writing and in figures.** Bids must be signed by the Bidder. If the proposal is signed by an individual, that individual's name and business address must be shown. If made by a firm or partnership, the name and the post office address of each member of the firm or partnership must be shown. If made by a corporation, the proposal must show the name of the state under the laws of which the corporation was chartered and the names, titles, and business addresses of the president, secretary and treasurer.

E. PRESENTING AND MARKING OF BIDS. Bids must be presented to the Public Works Department, 950 W. Mall Square, Room 110, Alameda, California, under sealed cover, plainly marked on the outside, **"CYCLIC SEWER REPLACEMENT PROJECT, PHASE 15, NO. P.W. 03-18-10"** no later than **2:00 p.m.** on the date set forth in the following paragraph.

A **mandatory** pre-bid meeting will be held at City Hall West, 950 W. Mall Square, Conference Room 156, Alameda, California, 94501 on July 19, 2018. City reserves the right to hold additional prebid meetings as necessary for contractors to visit the site.

Bids will be opened in the Public Works Department, 950 W. Mall Square, Room 110, Alameda, California, at **2:01 p.m. on July 26, 2018.**

F. **BIDDER'S GUARANTY.** All bids shall be accompanied by one of the following forms of bidder's guaranty: cash, a cashier's check, a certified check, or a bidder's bond executed by an admitted surety insurer, made payable to the City of Alameda. The security shall be in an amount equal to at least ten percent (10%) of the amount bid. A bid shall not be considered unless one of the forms of bidder's security is enclosed with it. If, in lieu of depositing cash, a cashier's check, or a certified check, the bidder submits a bidder's bond, the said bond shall, in form, be satisfactory to the City Attorney of the City of Alameda. A Bid Bond form is provided in Exhibit H.

Said bidder's guaranty which is submitted according to the above paragraph shall, in the event of the failure, for any reason, of the successful bidder or bidders to execute the contract as awarded, be deemed to be liquidated damages to be retained in full by the City of Alameda, but shall not be construed as a penalty for failure to execute said contract. The full amount of the said bidder's guaranty shall also be retained in full by the City of Alameda as consideration payable to the City of Alameda for engineering, accounting and clerical services in formulating specifications for such bid or bids, for advertising costs to the City of Alameda in connection with such bid or bids, and further, as consideration for the award of such contract to such bidder or bidders.

Any bid bond submitted under this Section shall incorporate therein by reference, or otherwise, all of the provisions of Section I, Item F, of these specifications.

G. **RETURN OF BIDDER'S GUARANTIES.** Within ten (10) days after the award of the contract, the Public Works staff will return the proposal guaranties accompanying the bids which are not to be considered in making the award. All other proposal guaranties will be held until the contract has been finally executed, after which they will be returned to the respective bidders whose bids they accompanied.

H. **TAXES.** Bids must include all state and federal taxes applicable to the transaction.

I. **SUBCONTRACTORS.** All contractors shall comply with the State Subletting and Subcontracting Fair Practices Act, located in Sections 4100 through 4112 of the California Public Contract Code. A copy of said Act is available in the office of the City Engineer. Said Act is hereby made a part of the specifications on the above-mentioned job and all contractors submitting bids shall accompany the bid with information regarding subcontractors as therein provided. All Subcontractors shall have a current City of Alameda business license.

J. REJECTION OR RETURN OF BIDS. Bids may be rejected if they show any alterations of form, additions not called for, conditional or alternative bids, incomplete bids, erasures or irregularities of any kind. The right is reserved to reject any and all bids. The City reserves the right to return bids unopened.

K. BID PROTEST. Any bid protest must be submitted in writing to the Public Works Director, City of Alameda Public Works Department, City Hall West, 950 West Mall Square, Room 110, Alameda, CA 94501 before 5:00 p.m. of the 5th business day following the posting date of the Notice of Intent to Award.

1. The initial protest document shall contain a complete statement of: the legal grounds for the protest; all the facts relevant to the protest; and the form of relief requested and the legal basis for such relief.
2. The protest shall refer to all the specific portions of the document which forms the legal grounds for the protest.
3. The protest shall include the name, address, and telephone number of the person representing the protesting party.
4. The party filing the protest shall concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
5. The Public Works Director will issue a decision on the protest. If the Public Works Director determines that a protest is frivolous, the party originating the protest may be determined to be irresponsible and that party may be determined to be ineligible for future contract awards.
6. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder's sole and exclusive remedy in the event of Bid protest and failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings.

L. AWARD OF CONTRACT. The award of contract, if it be awarded, will be to the responsible bidder who submits the lowest and best bid and whose proposal complies with all requirements described herein. The award, if made, will be made within ninety (90) days after the opening of the bids. All bids will be compared on the basis of the Engineer's estimate of quantities of work to be done. Once awarded, this contract may be mutually extended on a year-by-year basis, for up to three (3) additional years, based on satisfactory performance of all aspects of this contract. The Public Works Director shall, on or before April 1, submit written notice that the contract is to be extended upon the same terms and costs (plus an annual increase to consumer price index for the San Francisco Bay Area appropriate to the trades associated with the work for the previous calendar year) as the existing contract. In the event of a delay the City reserves the right to hold the Bidder to its bid for 90 days from the date the contract is awarded.

Bid protests, contracts, bonds, insurance, and other documents identified in these specifications and these special provisions are to be delivered to the following City address: City of Alameda, City Hall West, Public Works Department, 950 West Mall Square, Room 110, Alameda, CA 94501.

M. EXECUTION OF CONTRACT. The contract, in form and content satisfactory to the City, will be awarded at a regular City Council meeting (first and third Tuesdays of each month, except August). At least five (5) business days prior to the anticipated award date, the Contractor will be notified of apparent award status and requested to provide the documents necessary to complete the contract process. Required documentation shall include two (2) copies of the contract executed by the Contractor, proof of insurance and Payment and Performance bonds. The Contractor will be given five (5) business days from the date the City Council awards the contract to obtain the relevant bonds and insurance along with any other documents required for submission.

No proposal shall be considered binding upon the City until the execution of the contract. Failure to execute a contract and file acceptable bonds and insurance as provided herein within the time frame outlined above shall be just cause for the annulment of the award and the forfeiture of the bidder's guaranty.

N. CONTRACT BONDS. The Contractor shall furnish two good and sufficient bonds. One of the bonds shall be executed in a sum equal to at least one hundred percent (100%) of the contract price, which shall be furnished as required by the Terms of Section 3247 to 3252 of the Civil Code of the State of California (see Exhibit G). The other bond shall guaranty faithful performance of the said contract by the Contractor and shall be executed in a sum equal to at least one hundred percent (100%) of the contract price (see Exhibit F). Bonds shall be furnished by a surety company satisfactory to the City of Alameda.

Whenever any surety or sureties on any such bonds, or any bonds required by law for the protection of the claims of laborers and materials, 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 further bond or bonds or additional surety not exceeding that originally required, as is considered necessary, taking into account 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. Faithful performance bonds, whether by individual or corporate surety, shall in addition to other terms and conditions, contain the conditions that (1) death of the named principal shall not operate as a release of the obligation hereunder of the surety, and (2) extensions of time, if any, granted by the City to Contractor for performance of the work covered by said bond shall extend for a like time the period of limitations during which surety shall remain bound by the said undertaking.

SECTION II. LEGAL RELATIONS AND RESPONSIBILITIES

A. LAWS TO BE OBSERVED. The Contractor shall keep himself fully informed of all existing and future state and federal laws and all municipal ordinances and regulations of the City of Alameda which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

B. PROJECT STABILIZATION AGREEMENT. This project is subject to and shall be performed under the Project Stabilization Agreement (“PSA”) between the City of Alameda and the Building and Construction Trades Council of Alameda County and its affiliated local unions. Contractors submitting bids must provide evidence of acceptance of the terms and conditions of the PSA at the time of bid. Specifically, contractor must submit the completed and signed “Agreement to be Bound to PSA” (included in Exhibit A, Bidder’s Proposal). Additionally, all contractors and subcontractors of any tier on this project will be required to execute the Agreement to be Bound to PSA and be subject to the PSA prior to contract award.

C. DEPARTMENT OF INDUSTRIAL RELATIONS COMPLIANCE AND PREVAILING WAGE REQUIREMENTS ON PUBLIC WORKS PROJECTS.

1. Effective January 1, 2015, no Contractor or Subcontractor may be listed on a bid proposal for a public works project (submitted after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 (with the limited exceptions from this requirement for bid purposed only under Labor code Section 1771.1(a)). Register at <https://efiling.dir.ca.gov/PWCR>

2. No Contractor or Subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

3. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

4. The Prime Contractor is required to post job site notices prescribed by regulations. See 8 Calif. Code Regulation §16451(d).

5. Effective April 1, 2015, All Contractors and Subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner at: <https://apps.dir.ca.gov/ecpr/das/altlogin>

D. PREVAILING WAGES:

1. The Contractor is aware of the requirements of California Labor Code sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, section 16000 et seq. (“Prevailing Wage Laws”), which require the payment of prevailing wage rates and the performance of other requirements on certain “public works” projects. Since this Project involves a “public work” project, as defined by the Prevailing Wage Laws, Contractor shall fully

comply with such Prevailing Wage Laws. Contractor's failure to comply with the Prevailing Wage Law may constitute a default under the contract for performance of the work which would entitle the City to rescind the contract or exercise other remedies as provided by law or the contract.

2. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this contract from the website of the Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov/dlsr/. In the alternative, the Contractor may view a copy of the prevailing rates of per diem wages at the City's Public Works Department, Building 1, 950 W. Mall Square, Room 110, Alameda. The Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the Project site. The Contractor shall defend, indemnify, and hold the City, its elected officials, officers, employees, volunteers, and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws and/or the City's Labor Compliance Program (hereinafter referred to as "LCP"), if any.

3. If this project is funded in whole or in part with Federal monies and subject to the provisions of the Davis-Bacon Act, the successful bidder shall pay not less than the wage rates determined by the Secretary of Labor. The Federal wage rates shall apply unless the State wage rates are higher. The Federal Wage Rates applicable to the contract are those current within ten (10) days of the bid due date.

4. The Contractor and all subcontractors shall pay and shall cause to be paid each worker engaged in work on the Project not less than the general prevailing rate of *per diem* wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such workers.

5. The Contractor and all subcontractors shall pay and shall cause to be paid to each worker needed to execute the work on the Project travel and subsistence payments, as such travel and subsistence payments are defined in the applicable collective bargaining Contracts filed with the Department of Industrial Relations in accordance with Labor Code § 1773.8.

6. If during the period any bid for work on this Project remains open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of *per diem* wages in the locality in which this public work is to be performed, such change shall not alter the wage rates in the Notice calling for Bids or the contract subsequently awarded.

7. Pursuant to Labor Code §1775, the Contractor shall as a penalty to the City, forfeit Fifty Dollars (\$50.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of *per diem* wages, determined by the Director, for such craft or classification in which such worker is employed for any public work done under the Contract by the Contractor or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commission. In addition, the difference between such prevailing rate of *per diem* wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of *per diem* wage shall be paid to each work by the Contractor.

8. Any worker employed to perform work on the Project, which work is not covered by any craft or classification listed in the general prevailing rate of *per diem* wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to the work on the Project to be performed by them, and such minimum wage rate shall be retroactive to time of initial employment of such

person in such craft or classification.

9. For those crafts or job classifications requiring special prevailing wage determinations, please contact the Division of Labor Statistics and Research, Prevailing Wage Unit, P.O. Box 420603, San Francisco, CA 94142-0603, (415) 703-4774 or check out the web site at www.dir.ca.gov.

E. HOURS OF LABOR.

1. As provided in Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any Subcontractor on any subcontract under this Contract, upon the work or upon any part of the work contemplated by this Contract, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereinafter provided. Notwithstanding the provision hereinabove set forth, work performed by employees of Contractor in excess of eight (8) hours per day and forty (40) hours during any one week shall be permitted upon this public work provided that the employees' compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay.

2. The Contractor shall pay to the City a penalty of Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor, or by any Subcontractor, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one (1) calendar week, in violation of the provisions of Article 3 (commencing at §1810), Chapter 1, Part 7, Division 2 of the Labor Code, unless compensation for the workers so employed by Contractor is not less than one and one-half (1-1/2) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

3. Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half (1½) times the above specified rate of *per diem* wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Contract applicable to each particular craft, classification, or type of worker employed.

F. CERTIFIED PAYROLL.

1. Contractor's attention is directed to California Labor Code Section 1776, which requires Contractor and any subcontractors to keep an accurate payroll record and which imposes inspection requirements and penalties for non-compliance. Contractor is responsible for the submission of copies of payrolls by all subcontractors. Each payroll submitted shall be accompanied by a "Statement of Compliance", signed by the Contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract, and shall certify the following:

- a. That the payroll for each payroll period contains the name, social security number, and address of each employee, his or her correct classification, including applicable area and group code, hourly rates of wages paid, daily and weekly number of hours worked, deductions made and actual wages paid, and that such information is correct and complete;
- b. That such laborer or mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions

have been made either directly or indirectly from the full wages earned, other than permissible deductions; and

- c. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
 2. If the Contractor or a subcontractor does not work during the payroll period, a Statement of Non-Working Days must be submitted for each day not worked.
 3. In the event of noncompliance with the requirements of such section after 10 Days written notice specifying in what respects compliance is required, the CONTRACTOR shall forfeit as a penalty to the CITY, \$25.00 for each calendar Day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payments then due.

G. APPRENTICES.

1. Attention is directed to the provisions in sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him on contracts greater than \$30,000 or 20 working days. The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

2. Section 1777.5 requires the Contractor or subcontractor employing workers 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, if they have not previously applied and are covered by the local apprenticeship standards.

3. The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if: (1) the Contractor 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; or (2) if the Contractor is not a signatory to an apprenticeship fund and if the funds administrator is unable to accept Contractor' required contribution. The Contractor or subcontractor shall pay a like amount to the California Apprenticeship Council.

4. 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.

H. LABOR DISCRIMINATION. No discrimination shall be made in the employment of persons upon public works because of the race, color, sex, religion, age, national origin, sexual orientation, or physical disability of such persons and every Contractor for public works violating this section is subject to all the penalties imposed for a violation of the provisions of the Labor Code, and, in particular, Section 1735.

I. REGISTRATION OF CONTRACTORS. Before submitting bids, contractors shall be licensed in accordance with the provisions of Chapter 9, Division 3, of the Business and

Professional Code of the State of California. All Contractors must have an "A" license or a "C" license that allows them to complete the work specified herein, in a professional manner consistent with these specifications.

J. **PERMITS AND LICENSES.** The Contractor shall procure all permits and licenses, including City of Alameda business licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. However, the contractor will be reimbursed for construction permit fees. The estimated cost shown as an allowance in the bid proposal is only for bidding purposes. Payment shall be made for the actual cost of the permit. The cost for a City of Alameda business license is not reimbursable. Each Subcontractor shall have a current City of Alameda business license.

The following permit(s) and/or license(s) are required for this project:

1. **A City of Alameda Business License from the City of Alameda, 2263 Santa Clara Avenue, Finance Department, Room 220, Alameda.**
2. **"No Parking, Tow Away" signs and Excavation Permit from City Hall, 2263 Santa Clara Avenue, Planning and Building Services, Room 190, Alameda.**

K. **PATENTS.** The Contractor shall assume all costs arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work, and agrees to indemnify and hold harmless the City of Alameda, its officers, employees and agents from all suits at law or actions of any nature, damages, royalties and costs on account of the use of any patented materials, equipment, devices or processes.

L. **RESPONSIBILITY FOR DAMAGES.** The City of Alameda, its officers, employees and agents shall not be answerable or accountable in any manner for any loss or damage to the work or any part thereof, nor to any material or equipment used in performing the work, nor for injury or damage to any person or persons, either workers or the public, nor for damage to adjoining property from any cause whatsoever during the progress of the work nor at any time before final acceptance.

M. **CONTRACTOR'S RESPONSIBILITY FOR THE WORK.** Except as provided above, until formal acceptance of the work by the City, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof, except such injuries or damages occasioned by acts of the Federal Government or the public enemy. The Contractor will not be responsible for the cost of repairing or restoring damage to the work, which damage is determined to have been proximately caused by an act of God, in excess of 5% of the contracted amount.

N. **SAFETY PROVISIONS.** The Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Occupational Safety and Health of the Industrial Relations Department (CAL-OSHA).

O. NO PERSONAL LIABILITY. Neither the City Council, City Manager, the City Engineer, nor any other City officer, authorized assistant or agent shall be personally responsible for any liability arising under this contract.

P. RESPONSIBILITY OF CITY. The City of Alameda shall not be held responsible for the care or protection of any material or parts of the work prior to final acceptance, except as expressly provided in these specifications.

Q. PUBLIC CONVENIENCE AND SAFETY. The Contractor shall so conduct operations as to cause the least possible obstruction and inconvenience to public traffic. The Contractor shall furnish, erect and maintain such fences, barriers, lights and signs as are necessary or as required by the Engineer to give adequate warning to the public at all times that the work is in progress and of any dangerous conditions to be encountered as a result of the work or of the presence of the Contractor's equipment or machinery.

The use of Flex-o-Lite Model No. 501, or approved equal, will be permitted only in specifically approved locations and only to the extent of 50 percent of the total amount of necessary lighting. Other models of lesser candle power may be permitted in some approved locations at a lesser percentage.

If the work involves the construction of a street or highway, the following additional provisions shall apply:

All traffic shall be permitted to pass through the work, unless other existing streets are stipulated as detours in the special provisions. Residents and businesses along the affected street or highway shall be provided passage as far as practicable; convenient access to driveways, houses and public buildings along the street or highway shall be maintained and temporary crossings shall be provided and maintained in good condition. No more than one cross or intersecting street or highway shall be closed at any time without the approval of the Engineer.

Contractor shall submit to the Engineer at the pre-construction meeting a Traffic Control Plan for any work that will impact vehicular traffic in the area. The Contractor must have an approved plan prior to commencing of work. All Traffic Control Plans must be in conformance with Caltrans regulations and guidelines.

The Contractor shall furnish, install and maintain such facilities as barricades, traffic signs, and flagmen, as may be necessary to advise the public of construction hazards and to control traffic.

The Traffic Control Plan shall cover, at minimum, all phases of work scheduled to occur in the first twenty (20) working days that will impact vehicular, pedestrian and bicycle traffic in the area. The Traffic Control Plan shall allow residents on the streets impacted ample "on street" parking within one (1) block of their homes. The Contractor shall have an approved Traffic Control Plan prior to commencing of work in the field. Contractor shall submit subsequent additions to the Traffic Control Plan in a timely manner to allow for the Engineer's review and shall be in conformance with Caltrans regulations and guidelines.

At least 72 hours prior to beginning work on a section of street, curb or sidewalk that will affect use of the parking lane, the Contractor shall notify, by approved "No Parking - Tow Away" signs on barricades, all affected property owners, residents, businesses and agencies adjacent to that section of street. The "No-Parking" signs shall state the days, dates, and hours of parking lane closure, and shall be placed along the street on each side at no more than 50 feet spacing. The Contractor shall notify the Engineer at least one (1) working day in advance of the intent to post No-Parking signs, so that the timely posting can be verified by the Inspector. The Contractor is permitted to list up to one (1) working day before and one (1) working day after the scheduled days of work, as shown in the latest approved schedule on signs, in order to bracket the approved scheduled date of work. The Contractor shall remove the "No Parking" signs as soon as the parking lane is re-opened to parking.

If the Contractor is unable to meet the scheduled and noticed time for the work, the Contractor shall immediately notify the Engineer and remove the posted "No-Parking" signs. The Contractor shall submit a new scheduling request in writing to the Engineer. Upon written approval of the Engineer, the Contractor shall post signs at least 72 hours prior to beginning work per the revised schedule.

Work hours are limited between 8:00 A.M. and 5:00 P.M., except for vicinity of schools where the work hours are limited between 9:00 A.M. and 3:00 P.M.

Contractors must coordinate with the Alameda Unified School District and any private school on the streets that are in the vicinity of schools.

R. NOTICES TO CONTRACTOR. Any notice required to be given to the Contractor by the City of Alameda or by the City Engineer or by any officer of said City may be given to said Contractor at the address shown in the Contractor's proposal. Such notice may be given by mailing a copy of said notice to the Contractor to such address by United States certified mail. Evidence of such mailing shall be deemed the equivalent of personal services of said notice.

S. UTILITIES. The location of railroad tracks, utility facilities and other structures shall be the responsibility of the Contractor. The Contractor shall contact the owners of those tracks, facilities and structures for any information that may be required. The Contractor shall contact Underground Services Alert (USA) at 800-642-2444 forty-eight (48) hours prior to commencement of work.

Where existing sewers and storm drains cross or interfere in any way with construction under this contract, they shall be left in place and the Contractor shall work around them, or where feasible and practical, the Contractor may, with the permission of the City Engineer, remove and replace them at his/her own expense. Precautions shall be exercised to provide bearing under existing sewer lines so encountered to preclude settlement during or after the term of the contract. In the event that some of these sewers are abandoned, they may, with the permission of the City Engineer, be removed and not replaced. The Contractor shall provide submittals for the Engineer's review and approval for supporting utilities.

The owners of pipes, wires, conduits, vaults and other utilities (other than sewers) located in the City streets which could conflict with the proposed work will be notified by the City Engineer to remove or adjust the same, without cost to the Contractor, to such extent as will allow the prosecution of the work described herein according to the necessities thereof and in accordance with these specifications. Wherever and whenever the Contractor anticipates working in an area from which utilities must be removed at the expense of others, he/she shall notify the City Engineer sufficiently in advance (a minimum of ten (10) working days) to permit the owners thereof to rearrange or abandon such utilities, and he/she shall cooperate with the owners thereof in the performance of the work under this contract.

The work will be so prosecuted that a minimum of damage will result to utility services. In the event that utility services are damaged or interrupted, the Contractor shall immediately, at his/her own expense, restore such services in a manner satisfactory to the City Engineer. In the event that an interruption of utility services is sustained for a period of longer than one-half hour, it shall be the responsibility of the Contractor to notify the occupants of the premises to which said services are connected, so that no damage will accrue on or to said premises.

The Contractor shall perform all work in such manner as to prevent damage to utilities lying outside of or below a required excavation of trench area.

T. SOUND CONTROL REQUIREMENTS. Sound control shall conform to Section 4-10 of the Alameda Municipal Code, which prohibits weekday construction activities between 7:00 pm and 7:00 am.

U. CONSTRUCTION SITE CONTROLS. Within five (5) business days of the date the work is to commence pursuant to the NTP the Contractor shall submit an Erosion/Stormwater Pollution Prevention Plan (SWPPP) to the City Engineer for review. The SWPPP shall include appropriate erosion and sediment control measures to effectively prevent the entry of soil, dirt, debris and other pollutants to storm water runoff, the storm drain system, lagoons and the bay/estuary during construction. No work in the field under this Contract may begin until the City Engineer has approved the Contractor's SWPPP.

Erosion and sediment control plans/sheets shall indicate the specifications and maintenance schedules for the installation and upkeep of the erosion control mechanisms. Specifications shall be provided for the erosion control practices, perimeter protection(s), any silt fencing and fiber rolls to be used, storm drain inlet protections, stabilized construction entrance(s) and exits, site and excavation dewatering activities, vehicle tire wash area(s), vehicle and equipment servicing area(s), and the materials handling and storage area(s). These specifications should meet the same level of erosion and sediment control effectiveness established by practices identified in the San Francisco Bay Regional Water Quality Control Board's Erosion and Sediment Control Field Manual (510-622-2465), the Association of Bay Area Government's Manual of Standards for Erosion and Sediment Control (510-464-7900) and/or the California Stormwater Quality Association's Stormwater Best Management Practice Handbook – Construction (2003) (www.cabmphandbooks.com). Contact City Public Works Department Clean Water Program Specialist Jim Barse (510-747-7930) for additional assistance in obtaining copies of these reference documents.

The Contractor is responsible for ensuring that all of his/her workers and subcontractors are aware of and implement the specific stormwater quality control measures under the approved SWPPP. The Contractor(s) shall avoid creating excess dust when breaking asphalt/concrete and during excavation and grading. If water is to be used as a measure for dust control, use as little as possible. All wash water shall be kept out of streets, gutters and storm drains. Controls shall be implemented before construction begins and maintained until the end of construction at which time they shall be removed.

Failure to comply with the following approved construction Best Management Practices (“BMPs”) shall result in the issuance of correction notices, citations and/or a project stop order:

1. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. After breaking old pavement, remove all pieces to avoid contact with rainfall or runoff.

2. Remove on-site piles from the site on a regular basis. Only temporary storage is allowed. All temporary soil or other stockpiles on site shall be securely covered with a tarp, plastic sheeting or similar material.

3. Remove all dirt/mud, gravel, rubbish, refuse and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site daily and prior to rain. Clean up leaks, drips and spills immediately. Avoid unnecessary driving on unpaved areas during wet weather.

4. Install and maintain stabilized construction entrances to minimize the tracking of dirt, mud, dust and debris onto the public right-of-way.

5. Broom-sweep the sidewalk and public street pavement adjoining the project site daily and prior to rain. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the completion of work the street shall be washed and the wash water collected and disposed offsite.

6. Install filter materials (such as block and gravel bags, sandbags, filter fabric) at the storm drain inlets surrounding the project site. Such inlet protections shall be installed before: the start of the rainy season (October 1st), site de-watering activities, saw-cutting activities, or any other activity that may result in the discharge of material to the storm drain. Filter materials shall be maintained and/or replaced as necessary to minimize short-cutting and to remove sediment deposits and buildup. Accumulated sediment/debris shall be disposed of properly.

7. Vacuum saw-cutting slurry and remove from site. Do not allow saw-cut slurry to enter the storm water conveyance system.

8. Create a contained and covered area on the site for the storage of cement bags, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by wind, exposure to rainfall or in the event of a material spill.

9. Never clean machinery, tools, brushes, etc. or rinse containers into a street, gutter, storm drain or stream. See the *Building Maintenance and Remodeling* BMP flyer and ACCWP BMP brochures for more information. Contact the Public Works Department at 747-7930 for assistance with obtaining these documents.

10. Ensure that concrete/gunite supply trucks or concrete/plaster finishing operations

do not discharge wash water into street gutters or drains. Concrete trucks shall have a self-contained washout system or discharge to a dedicated, secure site washout in order to avoid the possibility of debris on city streets or discharge of wash water to the storm water conveyance system.

11. Minimize removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Re-plant the area, and stabilize all cut and fill slopes as soon as possible after grading is completed. At a minimum, 4,000 pounds/acre of straw with tackifier should be placed on all exposed soils including those within active work areas and flat lots. **No site grading shall occur between October 1 and May 31 unless approved erosion and sedimentation control measures are in place.**

12. Provide erosion "prevention" and perimeter protection measures (soil stabilization) such as fiber rolls, silt fence, and/or sediment traps or basins. Ensure control measures are adequately maintained and in operable condition. Sediment controls, including inlet protection, are necessary but should be a secondary defense behind good erosion control and site perimeter measures.

13. Design site de-watering operations to prevent the discharge of any sediment, debris or other pollutants to the municipal storm water conveyance system.

14. Maintain and if necessary, repair, all erosion prevention and sediment control measures throughout the contract term. Replacement supplies should be kept on site. Site inspections shall be conducted before and after each storm event, and every 24 hours for extended storm events, to identify areas that contribute to erosion and sediment problems or any other pollutant discharges. If additional measures are needed, inform the City Engineer immediately and document all inspection findings and actions taken.

15. Conduct visual observations before, during, and after storm events. Any breach, malfunction, leakage, or spill observed that could result in the discharge of pollutants to surface waters that might not be visually detectable in stormwater shall trigger the collection of a sample of discharge. The following procedures shall be followed during sampling:

Sampling Procedures:

- For all construction activity, identify a sampling and analysis strategy and sampling schedule for potential discharges discovered through visual monitoring.
- Any breach, malfunction, leakage, or spill observed during visual monitoring which could result in the discharge of pollutants to surface waters that would not be visually detectable in stormwater shall trigger the collection of a sample of discharge.
- Samples shall be collected at all discharge locations which drain the areas identified by the visual observations and which can be safely accessed.
- Personnel trained in water quality sampling procedures shall collect stormwater samples.
- An uncontaminated sample shall be collected for comparison with the discharge sample.
- Sampling shall be conducted during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.
- The uncontaminated sample shall be compared to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and TDS
- All field and/or analytical data shall be kept in the SWPPP document, which is to remain at the construction site at all times.

16. Contact the City of Alameda Public Works Department at 510-747-7930 in the event of any slope failure, sediment pond overflow, or any other malfunction resulting in sediment-laden runoff. The City shall, in turn, report such incidents to the Regional Water Quality Control Board.

17. Clearly mark with the words, "No Dumping! Drains to Bay" or the equivalent, using methods approved by the City of Alameda, onto the on-site storm drain inlets. All on-site storm drains must be inspected and, if necessary, cleaned, at least once a year immediately prior to the rainy season. Additional cleaning may be required by the City of Alameda.

18. Require all concrete trucks used in the performance of the work to have a self-contained washout system, rather than do washout on the site. The idea is to avoid:

- a. An undesirable pile of concrete on the jobsite, and
- b. The possibility of debris on city streets.

The objective of these Standard Conditions is to ensure that the City's municipal storm water Permit, the National Pollutant Discharge Elimination System (NPDES) Permit provisions and additional Regional Water Quality Control Board requirements are adequately enforced.

These recommendations are intended to be used in conjunction with the State's Best Management Practices Municipal and Construction Handbooks, local program guidance materials from municipalities, Section 7.1.01, of the Standard Specifications and any other appropriate documents on storm water quality controls for construction. If you need assistance in checking these documents, contact Clean Water Program Specialist at 510-747-7930.

Failure to comply with the above program will result in issuance of noncompliance notices, citations, project stop orders or fines. The fine for noncompliance of the above program is two hundred and fifty dollars (\$250.00) per occurrence per day. The State under the Federal Clean Water Act can also impose a fine on the Contractor.

V. RECYCLING OF CONCRETE AND ASPHALT MATERIALS. Concrete and Asphalt are highly recyclable, and must be source separated as much as possible on the project site and delivered to a processor as separate materials to ensure a very high recycling rate, above 80%. Additionally, the Contractor shall prepare and submit to Alameda.WasteTracking.com a Waste Management Plan to recycle at least 80% of these two types of materials to an approved materials recycling location other than a landfill. The 80% shall be determined by weight of materials of the entire project.

The Contractor shall also submit to alameda.wastetracking.com a Summary Report, containing proof of actual recycling results of construction and/or demolition debris hauled from the project (ex. processing facility tonnage receipts verifying at least 80% recycling rate).

Proof of an approved Waste Management Plan must be provided to the City Engineer before construction starts and proof of an approved Summary Report must be provided before project acceptance. The Contractor shall submit a request, along with proof in writing, to the City Engineer of the Contractor's inability to comply with this requirement.

W. CLEAN AIR ACT OF 1970, ET SEQ. AND FEDERAL WATER POLLUTION CONTROL ACT AS AMENDED BY THE CLEAN WATER ACT OF 1977. The Contractor agrees to comply with federal clean air and water standards during the performance of this contract and specifically agrees to the following:

- The term “facility” means any building, plant, installation, structure, mine, vessel or other floating craft, location or site of operations owned, leased, or supervised by the Contractor and the subcontractors for the construction, supply and service contracts entered into by the Contractor;
- Any facility to be utilized in the accomplishment of this contract is not listed on the Environmental Protection Agency’s List of Violating Facilities pursuant to 40 CFR, Part 15.20;
- In the event a facility utilized in the accomplishment of this contract becomes listed on the EPA list, this contract may be canceled, terminated, or suspended in whole or in part;
- It will comply with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Water Pollution Control Act relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308, respectively, and all regulations and guidelines issued thereunder;
- It will promptly notify the Government of the receipt of any notice from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that any facility utilized or to be utilized in the accomplishment of this contract is under consideration for listing on the EPA List of Violating Facilities;
- It will include the provisions of Paragraph a. through g. in every subcontract or purchase order entered into for the purpose of accomplishing this contract, unless otherwise exempted pursuant to the EPA regulations implementing the Air or Water Acts above (40 CFR, Part 15.5), so that such provisions will be binding on each subcontractor or vendor;

In the event that the Contractor or the subcontractor for the construction, supply and service contracts entered into for the purpose of accomplishing this contract were exempted from complying with the above requirements under the provisions of 40 CFR, Part 15.5 (a), the exemption shall be nullified should the facility give rise to a criminal conviction (see 40 CFR 15.20) during the accomplishment of this contract. Furthermore, with the nullification of the exemption, the above requirements shall be effective. The Contractor shall notify the Government, as soon as the Contractor’s or the subcontractors’ facility is listed for having given rise to a criminal conviction noted in 40 CFR, Part 15.20.

X. SUBMITTALS AND REQUEST FOR INFORMATION (RFI’S). The Contractor shall submit an RFI within five (5) business days of an event or question of fact arising under the Contract. The Engineer in charge of the project shall have ten (10) business days to respond to an RFI or any Submittal required to be made under the Contract.

Y. COMPLIANCE WITH THE CITY'S INTEGRATED PEST MANAGEMENT POLICY:

The Contractor shall follow the requirements of the City's Integrated Pest Management (IPM) Policy to ensure the City is in compliance with its Municipal Regional Stormwater NPDES Permit, Order No. R2-2009-0074, issued by the California Regional Water Quality Control Board. Contractor shall follow the City's IPM Policy and utilize generally accepted IPM Best Management Practices (BMPs) to the maximum extent practicable for the control or management of pests in and around City buildings and facilities, parks and golf courses, urban landscape areas, rights-of-way, and other City properties.

Contractor will ensure that applicators will use the most current IPM technologies available to ensure the long-term prevention or suppression of pest problems and to minimize negative impacts on the environment, non-target organisms, and human health. Contractor will consider the options or alternatives listed below in the following order, before recommending the use of or applying any pesticide on City property:

1. No controls (e.g., tolerating the pest infestation, use of resistant plant varieties or allowing normal life cycle of weeds)
2. Physical or mechanical controls (e.g., hand labor, mowing, exclusion)
3. Cultural controls (e.g., mulching, disking, alternative vegetation), good housekeeping (e.g. cleaning desk area)
4. Biological controls (e.g., natural enemies or predators)
5. Reduced-risk chemical controls (e.g., soaps or oils)
6. Other chemical controls

Contractor shall ensure that only appropriate licensed applicators who are authorized and trained in pesticide application and who shall implement the City department's IPM standard operating procedures may apply pesticides to or within City property.

Restricted Chemicals

The term pesticide applies to herbicides, insecticides, fungicides, rodenticides and other substances used to control pests. Antimicrobial agents are not included in this definition of pesticides.

Contractor shall avoid the use of pesticides that threaten water quality, human health and the environment. Thus, the Contractor shall not use or promote the use of the following chemicals:

1. Acute Toxicity Category I chemicals as identified by the Environmental Protection Agency (EPA),
2. Organophosphate pesticides (e.g., those containing Diazinon, chlorpyrifos or malathion)
3. Pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin),
4. Carbamates (e.g., carbaryl),
5. Fipronil,
6. Copper-based pesticides unless:

- a) Their use is judicious,
- b) Other approaches and techniques have been considered, and;
- c) Threat of impact to water-quality is prevented.

General Pesticide Usage Practices

Contractor shall ensure implementation of the following practices:

1. All pesticide applications shall be performed according to the manufacturer's instructions as detailed on the product label, and in accordance with all applicable state and local laws and regulations set forth to protect the environment, the public, and the applicator; and properly dispose of unused pesticides and their containers.
2. Pesticides that are not approved for aquatic use will not be applied to areas immediately adjacent to water bodies where through drift, drainage, or erosion, there is a reasonable possibility of a pesticide being transported into surface water.
3. Applicators will always avoid applications of pesticides that directly contact water, unless the pesticide is registered under Federal and California law for aquatic use.
4. Obtain coverage under the Statewide General NPDES Permit prior to discharging pollutants from the use of aquatic pesticides directly to the waters of the United States, or onto aquatic plants growing in waters of the United States (as required by the State Water Quality Resources Control Board).

Posting of Warning Notices Prior to Pesticide Application

1. If a pesticide with a "Warning" or "Danger" label indicator must be applied, the Contractor shall post sufficient copies of warning notices (Notice of Scheduled Chemical Application for Pest Management) and MSDS to effectively alert the public (i.e., at all entrances to a building) no less than 48 hours in advance of the pesticide application. The warning notice must be completely filled out, including name of the pesticide (both chemical and brand name), time and date of application, and with a fully legible re-entry time.

Annual Pesticide Use Summary Report

Contractor shall track pesticide use on City properties and provide an annual pesticide use summary report of pesticide application on City properties. The annual pesticide use summary report shall be submitted to the City's Public Works Department Clean Water Program staff by a date to be determined in the scope of work and shall include the following information:

1. Product name and manufacturer
2. Active ingredient
3. The total quantity of each pesticide used during the prior fiscal year (from July 1 to June 30)
4. Target pest(s) for pesticide application(s).
5. Reasons for increases in use of pesticides that threaten water quality, specifically organophosphorous pesticides, pyrethroids, carbamates, fipronil, and copper-based pesticides.

Best Management Practices (BMPs)

To protect water quality, the Contractor shall implement the BMPs and control measures described below:

1. Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of pesticides and training of pest control advisors and applicators.
2. Use the most effective, least toxic pesticides that will do the job, provided there is a choice. The agency will take into consideration the LD50, overall risk to the applicator, and impact to the environment (chronic and acute effects).
3. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging pesticides in stormwater runoff. Avoid application of pesticides if rain is expected (this does not apply to the use of pre-emergent herbicide applications when required by the label for optimal results.)
4. Employ techniques to minimize off-target application (i.e. spray drift) of pesticides, including consideration of alternative application techniques. For example, when spraying is required, increase drop size, lower application pressure, use surfactants and adjuvants, use wick application, etc.
5. Apply pesticides only when wind speeds are low.
6. Mix and apply only as much material as is necessary for treatment. Calibrate application equipment prior to and during use to ensure desired application rate.
7. Do not mix or load pesticides in application equipment adjacent to a storm drain inlet, culvert, or watercourse.
8. Properly inspect applicator equipment to prevent accidental pesticide leaks, spills and hazards to applicators and the environment.
9. Meet local fire department and Alameda County Agricultural Commissioner storage requirements for pesticide products. Provide secondary containment for liquids if required.
10. Prepare spill kits, store the kits near pesticides, and train employees to use them.
11. Store pesticides and other chemicals indoors in a locked and posted storage unit, as per California Code of Regulations.
12. Store pesticides in labeled containers, as per California Code of Regulations.
13. Rinse empty pesticide/herbicide containers, and empty in the spray, as per California Code of Regulations.
14. Dispose of triple-rinsed empty pesticide containers according to recommendations of the Alameda County Agricultural Commissioner and the manufacturer.
15. Try to find a qualified user for any unwanted pesticides, or return to the manufacturer if unopened. If disposal is required, contact Alameda County's Household Hazard Waste Collection Program at (510) 670-6460 between 8:30 AM and 5:00 PM., Monday through Friday, to make appropriate disposal arrangements, or to recycle the material.
16. If changing pesticides or cleaning spray tanks, use tank rinse water as the product, over a targeted area within the application site.
17. Irrigate slowly to prevent runoff, and do not over-water.

SECTION III. SCOPE OF WORK

A. **WORK TO BE DONE.** The work to be done consists of furnishing all labor, tools, equipment, materials, except as herein specified, and doing all work associated with removing and installing sanitary sewer mains, sewer laterals, manholes, cleanouts, curb, gutter, sidewalk, driveway, street patch, SWPPP, traffic controls and all other associated work to complete the project at the locations designated in the plans.

The Notice to Proceed (NTP) for this project is tentatively scheduled to be issued September 24, 2018.

The Initial Project Submittal Package shall address the entire project, and shall include the Traffic Control Plan (first 20 working days at minimum), SWPPP, Waste Reduction and Recycling Plan, and the full project schedule. Contractor shall not commence work in the field until Engineer has approved the Initial Project Submittal Package.

The Contractor shall have two hundred fifty (250) consecutive working days from the date the work is to commence pursuant to the Notice to Proceed to complete the work.

Contractor is advised to remove all equipment from the streets identified as route, detour, and/or staging areas for the 4th of July Parade, during the period of Tuesday, July 2, 2 p.m. through 8 a.m. Friday, July 5. No removal of concrete, asphalt or pavement markings shall be allowed on these streets unless they are restored in full at least 24 hours prior to July 2.

Contractor shall not work during City holidays, 2018 and 2019 holidays include:

Veteran's Day	Monday, November 12, 2018
Thanksgiving Day	Thursday, November 22, 2018
Day after Thanksgiving Day	Friday, November 23, 2018
Christmas Day	Tuesday, December 25, 2018
New Year's Day	Tuesday, January 1, 2019
Martin Luther King, JR.	Monday, January 21, 2019
Presidents Day	Monday, February 18, 2019
Memorial Day	Monday, May 27, 2019
Independence Day	Thursday, July 4, 2019
Labor Day	Monday, September 2, 2019

The following City events are planned for Calendar Year 2018 and 2019:

<u>Event</u>	<u>Date</u>
Farmer's Market (Webster Street at Haight Avenue) held every Tuesday and Saturday (year-round) from 9 a.m. to 1 p.m.	
Classic Car Show (Park Street)	Saturday, October 13, 2018
Trick or Treat at Webster Street	Sunday, October 28, 2018

Santa on Webster Street
Spring Festival (Park Street)
Alameda Island Jam (Webster Street)
July 4th Parade
Art and Wine Faire (Park Street)
Concerts at the Cove

Friday, December 8, 2018
Sat/Sun, May 11 and 12, 2019
Sunday, June 16, 2019
Thursday, July 4, 2019
Sat/Sun, July 27 and 28, 2019
2nd Friday in June, July and August 2019

B. ALTERATIONS. The City of Alameda reserves the right to increase or decrease the quantity of any item or portion of work, or to omit portions of the work as may be deemed necessary or expedient by the Engineer; also to make such alterations or deviations, increases or decreases, additions or omissions in the plans and specifications, as may be determined during the progress of the work to be necessary and advisable.

C. EXTRA AND FORCE ACCOUNT WORK. New and unforeseen work will be classed as extra work when such work cannot be covered by any of the various items or combination of items for which there is a bid price.

The Contractor shall do no extra work except upon written order from the Engineer. Extra work as herein before defined under Section 4-1.05, Extra Work, when ordered and accepted, shall be paid for under a written work order in accordance with the terms therein provided. Payment for extra work will be made as agreed upon in writing pursuant to an extra work order signed by both parties, or by force account.

Work performed on force account shall be paid on a time and materials basis plus ten percent (10%). For work done by a subcontractor, an additional five percent (5%) markup is allowed to reimburse the contractor for additional administration cost and no other additional payment will be made; provided, however, that the City reserves the right to furnish such materials required as it deems expedient, and the Contractor shall have no claim for profit on the cost of such materials. Payment for work performed on force account pursuant to this subsection shall include full compensation to the Contractor for contributions made to the State as required by the provisions of the Unemployment Reserve Act, Chapter 352, Statutes of 1935, as amended; for taxes paid to the Federal Government as required by the Social Securities Act, approved August 14, 1935, as amended; for premiums paid on any other insurance of any nature which the Contractor may be required to carry or which he may elect to carry, and for additional premiums paid on faithful performance and labor and materials bonds required by reason of increase in the amount of work to be performed over and above that called for in the original contract. The price paid for labor shall include any compensation insurance paid by the Contractor.

All force account work shall be recorded and tracked daily upon Time and Material Tentative Extra Work Order report sheets furnished by the Contractor to the Engineer and signed by both parties, which daily reports shall thereafter be considered the true record of force account work done. Verification of time and materials shall be made on a daily basis by the Inspector or by his/her designee.

D. REMOVAL OF OBSTRUCTIONS. The Contractor shall remove and dispose of all structures, debris, or other obstruction of any character to the construction of the project if and as required by the Engineer.

E. CLEAN UP. Contractor shall leave the work site in an acceptable clean manner at the end of each work day. Upon completion and before making application for acceptance of the work, the Contractor shall clean the street or road, borrow pits, and all ground occupied by the Contractor in connection with the work, of all rubbish, excess materials, temporary structures, and equipment; and all parts of the work shall be left in a neat and presentable condition.

SECTION IV. CONTROL

A. AUTHORITY OF THE ENGINEER. The Engineer shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed; the manner of performance and rate of progress of the work; the interpretation of the plans and specifications; the acceptable fulfillment of the contract on the part of Contractor; and all questions as to claims and compensation.

The Engineer's decision shall be final and he/she shall have executive authority to enforce and make effective such decisions and orders that the Contractor fails to carry out promptly.

B. PLANS. All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made to any plans or drawings after the same have been approved by the Engineer, except by direction of the Engineer.

Working drawings of plans for any structure not included in the plans furnished by the Engineer shall be approved by the Engineer before any work involving these plans shall be performed, unless approval is waived in writing by the Engineer.

Notwithstanding the foregoing, the Contractor agrees that approval by the Engineer of the Contractor's working plans does not relieve the Contractor of any responsibility for the accuracy of the dimensions and details thereof, and that the Contractor shall be responsible for agreement and conformity of his/her working plans with the approved plans and specifications.

The Contractor shall provide as-built drawings at the completion of the work. As-built drawings shall be prepared by a licensed engineer or surveyor and approved by the City Engineer.

As-built drawings must be in digital format. Any difficulty in providing the digital as-built drawings must be documented and presented to the City Engineer, who may permit manual as-built drawings on 24"x36" vellum. Release of retention is subject to the approval of the as-built drawings by the Engineer.

Full compensation for furnishing all working drawings and digital **as-built drawings** shall be considered as included in the prices paid for the various contract items of work, and no additional allowance will be made therefor.

C. CONFORMITY WITH PLANS AND ALLOWABLE DEVIATION. Finish surfaces in all cases shall conform with the lines, grades, cross sections, and dimensions shown on the approved plans. Deviations from the approved plans, as may be required by the exigencies of construction will be determined in all cases by the Engineer and authorized in writing.

D. COORDINATION OF PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS.

These specifications, the plans, special provisions and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be cooperative, to describe, and to provide for a complete work. Plans shall govern over specifications; special provisions shall govern over both specifications and plans.

E. INTERPRETATION OF PLANS AND SPECIFICATIONS AND ADDENDA THERETO.

Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained in these specifications, plans, and the special provisions, the Contractor shall apply to the Engineer for such further explanation as may be necessary to carry out the work. Upon such application by the Contractor or prospective bidder, or in the event that it appears expedient to the Engineer to further explain, clarify, or amend these specifications, special provisions and plans, the Engineer shall issue addenda thereto and such addenda shall constitute a part hereof, and shall be binding on the Contractor. It is up to the Contractor to check before the bid date that Contractor has all paperwork to complete the bid.

Addenda will be forwarded by fax or email, followed by mail, to prospective bidders who have purchased a set of these specifications from the City's Public Works Department and have furnished contact information. If the addendum is issued after a pre-bid meeting is held, the addendum will also be forwarded by fax or email, followed by mail, to all attendees who have furnished contact information. All prospective bidders are responsible for inquiring at the Public Works Department (510-747-7930) within four (4) working days prior to the bid opening, to determine if any addenda have been issued. Do not rely upon third party providers of the original plans and specs to issue all addenda. Contractor shall acknowledge receipt of all addenda on the Bid and those Bids that do not have acknowledgment of all addenda will be considered non-responsive.

In the event of any discrepancy between any drawing and the figures written thereon, the figures shall be taken as correct.

F. SUPERINTENDENCE. Whenever the Contractor is not present on any part of the work where it may be desired to give directions, orders will be given by the Engineer in writing and shall be received and obeyed by the superintendent or foreman in charge of the particular work in reference to which orders are given.

G. CONSTRUCTION STAKING & LAYOUT. Construction staking and layout shall be at the contractor's expense and performed by the contractor's surveyor or engineer qualified to do surveying work.

The Contractor shall preserve all stakes and points set for lines, grades, or measurements of the work in their proper places until authorized to remove them by the Engineer. All expenses incurred in replacing stakes that have been removed without proper authority shall be paid by the Contractor.

AND/OR

G. LINES AND GRADES. All distances and measurements are given and will be made in a horizontal plane. Grades are given from the top of stakes or nails, unless otherwise noted on the plans.

Three consecutive points shown on the same rate of slope must be used in common, in order to detect any variation from a straight grade, and in case any discrepancy exists, it must be reported to the Engineer. If such discrepancy is not reported to the Engineer, the Contractor shall be responsible for any error in the finished work.

The Contractor shall preserve all stakes and points set for lines, grades, or measurements of the work in their proper places until authorized to remove them by the Engineer. All expenses incurred in replacing stakes that have been removed without proper authority shall be paid by the Contractor.

H. INSPECTION. The Engineer shall at all times have access to the work during construction and shall be furnished with every reasonable facility for ascertaining full knowledge respecting the progress, workmanship, and character of materials used and employed in the work.

The Contractor shall give at least 48 hours notice in writing when he will require inspection on subgrade, formwork, concrete paving, etc. Inspection will routinely be carried out at pre-scheduled time established at the pre-construction meeting. Inspection will only be carried out for substantial quantities of work ready for inspection.

The Contractor shall contact the City's representative by 11:00 a.m. the day prior to any special inspections so the City can schedule the inspections. If the contractor does not perform work that requires the special inspection as previously communicated to City's representative then the contractor will be responsible for all costs associated with special inspection regardless of the fact that the special inspector did not perform any services.

Whenever the Contractor varies the period during which work is carried on each day, he shall give due notice to the Engineer, so that proper inspection may be provided. Any work done in the absence of the Engineer is subject to rejection.

The inspection of the work shall not relieve the Contractor of any of his/her obligations to fulfill the contract as prescribed. Defective work shall be made good and unsuitable materials may be rejected, notwithstanding the fact that such defective work and unsuitable materials have been previously overlooked by the Engineer and accepted or estimated for payment.

Working hours in the field are restricted to 8 AM through 5 PM, Monday through Friday, excluding City Holidays, and shall constitute "normal working hours." The Public Works Department Inspectors work on Friday's and can be reached at 510-747-7900. In some locations, as noted on the Plans, normal working hours may be further restricted to avoid traffic and/or school-related conflicts. Any work in the field performed outside of these hours, including but not limited to construction, clean up, placement of traffic control devices, and mobilization/demobilization, shall be subject to removal and the Contractor fined \$5,000 per incident, unless such work has been previously authorized by the Engineer in writing.

Inspection hours for construction shall be from 8 AM through 5 PM, Monday through Friday, excluding City Holidays, and shall constitute "normal inspection hours." The Public Works Department Inspectors work on Friday's and can be reached at 510-747-7900. Unless prior written authorization has been received from the Engineer, the Contractor shall not perform any work outside of these hours except for general clean up, demobilization, and placement of no-parking signs. The Contractor shall pay the salary and benefits, including overtime, of the City employee(s) for inspection of any work performed outside of the normal inspection hours. Projects financed in whole or in part with state funds shall be subject to inspection at all times by the Director of Public Works of the State of California, or his agents.

I. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK. All work which is defective in its construction or deficient in any of the requirements of these specifications shall be remedied, or removed and replaced by the Contractor in an acceptable manner and no compensation will be allowed for such correction.

Any work done beyond the lines and grades shown on the plans or established by the Engineer, or any extra work done without written authority, shall be considered as unauthorized and will not be paid for.

Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this article, the Engineer shall have the authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed, and to deduct the cost thereof from any monies due or to become due the Contractor.

The fact that the work and materials have been inspected from time to time, and payments on account have been made, does not relieve the Contractor from the responsibility of replacing and making good any defective work or materials that may be discovered within one year from the date of the completion of the work by the Contractor and its acceptance by the City.

J. FINAL INSPECTION. Whenever the work provided and contemplated by the contract shall have been satisfactorily completed, the Engineer will make the final inspection.

K. FINAL GUARANTEE. It is understood that the Contractor is skilled in the trade or calling necessary to perform the work set forth within the plans and specifications, and that the City of Alameda, not being skilled in such matters, relies upon the Contractor to do and perform all work, acts, and things necessary to carry out the contract in the most skilled and desirable manner, and the Contractor guarantees the workmanship and materials to be the best of their kind. The acceptance of any part or of the whole of the work by the City does not operate to release the Contractor or the Contractor's surety from said guarantee.

The Contractor shall be held responsible for and must make good any defects through faulty, improper or inferior workmanship or materials arising from or discovered in any part of the contract work within one year of the completion and acceptance of the same. The bond for faithful performance, furnished by the Contractor, shall cover such defects and protect the City of Alameda against any and all such defects.

Nothing in this section supersedes contractor obligations for repair and replacement of work pursuant to the Public Contract Code.

SECTION V. CONTROL OF MATERIAL

A. SAMPLES AND TESTS. 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 all materials to be used in the work for testing or examination as desired by the Engineer.

All tests of materials furnished by the Contractor shall be made in accordance with commonly recognized standards of national organizations and such special methods and tests as are 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.

B. DEFECTIVE MATERIALS. All materials not conforming to the requirements of these specifications shall be considered as defective, and all such materials, whether in place or not, shall be rejected. They shall be removed immediately from the site of the work unless otherwise permitted by the Engineer.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this article, the Engineer shall have the authority to remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

SECTION VI. PROSECUTION AND PROGRESS

A. PROGRESS OF THE WORK AND TIME FOR COMPLETION. The Contractor shall submit the Initial Project Submittal Package to the City Engineer for review. The Initial Project Submittal Package shall address the entire project, and shall include the Traffic Control Plan (first 20 working days at minimum), SWPPP, Waste Reduction and Recycling Plan, and the full project schedule. Contractor shall not commence work in the field until Engineer has approved the Initial Project Submittal Package.

The Contractor shall not commence construction on any section of the work until such time that he/she shall have on the ground, or can furnish definite assurance to the Engineer that there will be available when required, all the materials necessary to complete the section of the work upon which construction is to begin.

The Contractor shall submit a three week look-ahead work schedule every Monday and upon the issuance of any change order that alters the contract's schedule. Engineer shall have ten (10) working days to respond to the updated work schedule, and Contractor shall abide by most recently approved schedule until a new one has been approved in writing by the Engineer.

The Contractor shall submit additions to the Traffic Control Plan ten (10) working days in advance of any work that was not covered by the Traffic Control Plan submitted in the Initial Project Submittal Package.

In order to minimize disturbances to residents and public the Contractor shall:

1. Backfill and resurface failed area locations the same working day as the start of break out.
2. Resurface planed AC areas within three (3) working days from the day the areas were planed. The streets shall be swept, repeatedly if necessary, to minimize loose material.
3. Schedule removal and reconstruction of curb, gutter, and culverts so that only one side of the street is under construction on any one day, and parking and unimpeded pedestrian passage remains available on the opposite side of the street.
4. Not apply the slurry seal on streets the same day that trash and recycling pickup is scheduled.

B. SUBLETTING AND ASSIGNMENT. The Contractor shall give his/her personal attention to the fulfillment of the contract and shall keep the work under his/her control.

Subcontractors will not be recognized as such, and all persons engaged in the work of construction will be considered as employees of the Contractor, and their work shall be subject to the provisions of the contract and specifications.

Where a portion of the work sublet by the Contractor is not being prosecuted in a manner satisfactory to the Public Works Director, the subcontractor shall be removed immediately on the requisition of the Engineer and shall not again be employed on the work.

This contract may be assigned only on written consent of the City Council.

C. CHARACTER OF WORKER. If any subcontractor or person employed by the Contractor shall fail or refuse to carry out the directions of the Engineer or shall appear to the Engineer to be incompetent or to act in a disorderly manner, said worker shall be discharged immediately on the requisition of the Engineer and such person shall not again be employed on the work.

D. TEMPORARY SUSPENSION OF WORK. The Engineer shall have the authority to suspend the work wholly or in part for such period as he/she may deem necessary, due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as he/she may deem necessary, due to the failure on the part of the Contractor to carry out orders given or to perform any of the provisions of the work. The Contractor shall immediately obey such orders of the Engineer and shall not resume suspended work until ordered in writing by the Engineer.

E. TIME OF COMPLETION AND LIQUIDATED DAMAGES. It is agreed by the parties to the contract that in case all the work called for under the contract is not completed before or upon the expiration of the contract's term as set forth in these specifications, damage will be sustained by the City of Alameda, and that it is and will be impracticable to determine the actual damage which the City will sustain in the event of and by reason of such delay; and it is therefore agreed that the Contractor will pay to the City of Alameda the sum of one thousand dollars (\$1000.00) per day for each and every day's delay beyond the time prescribed to complete the work; and the Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, agrees that the City of Alameda 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 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 extensions, except that the cost of final surveys and preparation of final estimate shall not be included in such charges.

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 the public enemy, acts of the City, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes; provided that the Contractor shall within ten (10) days from the beginning of such delay notify the Engineer in writing of the causes of delay. The Engineer shall ascertain the facts and the extent of the delay and his findings of the facts thereon shall be final and conclusive.

F. SUSPENSION OF CONTRACT. If, at any time, in the opinion of the City Council, the Contractor has failed to supply an adequate working force, or material of proper quality, or has failed in any other respect to prosecute the work with the diligence and force specified and intended in and by the terms of the contract, notice thereof in writing will be served upon him; and shall he neglect or refuse to provide means for a satisfactory compliance with the contract, as directed by the Engineer, within the time specified in such notice, the City Council in any such case shall have the power to suspend the operation of the contract. Upon receiving notice of such suspension, the Contractor shall discontinue said work, or such parts of it as the City Council may designate. Upon such suspension, the Contractor's control shall terminate, and thereupon the City Council or its duly authorized representative may take possession of all or any part of the Contractor's materials, tools, equipment and appliances upon the premises, and use the same for the purpose of completing said contract, and hire such force and buy or rent such additional machinery, tools, appliances, and equipment, and buy such additional materials and supplies at the Contractor's expense as may be necessary for the proper conduct of the work and for the completion thereof; or may employ other parties to substitute other machinery or materials, and purchase the materials contracted for, in such manner as the City Council may deem proper; or the City Council may annul and cancel the contract and relet the work or any part thereof. Any excess of cost arising therefrom over and above the contract price will be charged against the Contractor and his sureties, who will be liable therefor. In the event of such suspension, all monies due the Contractor or retained under the terms of this contract shall be forfeited to the City; but such forfeiture shall not release the Contractor or his sureties from liability for failure to fulfill the contract. The Contractor and his sureties will be credited with the amount of money so forfeited toward any excess of cost over and above the contract price, arising from the suspension of the operations of the contract and the completion of the work by the City as above provided; the Contractor will be so credited with any surplus remaining after all just claims for such completion have been paid.

In the determination of the question whether there has been any such noncompliance with the contract as to warrant the suspension or annulment thereof, the decision of the City Council shall be binding on all parties to the contract.

G. RIGHT-OF-WAY. The right-of-way sufficient for the work to be constructed will be provided by the City. The Contractor shall make his own arrangements, and pay all expenses for additional area required by him outside of the limits of right-of-way, unless otherwise provided in the special provisions. Contractor's staging area must be approved by the Engineer.

SECTION VII. MEASUREMENTS AND PAYMENT

A. MEASUREMENTS AND PAYMENT. Payment for work done under the contract shall be made on the basis of the sums as calculated from the finally measured quantities of work done and the agreed unit and lump sum prices. Payment shall be full compensation for furnishing all labor, materials, tools and equipment and doing all the work necessary to construct the items for which payment is being made, complete in place as shown on the plans and described in the specifications.

B. EXTRA AND FORCE ACCOUNT WORK. Extra work as hereinbefore defined (Section III, Paragraph C) when ordered and accepted, shall be paid for under a written work order in accordance with the terms therein provided. Payment for extra work will be made as agreed upon in writing pursuant to an extra work order signed by both parties, or by force account.

Work performed on force account shall be paid on a time and materials basis plus ten percent (10%). For work done by a subcontractor, an additional five percent (5%) markup is allowed to reimburse the contractor for additional administration cost and no other additional payment will be made; provided, however, that the City reserves the right to furnish such materials required as it deems expedient, and the Contractor shall have no claim for profit on the cost of such materials. Such payment shall include full compensation to the Contractor for contributions made to the State as required by the provisions of the Unemployment Reserve Act, Chapter 352, Statutes of 1935, as amended; for taxes paid to the Federal Government as required by the Social Securities Act, approved August 14, 1935, as amended; for premiums paid on any other insurance of any nature which the Contractor may be required to carry or which he may elect to carry, and for additional premiums paid on faithful performance and labor and materials bonds required by reason of increase in the amount of work to be performed over and above that called for in the original contract. The price paid for labor shall include any compensation insurance paid by the Contractor.

C. PROGRESS PAYMENTS. The City shall, once each month, cause an estimate in writing to be made by the City 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 Alameda 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 to 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 City 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). No such estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

Partial Payments

Progress payments shall be in accordance with Section 9-1.16 of the Standard Specifications "Progress Payments", as currently amended, and these special provisions. The City, once in each month, shall cause an estimate in writing to be made by the Engineer. The estimate shall include the total amount of work done and acceptable materials furnished, provided the acceptable materials are listed as eligible for partial payment as materials in the special provisions and are furnished and delivered by the Contractor on the ground and not used or are furnished and stored for use on the Contract, if the storage is within the City and the Contractor furnishes evidence satisfactory to the Engineer that the materials are stored subject to or under the control of the City, to the time of the estimate, and the value thereof. The estimate shall also include any amounts payable for mobilization.

The amount of any material to be considered in making an estimate will in no case exceed the amount thereof which has been reported by the Contractor to the Engineer. Only materials to be incorporated in the work will be considered. The estimated value of the material established by the Engineer will in no case exceed the Contract price for the item of work for which the material is furnished.

Contractor warrants that upon signature of pay estimate, all work has been performed in strict compliance with the Contract Documents, and all work for which progress payments have been previously issued and payment has been received from City, shall be free and clear of all third-party claims, stop notices, security interests, and encumbrances.

Payment of all, or any part, of an estimate in writing may be withheld on account of any of the following:

1. Defective work not remedied;
2. Third-party claims against Contractor or City arising from the acts or omissions of Contractor or subcontractors;
3. Stop Notices;
4. Failure of Contractor to make timely payments due to subcontractors for material or labor;
5. Damage to the City or others for which Contractor is responsible;
6. Failure of Contractor to maintain, update, and submit record documents;
7. Failure of Contractor to submit schedules or their updates as required by the Contract Documents;
8. Performance of the work by Contractor without properly processed shop drawings;
9. Liquidated damages assessed;
10. Any other failure of Contractor to perform its obligations under the Contract Documents.

SUBSTITUTION OF SECURITIES FOR WITHHELD ACCOUNTS. Pursuant to Chapter 13 (commencing with Section 4590), Division 5, Title 1 of the Government Code of the State of California, securities may be substituted for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the public agency, or with 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 substitution under this section shall include those listed in Section 22300 of the Public Contract Code of the State of California or bank or savings and loan certificates of deposit.

Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

Any escrow agreement entered into pursuant to this section shall contain, as a minimum, the following provisions:

1. The amount of securities to be deposited.
2. The terms and conditions of conversion to cash in case of the default of the Contractor.
3. The termination of the escrow upon completion of the contract.

D. NOTICE OF COMPLETION. Whenever the work provided and contemplated by the contract shall have been satisfactorily completed, the Engineer will make the final inspection.

When such final inspection shows that the work has been completed in conformance with the plans, specifications and special provisions, the Engineer will recommend the formal acceptance of the work by the City Council; and upon such acceptance, Notice of Completion will be recorded. The said work shall not be deemed completed until the same is accepted by the City.

E. PAYMENT OF THE RETENTION. The City Engineer shall, after the completion of the contract, total all amounts retained under the provisions of the contract. Final payment of retention shall be in conformance with Public Contract Code Section 7107.

It is mutually agreed between the parties to the contract that no certificate given or payments made under the contract, except the final certificate of final payment, shall be conclusive evidence of the performance of the contract, either wholly or in part, against any claim of the Contractor; 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 Alameda, its officers, employees and agents from any and all claims or liability on account of work performed under the contract or any alteration thereof.

SECTION VIII. SPECIAL PROVISIONS

STANDARD SPECIFICATIONS ADOPTION. The work embraced herein shall be done in accordance with the appropriate provisions of construction detail of the specifications entitled "State of California, Department of Transportation, Standard Specifications", latest revision, insofar as the same apply, which specifications are hereinafter referred to as the Standard Specifications, and in accordance with the following Special Provisions.

Whenever in the Standard Specifications the following terms are used, they shall be understood to mean and refer to the following:

Department of Public Works or Department of Transportation	To the Engineering Division
Director of Public Works	To the Public Works Director
Engineer	To the City Engineer, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.
Laboratory	To the designated Laboratory authorized by the City of Alameda to test materials and Work involved in the contract.
State	To the City of Alameda

Other terms appearing in the Standard Specifications, and these specifications, shall have the intent and meaning specified in Section I, Definition of Terms, of the Standard Specifications.

In case of conflict between the Standard Specifications and these Special Provisions, the special provisions shall take precedence over and be used in lieu of such conflicting portions.

SECTION IX. QUANTITIES

The following preliminary estimate of the quantities of work to be done and materials to be furnished is approximate only, and the City of Alameda does not expressly or by implication agree that the actual amount of work will correspond therewith, 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 that may be deemed necessary or expedient to the Engineer.

Quantities shall be determined by the Contractor from plans and specifications, and /or pre-construction meeting and walk - through. Any discrepancy or conflict shall be reported to the Project Manager. Contractor shall be held responsible for any discrepancies or conflicts not reported to the Project Manager seventy-two (72) hours prior to the bid opening.

The basis of award of contract shall be by the City of Alameda for the lowest and best bid that will best serve the City's need. The contract shall be awarded with the entire project based bid.

The City reserves the right to reject any, any portion, or all bids.

The base bid consists of twenty-five (25) bid items, as outlined below and detailed in Section XII, L, Extent of Contract.

TABULATION OF PRELIMINARY ESTIMATE OF QUANTITIES

Item No.	Description	Quantity	Unit
1.	Mobilization	1	Lump sum
2.	Maintaining Traffic	1	Lump sum
3.	Replacing Existing SS Main with 8" Pipe (Open Trench)	13,300	Linear Foot
4.	Replacing Existing SS Main with 8" Pipe (Pipe Burst)	1,050	Linear Foot
5.	Replacing Existing SS Main with 6" Pipe (Pipe Burst)	166	Linear Foot
6.	Replace Existing SS Main with 10" Pipe (Open Trench)	515	Linear Foot
7.	Replace Existing SS Lateral with 4" Pipe (Open Trench)	100	Linear Foot

TABULATION OF PRELIMINARY ESTIMATE OF QUANTITIES continued

Item No.	Description	Quantity	Unit
8.	Replace Existing SS Lateral with 4" Pipe (Pipe Burst)	14,350	Linear Foot
9.	Replace Existing SS Lateral with 6" Pipe (Pipe Burst)	60	Linear Foot
10.	Install 4" 2-Way Kelly Cleanout	199	Each
11.	Install 6" 2-Way Kelly Cleanout	2	Each
12.	Remove Existing MH and Construct New MH	60	Each
13.	Install New Manhole	8	Each
14.	Rehabilitate Manhole	26	Each
15.	Replace Manhole Lid and Casting	43	Each
16.	Reconstruct Sidewalk	6,000	Square Foot
17.	Reconstruct Curb and Gutter	1,000	Linear Foot
18.	Asphalt Concrete Patch	1,000	Ton
19.	Asphalt Concrete Bridge	1,000	Ton
20.	Mechanical Sheeting and Shoring of Sewer Trench	15,000	Linear Foot
21.	Signage and Striping Restoration	1	Lump Sum
22.	Permits	1	Allowance
23.	Stockpiling of Contaminated Soil	20	Ton
24.	Import Borrow	20	Ton
25.	Contaminated Water	1,000	Gallon

SECTION X. MATERIALS

The Contractor shall furnish for use under these special provisions all materials required to complete the contract, except as described under Section VII of the specifications.

SECTION XI. DESCRIPTION AND LOCATION OF WORK

A. **DESCRIPTION OF WORK** The work to be done consists of doing all work associated with the installation of sanitary sewer mains, sewer laterals, manholes, cleanouts, street patch, SWPPP, traffic control, removal and disposal of manholes, sewer lines, and all other associated work to complete the project at the locations shown on the plans.

All work is to be in conformance with the plans and specifications as required by the Engineer. The contract shall include all work necessary to make the job complete as herein specified or as shown on the plans. The contract will be awarded with Base Bid only.

B. **PLANS** The following drawings dated are incorporated into these Specifications:

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>CASE</u>
Cyclic Sewer Replacement Project, Phase 15	9412	35
CITY OF ALAMEDA STANDARD PLANS:		
Standard Plan Curb, Gutter, Sidewalk and Driveway	6297	34
Standard Pre-Cast Concrete Manhole Type A	2815	34
Standard Manholes Type B and C Shallow Depth	5432	34
Inside Drop Manhole Detail	8214	32
Standard Manhole Cover	1115	34
Excavation of Trenches for Pipe Sewers	3147B	32
Standard Section for Repaving Trenches	2930	22
4" Sewer Lateral Two-Way Cleanout	SS-1	
6" or 8" Sewer Lateral Two-Way Cleanout	SS-2	
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS 2015 EDITION AND CALIFORNIA MUTCD 2014 EDITION:		
Traffic Control System for Lane Closure on Multilane Conventional Highways	T11	
Traffic Control System for Half Road Closure on Multilane Conventional Highways and Expressway	T12	

TITLE

DRAWING NO. CASE

Traffic Control System for Lane Closure on Two Lane
Conventional Highways

T13

Work in Center of Road with Low Traffic Volumes

TA-15

Closure in the Center of an Intersection

TA-26

Closure at the Side of an Intersection

TA-27

Sidewalk Detour or Diversion

TA-28

Crosswalk Closures and Pedestrian Detours

TA-29

SECTION XII. CONSTRUCTION DETAILS

The construction details covered under this Section XII shall be Special Provisions as set forth in Section VIII.

A. MAINTAINING TRAFFIC. Attention is directed to Section 7-1.03, "Public Convenience", 7-1.04, "Public Safety", of the State of California Standard Specifications, and to Section II, Article Q of these specifications.

The Contractor shall furnish, install and maintain such facilities as barricades, traffic signs, and flagmen, as may be necessary to advise the public of construction hazards and to control traffic.

The Contractor will not be permitted to detour traffic from the work area at any time. The Contractor will be required to maintain two-way traffic at all times. Any lane closure shall be subject to the prior approval of the City Engineer.

The full width of the traveled way shall be open for use by public traffic when construction operations are not actively in progress on working days.

Prior to commencement of work, the Contractor shall provide the Engineer with sketches for approval, indicating the method of signing and necessary delineators for proposed lane closures.

The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make his own arrangement relative to keeping the work area clear of parked vehicles.

The provisions of Section 7-1.04 of the Standard Specifications, regarding State-furnished signs, are hereby revised to provide that all signs and other warning devices shall be provided by the Contractor and shall become his/her property after the completion of the contract. The Contractor shall refer to the current "Manual of Warning Signs, Lights and Devices for Use in the Performance of Work Upon Highways" and the "Uniform Sign Chart" issued by the Department of Transportation, Division of Operations.

Flagmen, if necessary, shall be properly equipped and trained in accordance with "Instructions to Flagmen", published by the California Department of Transportation. Section 12-1.04 is revised to provide that all flagmen shall be furnished by the Contractor at his/her expense.

The provisions in this section may be modified or altered if, in the opinion of the Engineer, public traffic will be better served and work expedited. Said modifications or alterations shall not be adopted until approved in writing by the Engineer.

No additional compensation will be allowed the Contractor for providing for the free passage of traffic through the work. Construction work hours are restricted between 9:00 AM to 5:00 PM, Monday through Friday.

Whenever vehicle or equipment is parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with florescent traffic cones or portable delineators placed on a taper in advance of the parked vehicle or equipment and along the edge of the pavement at 25-foot intervals to a point no less than 25 feet past the last vehicle or piece of equipment. A minimum of nine (9) cones or portable delineators shall be used for the taper. A W20-1 (Road Work Ahead) or C24 (CA) (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags. The flag tree shall be placed where directed by the Engineer.

Contractor shall be responsible for posting “No Parking-Tow Away” Signs for the seventy-two (72) hours prior to construction. Contractor must obtain these signs at his/her own expense from the City’s Planning and Building Office or at the Department of Public Works. No parking signs shall be posted only when work is being performed by the Contractor at the posted locations. No Parking signs shall display a date range no longer than 2 weeks at any given time. A revision in date range requires re-posting.

All vehicular, bicycle, and pedestrian traffic shall be permitted to pass through the work, unless other existing streets stipulated in the special provisions. **Contractor must comply with ADA requirements, by providing pedestrian access on the sidewalk and crosswalk during construction.**

The Contractor shall furnish, install and maintain such facilities as barricades, traffic signs, and flagmen, as may be necessary to advise the public of construction hazards and to control traffic. A traffic control plan identifying the size and location of such facilities shall be submitted to the Engineer for approval a minimum of two weeks prior to beginning construction. Any work being performed without proper signing in place shall be stopped until the unsatisfactory condition is corrected. **Contractor shall submit to the Engineer a traffic control plan signed and stamped by a Traffic Engineer registered in the state of California for any work that will impact vehicular, bicycle, and pedestrian traffic in the area and shall be developed to show the actual field conditions and not a typical plan. The contractor must have an approved plan prior to commencing of work. All Traffic Control Plans must be in conformance with Manual on Uniform Traffic Control Devices-CA (MUTCD-CA) regulations and guidelines. Contractor shall submit Traffic Control Plan for approval to the Engineer at the pre-construction. Any work being performed without proper signing in place shall be stopped until the unsatisfactory condition is corrected.**

The Contractor shall place barriers at each end of all excavations and at such places along excavations as may be necessary to warn all pedestrian and vehicular traffic of excavations. Lights shall also be placed along excavations (from sunset each day to sunrise of the next day) until excavation is entirely restored. Material for backfill or for protection of excavation in public roads from surface drainage shall be neatly placed and stored in containers so as to cause the least possible interference with public travel. Free access must be maintained to all fire hydrants, water valves and meters, and private driveways.

Storage of construction material and equipment on City streets will not be permitted.

No trench or excavation shall be left open at the end of any day's work. Daily traffic control measures shall continue until cleanup activities have been satisfactorily completed and all of the Contractor's equipment has been removed from the traveled way area.

The provision of this section will not relieve the Contractor from his/her responsibility to provide such additional devices or take such measures as may be necessary to comply with the provision in Section 7-1.04, "Public Safety," of the Standard Specifications.

Contractor shall not work on multiple streets at a time unless approved by the engineer.

See Section II, Q. for traffic control guidelines. This section also outlines times construction is allowed on certain streets in the City. (Night work, if requested by the Contractor, must be approved by the City Engineer.)

B. ORDER OF WORK. Order of work shall conform to provisions of Section 10-1.02, "Work Sequencing", of the Standard Specifications and these Special Provisions.

The Contractor shall coordinate his work with all other contractors or utility companies working in the construction area.

At least three (3) working days prior to the placement of any new traffic striping and pavement markings, the Contractor shall layout cat-tracks for the traffic striping and pavement marking and contact the City inspector for inspection and approval of the cat-tracking. The City shall review, modify as necessary, and approve the cat-tracking prior to the Contractor proceeding with the striping/markings. The Contractor may not proceed with the striping/markings work until the cat-tracks have been approved by the Engineer or approved designee. The Contractor shall post temporary "No Parking" signs in accordance with the provisions of Sections 7-1.03 and 7-1.04, "PUBLIC CONVENIENCE AND PUBLIC SAFETY" of these Specifications.

Any work done without proper inspection and approval will be subject to rejection. In the case of rejection, the Contractor shall remove the rejected work, and the striping/markings work shall be reinstalled in accordance with these requirements and based on the direction of the Engineer. The City will not compensate the Contractor for any work associated with replacing striping/markings to the satisfaction of the Engineer, including but not limited to: the full removal of the rejected traffic striping and pavement marking work; the installation of new striping/markings, including blacking out any of the removed and rejected striping/markings; and the re-posting of temporary "No Parking" signs in accordance with the provisions of Sections 7-1.03 and 7-1.04, "PUBLIC CONVENIENCE AND PUBLIC SAFETY" of these Specifications. All of these costs shall be borne by the Contractor.

C. PORTLAND CEMENT CONCRETE. All concrete shall be Class "A" unless otherwise specified and shall meet the requirements of the Standard Specifications, Section 90. If it is found necessary to increase the slump of concrete at the site of the work it shall be done only by the addition of 16 pounds of cement (1/6 sack) per gallon of water. Such addition shall be made only at the direction of the Engineer and in his presence.

All edges of concrete shall be edged with a cement edger of the size 2-3/4" in width with a 3/16" radius. All joints or grooves that are indicated on the plans or required by the Engineer shall be marked with cement grooves or jointers 4" in width and having a groove 3/8" wide at the top and a depth of 1/4" to 1/2".

A power driven pavement saw shall be used to cut existing Portland cement concrete sidewalk, curb and gutter where it is necessary to remove the concrete. The depth of the cut shall be a minimum of 1-1/2" and straight; and, if two cuts are made, they shall be parallel. The cut shall be deep enough to permit complete breakage of the concrete without ragged edges. Sawcut debris is not permitted to enter the storm drain system and shall be vacuumed up by the contractor.

All concrete with exposed surfaces, such as sidewalk, curb, gutter, local depressions, driveway and catch basins tops shall be colored by adding to the mix a proportionate amount of the best quality lampblack, such proportion to be determined by the Engineer.

All new or previously existing concrete surfaces shall be left neat, clean and free from concrete droppings. The Contractor shall be responsible for preventing vandals or others from disfiguring or defacing the finished surfaces. Any new concrete surfaces disfigured due to pouring late in the day, or due to the failure on the part of the Contractor to provide adequate protection or covering to the new surfaces, shall be replaced at the Contractor's expense. The work shall conform to Section I.T. Construction Site Control and Section III. E. Clean Up.

The name of the Contractor and the year the work is performed shall be stamped upon both ends of each single piece of any concrete work, as called for by Section No. 22-5.3 of the Municipal Code. Contractor shall obtain a load slip from each delivery and give one copy of said slip to the Engineer at the point of deliver of the material.

All exposed surfaces shall be cured by the impervious membrane method to the satisfaction of the Engineer.

D. EQUAL AND/OR APPROVED EQUAL

Wherever the term "or equal" and/or "approved equal" are used following a trade name or the mention of any patented product in the specifications, they shall be deemed to read "or their equals in quality and utility" where two or more such trade names or patented products are mentioned. If any trade name or patented product or process is mentioned in these specifications and is not followed by any such term as "or equal", such trade name or patented product or process shall be deemed to be followed by the words "or its equal in quality and utility" or "or

their equals in quality and utility” if more than one is mentioned. Trade names, proprietary products and methods are used merely as standards of quality and utility and to designate the type of material and processes desired. Materials and processes of equal quality and utility may be furnished or used so long as such substitution causes no delay to product delivery and/or installation and the Contractor has received written approval therefor by the Engineer. The Contractor shall allow 30 days for the Engineer's review of the proposed substitution.

E. DISPOSAL OF EXCAVATED MATERIALS. Salvable materials will be disposed of as directed by the Engineer. The Contractor shall dispose of at least 80% of the removed concrete, rock, brick, asphalt or other similar materials to an approved materials recycling location other than a landfill. The 80% shall be determined by weight of materials. All disposal and recycling weight/receipt tags shall be submitted to the Engineer. In Exhibit B is a suggested list of facilities that will accept construction and demolition waste materials. The Contractor shall submit a request and proof in writing if unable to achieve this 80% goal. Other waste materials shall be disposed of in localities outside of the City of Alameda at the discretion of the Contractor.

F. EXISTING IMPROVEMENTS. Existing fence, lawn, or other improvements within the area of the work shall be carefully removed without damage and replaced in their present location and condition upon completion of the work, in a manner satisfactory to the Engineer and the owner.

Existing lawn shall be removed only where necessary and shall be replaced if considered by the Engineer to be in good condition. Otherwise, the Contractor shall furnish four inches (4") of new loam and plant new lawn, all as approved by the Engineer. All ground surface and replaced lawn shall be left smoothly graded to the original grade.

All existing irrigation system including electric wire, pipelines, sprinkler heads, damaged as a direct or indirect result of construction activity, shall be replaced by the Contractor at his/her expense at appropriate locations in a manner satisfactory to the Engineer and the owner. Any existing improvements that are damaged or disturbed due to carelessness by the Contractor shall be replaced or adjusted to the satisfaction of the Engineer.

Existing fence or other improvements within the area of the work shall be carefully removed without damage and replaced in their present location and condition upon completion of the work, in a manner satisfactory to the Engineer and the owner.

The Contractor shall not disturb or destroy any permanent survey points and/or monuments without the written consent of the City of Alameda. Any permanent survey points and/or monuments disturbed or destroyed, as a direct or indirect result of construction activity shall be replaced to the satisfaction of the Engineer by a licensed surveyor at the Contractor's expense.

All decorative landscaping (shrubs, plants, trees, lawn, etc.) and/or hardscaped ground surfaces (exposed aggregate, bricks and mortar, painted concrete, etc.) that are removed,

damaged, or destroyed as a direct or indirect result of any work done for this project shall be replaced by the contractor at his expense and in the manner that is satisfactory to the engineer and the owner.

Unless specified separately by bid items, payment for existing improvements should be included in various bid items and no additional payment will be made.

G. TREE ROOTS. Where tree roots conflict with the grade for the placement or replacement of concrete work, the Contractor shall inform the City Maintenance Division immediately. When directed by the City Maintenance Division, the Contractor shall perform the necessary root removal and trimming to a minimum depth of ten inches (10") below the proposed concrete, to prepare the site for the concrete work. All cut roots shall be properly painted with an approved root-sealing compound. The Contractor shall then proceed with the work to completion. The cost of the Contractor cutting the tree roots involved shall be included in the cost of the work.

Prior to any lateral extension excavation, the area must be reviewed by the Engineer or his representative, and if required, the City Arborist shall supervise the excavation and any root cutting or shaving where tree conflicts exist.

If root trimming is not allowed by the City Maintenance Division, all trees that could be damaged from equipment will require protection from physical injury. Tree trunks are to be wrapped with orange plastic construction fencing from the base up to the first branch. The plastic fencing must be wrapped to a minimum thickness of 2 inches to protect from possible injury. Additional protection from larger equipment can be provided by strapping 2x4 boards over the orange fencing on the side of the tree where there is a potential for injury. When trenching is undertaken, the size of the equipment may require that upper scaffold stems are also wrapped and protected. Hand digging is the only acceptable method for excavating the soil within five feet of the base of trees.

H. UTILITY RELOCATION. The known existing utilities and pipelines except building connections (laterals) are shown on the Drawings in their approximate location. The Contractor shall exercise care in avoiding damage to all utilities, as he/she will be held responsible for their repair if damaged. There is no guarantee that all utilities or obstructions are shown, or that locations indicated are accurate. Utilities are piping, conduits, wire, cable, poles, ducts, manholes, pull boxes and the like, located at the project site.

The Contractor shall be responsible for locating, protecting and supporting all utilities, which are to remain whether shown or not shown on the plans. Full compensation for this work shall be considered as included in the prices paid for the various contract items of work, and no additional allowance will be made.

The Contractor shall contact all affected utility owners and request them to locate their respective utilities prior to the start of "potholing" procedures. The utility owner shall be given seven days written notice prior to commencing potholing. If a utility owner is not equipped to locate its utility, the Contractor shall locate it.

The location of all affected utility underground pipes; conduits and other utilities shall be clearly marked on the pavement or with suitable markers if not on pavement. In addition to the location of metallic pipes and conduits, non-metallic pipe, ducts and conduits shall also be similarly located using surface indicators and shall then be similarly marked.

After the utility survey is completed, potholing shall commence to determine the actual location of the utilities. Prior to excavating for any new pipelines or structures, the Contractor shall locate and uncover all existing utilities to a point one foot below the utility. Pothole for all utilities where crossings, interferences, or connections to the new pipelines are shown on the Drawings, marked by the utility companies, or indicated by surface signs. The Contractor shall submit a report identifying each underground utility and its depth and station. Any variation in the actual elevations and the indicated elevations shall be brought to the Engineer's attention.

Any necessary relocations of utilities, whether shown on the Drawings or not, shall be coordinated with the affected utility. The Contractor shall perform the relocation only if instructed to do so in writing from the utility and the Engineer. Payment for work not shown on the Drawings shall be in accordance with Section VII, Article B, of these specifications or for a price previously agreed upon in writing, by the Contractor and the Engineer. If the Contractor does not expose all required utilities, he shall not be entitled to additional compensation for work necessary to avoid interferences, nor for repair to damaged utilities.

Excavations around underground electrical ducts and conduits shall be performed using extreme caution to prevent injury to workmen or damage to electrical ducts or conduits. Similar precautions shall be exercised around gas lines, telephone and television cables.

Backfill and pave with one inch of cutback after completing potholing.

If interferences occur at locations other than shown on the Drawings, the Contractor shall notify the Engineer, and a method for correcting said interferences shall be supplied by the Engineer. Payment for interferences that are not shown on the plans, nor for which there are surface indications, shall be in accordance with the provisions of the General Conditions.

Planned utility service shutdowns shall be accomplished during periods of minimum use. In some cases this may require night or weekend work, at no additional cost to the City. The Contractor shall program his work so that service will be restored in the minimum possible time, and shall cooperate with the utility companies in reducing shutdowns of utility systems to a minimum.

No utility shall be disconnected without prior written approval from the utility owner. When it is necessary to disconnect a utility, the Contractor shall give the utility owner not less than 72 hours notice when requesting written approval. The Contractor shall program his work so that service will be restored in the minimum possible time.

There are existing overhead electric and telephone transmission lines along the pipeline routes. These overhead utilities are not shown on the Drawings. Extreme caution shall be used

when working in the vicinity of overhead utilities so as to prevent injury to workmen or damage to the utilities. The Contractor shall be required to comply with the applicable provisions of the California Construction Safety Orders when working anywhere on this project.

Existing gas, water, sewer and telephone house laterals are not specifically shown on the Drawings but do exist along the pipeline routes. Protect all service laterals from damage due to construction operations. If any laterals are damaged, notify the Engineer and the affected utility immediately. The cost of repair shall be borne by the Contractor.

I. EXCAVATION AND BACKFILL Method of excavation, trench shoring and dewatering, if applicable, shall be the responsibility of the Contractor, subject to the approval of the Engineer. It should be presumed that the presence of high groundwater will require dewatering operations.

Contractor shall submit to the Engineer a submittal for the trenching plan, material data sheets of any shoring equipment to be used, and calculations signed, stamped and approved by a registered California Engineer. The Contractor must have an approved plan prior to commencing of any excavation and trenching work.

Refer to the attached Geotechnical report for the trenching guidelines.

The Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Occupational Safety and Health of the Industrial Relations Department.

Any excavation shall be supported so that it will be safe and the ground alongside the excavation will not slide or settle, and all existing improvements, either on public or private property, will be fully protected from damage.

Any damage or collapse of pavement or improvements beyond the trench shoring or excavation limits, due to sliding, caving, or settling of ground during excavation, construction, or backfilling, or from construction equipment, shall be repaired to the satisfaction of the Engineer at the Contractor's expense. All supports shall be removed after construction is completed, unless otherwise directed by the Engineer, and shall be withdrawn in a manner that will prevent the caving of the sides of the excavation. All openings caused by the removal of supports shall be filled with suitable material properly compacted.

Approved local or imported material shall be used for backfill. When the material from the excavation is unsuitable for backfill; it shall be disposed of and a suitable material (free from large stones) and approved by the Engineer, shall be furnished by the Contractor for the backfill. Backfilling shall be accomplished by tapping or ramming with proper tools for the full depth to sub-grade elevation in six inch (6") layers or less. Relative compaction shall be ninety-five percent (95%) or more as determined by the Impact or Field Method Compaction Test. Flooding or jetting of backfill shall not be allowed.

Backfilling of trenches in pipe areas shall be accomplished by backfilling on both sides of the pipe simultaneously so that injurious side pressures do not occur. Backfilling around the pipe by bulldozer or other mechanical equipment will not be allowed.

Guidelines for site preparation, suitable backfill material, material requirements, fill placement and compaction are outlined in the Geotechnical Report.

Payment for excavation and backfill shall be included in the various bid items of these specifications. The contractor shall provide the engineer daily load tags for backfill material used.

J. **SEWAGE PUMPING** The Contractor shall furnish, install, and operate pumps, conduits, and other equipment to divert the flow of sewage during the project construction.

The pumping system shall be of sufficient capacity to handle existing flow plus additional flow that may occur during a rainstorm. If pumping is required on a 24-hour basis, engines shall be equipped in a manner to keep noise to a minimum. Standby pumps shall be provided as required. Pumping shall be done by the Contractor in such a manner that it will not damage public or private property or create a nuisance or health menace. The pumped sewage shall be in an enclosed hose or pipe and shall be reinserted into the sanitary sewer system. Sewage shall not be allowed to free flow in gutters, streets, or over sidewalks, etc. Nor shall any sewage be allowed to flow into the storm inlets, the lagoon or conduits. Pumping and all related work shall be included in various items and shall not be considered for additional payment. Contractor shall submit a pump set up diagram showing the intake point and outfall point, including the pump size, pipe size for the sewage conveyance from the existing system.

Payment for sewage pumping whether on public right-of-way and private property shall be included in the various contract items of work.

K. **CONTROL OF WATER** All excavations shall be kept free from water and all construction shall be in the dry. The presence of high groundwater will require dewatering operations. The contractor shall furnish, install, maintain and operate all necessary pumping and other equipment for dewatering all excavations. The contractor shall at all times have on the project sufficient pumping equipment for immediate use, including standby pumps for use in case other pumps become inoperable. A sufficient number of pumps shall be provided as to hold the groundwater level at an elevation not less than two feet below the lowest elevation of the concrete or other material to be placed. Water shall be disposed of in such a manner as to cause no injury or nuisance to public or private property, or be menace to the public health.

The dewatering operation shall be continuous, so that the excavated areas shall be kept free from water during construction, while concrete is setting and achieves full strength, and until backfill has been placed to a sufficient height to anchor the work against possible floatation.

Dewatering shall be continued during, backfilling operations such that the groundwater is at least one foot below the level of the compaction effort at all times. No compaction of saturated clay materials shall be allowed.

Dewatering devices must be adequately filtered to prevent the removal of fines from the soil.

The Contractor shall be responsible for any damage to foundations or any other parts of existing structures or the new work caused by failure of any part of the Contractor's protective works. After temporary protective works are no longer needed for dewatering purposes, they shall be removed by the Contractor.

If pumping is required on a 24- hour basis, requiring engine drives, then engines shall be equipped in a manner to keep noise to a minimum. Refer to Section II, Article T, of these specifications for noise control requirements.

The contractor shall be responsible for furnishing temporary drainage facilities to convey and dispose of surface water falling or passing over site.

No sediment shall be pumped from the excavation. Refer to Section II, Article U, of these specifications for construction site controls.

Payment for dewatering whether on public right-of-way and private property shall be included in the various contract items of work.

L. EXTENT OF CONTRACT. The Contractor shall furnish all labor, material has herein specified, tools and equipment necessary and shall do all the work necessary to construct and put in complete order for use the construction project contemplated by these specifications, the various items, and in the approximate quantities tabulated in the Proposal, Section XIV.

1. MOBILIZATION (Bid Item #1). Mobilization shall conform to the provisions in Section 9, "Mobilization," of the Standard Specifications and the following items.
 - a. Signed Contract by the City and the Contractor
 - b. Completion of all tasks and submittals of all documents (bond, insurance, schedule, etc.) required as conditions of issue the Notice to Proceed.
 - c. Moving on to the site of all Contractors equipment required for operations.
 - d. Installing temporary construction water supply, power, wiring, and lighting facilities as required.
 - e. Providing field office trailers if needed by the Contractor.
 - f. Providing all on-site communication facilities, including telephones, and radio pagers.
 - g. Obtaining all required permits.
 - h. Having all OSHA required notices and establishment of safety programs.

- i. Beginning work on the project or at the subject site as applicable.
- j. Obtaining approved traffic control plan from the City.
- k. Moving off from the site of all Contractors equipment that was required for operations.
- l. Removal of all temporary facilities and equipment.
- m. Final cleanup and site restoration.

Payment for mobilization shall be at the contract lump sum price and shall be considered full compensation for labor, materials, tools, equipment, and incidentals required for mobilization and demobilization.

2. MAINTAINING TRAFFIC (Bid Item #2). Maintaining traffic shall be in conformance with Section XII, A, "MAINTAINING TRAFFIC" of these specifications.

Payment for maintaining traffic including temporary traffic control, plan, signs, flagman, and traffic control satisfactory implementation shall be paid at the lump sum price and shall include full compensation for labor, materials, tool, equipment, and incidentals required for maintaining traffic during construction.

3. REPLACE EXISTING SANITARY SEWER MAIN WITH 8" PIPE (OPEN TRENCH) (Bid Item #3). REPLACE EXISTING SANITARY SEWER MAIN WITH 10" PIPE (OPEN TRENCH) (Bid Item #6). These bid items include excavation of trenches, laying and jointing of sanitary sewer pipe, backfilling trenches, testing and CCTV Inspection.

Pipe Material. For new pipe installation, pipe material shall be uniform from structure to structure.

For sanitary sewer pipe to be installed by open cut excavation, the Contractor shall use solid wall polyvinyl chloride pipe (PVC) sewer pipe for gravity systems and shall conform to ASTM D3034 for sizes 6" - 18". Pipe shall be supplied with integral bell gasket joints. Rubber gaskets shall conform to ASTM F477.

PVC sewer pipe for gravity systems shall be made of PVC material with cell classifications of 12454B or 12364B as defined by ASTM D1784. Standard gravity pipe systems shall utilize pipe having a SDR26 with a minimum pipe stiffness of 115 per ASTM D2412 test.

Inside: The inner wall pipe color shall be white, light green, light gray or natural as to facilitate clear video inspections. Yellow, black, and light purple are not acceptable.

Outside: The outer wall pipe color shall be black, white, light green, gray or natural. Yellow and light purple are not acceptable.

The interior colored surface of the HDPE pipe shall be resistant to sewer abrasives and chemicals (including hydrogen sulfide) and over time will not fade or experience color loss.

The Contractor shall conform to the manufacturer's specifications for fittings and joining pipes.

a. Excavation of Trench. The ground shall be excavated in open trenches, the sides of which shall be parallel to and at equal distances on each side of the sanitary sewer centerline. **Trench shall be saw cut along straight lines with no jagged edges.** At no time shall there be more than 200 lineal feet of the trench opened along any single sanitary sewer route, including the section opened ahead of the pipe laying and the section behind the pipe laying which has not been completely backfilled. Open trenches will be plated during non-working hours. This is to include asphalt concrete fillets around the perimeter of plates.

The Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Occupational Safety and health of the Industrial Relations Department. See **Attachment C," TRENCH EXCAVATION CONSTRUCTION STANDARDS"**.

Except where otherwise shown on the plans or otherwise approved by the Engineer, maximum trench width shall be as follows:

For pipe size 4" use maximum trench width 28"
For pipe size 8" use maximum trench width 36"
For pipe size 10" use maximum trench width 36"

In addition, all excavation shall conform to Section XII. I., "Excavation and Backfill," and Drawing No. 3147B, Case 32.

Due to nature of soil along alignment excavation should be shored using recommended methods in Section XII, I., "Excavation & Backfill." Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Occupational Safety and Health of the Industrial Relations Department.

Contractor shall submit proposal for review and approval to the Engineer for method of sheeting and shoring.

All storm drains, water pipes, gas pipes, EBMUD sewer pipes, and conduits or other structures must be properly supported where crossing or lying along the trench.

Contractor should expect to encounter 8" concrete patch over utility crossings. The 8" patch shall be saw cut, as necessary, when trenching for the new line.

b. Laying and Jointing of Sanitary Sewer Pipe. All pipes shall be laid in crushed gravel to the top of the pipe. The crushed gravel shall conform to the requirements for Class 1, Type A, permeable materials as described in Section 68, Article 1.025, of the Standard Specifications. Crushed gravel shall extend a minimum of twelve inches (12") below the pipe. The crushed gravel shall be placed by tamping or ramming with proper tools so as not to injure

or disturb the pipe. If deemed necessary by the Engineer, the contractor will be required to use a vibratory plate to further compact the crushed gravel. The trench shall be filled simultaneously on both sides of the pipe so that injurious side pressures do not occur. If the trench material is unsuitable, excavation shall be to an additional depth below the pipe, as directed by the Engineer, and this excavation filled with crushed gravel so that the pipe may be well bedded and resting upon a satisfactory base. Pipe jointing shall be in conformance with manufacturer's recommendations.

Any settlement resulting from improper bedding placement will be addressed as stated in Section IV. Control, I. Removal of Defective and Unauthorized Work, of these specifications.

All pipes must be carefully handled at all times. Only suitable and proper equipment and appliances shall be used for the safe loading, hauling, unloading, handling, and placing of materials. Special care shall be exercised so that the preformed joints will not be damaged. Any pipe with a joint damaged or flattened will cause that pipe to be rejected. All rejected materials shall be promptly removed from the site.

All pipes shall be laid true to line and grade, without break or sudden offsets in the flow line. Pipe shall be protected during handling against impact shocks and free fall. As the work progresses, the interior of the pipe shall be cleared of all dirt and debris of every description.

The lubricant used for field assembly of all pipes shall have no detrimental effect on the gasket, joints, fittings or pipe, and shall be as recommended by the manufacturer.

Refer to the bid item related to replacement of existing sanitary sewer lateral for lateral to main connection information.

c. Trench Backfill shall be in conformance with Section XII.I. of these specifications and items a, and b. above.

d. Deflection Test. The deflection test for PVC pipe shall be performed by pulling a rigid ball or mandrel through the pipeline. The rigid ball or mandrel shall have a diameter equal to 95% of the inside diameter of the pipe being tested. When the rigid ball or mandrel cannot be pulled through the pipeline the Contractor shall locate and correct the defect to the satisfaction of the Engineer. After the defect is corrected, and trench rebackfilled and compacted, the section of line shall then be retested to compliance.

The use of a rerounder to force pipe into round is prohibited; any pipe that has been rerounded shall be removed and replaced.

e. Testing of PVC Sewer Lines. All newly constructed sanitary sewer mains, and laterals shall be tested for leakage only after the installation of all proposed lateral sewers to the main sewer system have been completed.

The contractor shall furnish all materials, equipment, tools and labor necessary to make leakage tests and to perform any work incidental thereto.

Leakage tests shall be performed on the entire sanitary sewer, installed, with the length of each test section limited to the pipe segment between adjacent manholes.

The contractor shall follow the detailed specifications and shall conform to the intent thereof to secure the highest quality of workmanship in the laying of the sanitary sewer line. All jointing of pipe shall be subject to rigorous inspection by the Engineer.

Testing of the lines shall be done at such time that the subbase has been compacted and accepted by the City Engineer.

The Low Pressure Air Test shall be the accepted method used to determine watertight integrity of the sanitary sewer line.

The Low Pressure Air Test shall be done in the presence of the Engineer and in accordance with the following procedure:

1. Plug and securely brace the ends of each reach of pipeline to be tested.
2. Pressurize line until internal air pressure reaches 4.0 pounds per square inch gage. When prevailing water is above the storm or sanitary sewer or force main line being tested, increase all pressures used in this test by 0.43 psi for each foot the water is above the flow line of the pipe.
3. Allow at least two minutes for the air pressure to stabilize, adding additional air as required to maintain 4.0 psig.
4. The Engineer shall observe the pressure gage attached to the pipeline and when the pressure decreases to 3.5 psig, a timing period shall be started. The timing period shall be stopped when the pressure has decreased to 2.5 psig or until the portion of line being tested is found to be "acceptable".
5. The portion of line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 psig to 2.5 psig is not less than two minutes for the 4" pipe, five minutes for the 8" pipe, six minutes for the 10" pipe, seven and one-half minutes for the 12" pipe, eight and one-half minutes for the 14" pipe, nine minutes for the 16", ten minutes for the 18" pipe, or 11.5 minutes for 20" pipe.
6. If adjoining laterals are tested concurrently with the sanitary sewer main, one half of the above listed respective time for the largest lateral tested shall be added to the respective required time listed for the sanitary sewer main.
7. If the line fails to meet the above requirements, the source of the leak shall be located and corrected to the satisfaction of the Engineer. After the leak or leaks are corrected and the trench is rebackfilled and compacted, the section of line shall then be retested to compliance.

Because of the inherent danger involved in air testing, extreme care shall be exercised in placing and bracing the pipe plugs, and no one shall be allowed in the manhole during testing.

After completion of a test, the air pressure shall be released slowly through the valve, which is incorporated in the test equipment. Air test plugs shall not be removed until the air pressure is no longer measurable.

Caution shall also be taken to avoid over pressurizing and damaging an otherwise acceptable line.

f. CCTV Inspection. The Contractor shall perform CCTV inspection **before, and at the completion of construction.** After cleaning all new main and lateral lines, the main lines shall be visually inspected by means of a closed-circuit television. In addition, CCTV inspection **one year after completion of construction** shall be performed by the Contractor if trenchless excavation (Pipe Bursting) is used in lieu of open trench excavation.

The inspection will be done one section at a time and the section being inspected will be suitably isolated from the remainder of the sewer line as required.

Video recordings shall be made of the television inspections by the Contractor and two DVD copies shall be supplied to the Engineer. Three copies of printed inspection logs shall also be supplied to the Engineer.

Lighting, camera quality, and all other necessary equipment used to perform the television inspection shall be suitable to provide a clear in-focus picture of the entire inside periphery of the sewer pipe. Videotape playback shall be at the same speed it was recorded.

g. Sewer Cleaning. Sewer cleaning shall include removal of foreign material and objects from the line to permit for the proper testing of the sewer facilities. Multiple passes may be required and shall be included in the cost to perform the tests. The Contractor is responsible for any damage or clean-up on private property caused by negligent sewer cleaning operations.

Measurement and Payment. Measurements of all pipes for payment purposes shall be horizontal and made along the centerline between the center of new manhole structures and to the point of connection to the existing structure. The price paid per lineal foot for each size and type of pipe shall be full compensation for furnishing all labor, tools, equipment, and materials, and doing all the work involved in furnishing and installing the pipe, complete in place, including connection to existing manholes, including excavation, backfill, crushed gravel, saw cutting for the trench, and items "d", "e", and "f" above. Removal of unsuitable material to the depth required for crushed gravel, including removal and offsite disposal of the existing sanitary sewer pipe, shall be included in the unit price bid for pipe.

4. REPLACE EXISTING SANITARY SEWER MAIN WITH 8" PIPE (PIPE BURSTING) (Bid Item #4). REPLACE EXISTING SANITARY SEWER MAIN WITH 6" PIPE (PIPE BURSTING) (Bid Item #5). REPLACE EXISTING SANITARY SEWER

LATERAL WITH 4" PIPE (PIPE BURSTING) (Bid Item #8). REPLACE EXISTING SANITARY SEWER LATERAL WITH 6" PIPE (PIPE BURSTING) (Bid Item #9). These bid items include trenchless excavation or pipe bursting as a method to sanitary sewer main and lateral installation.

The Contractor must perform pre-construction CCTV. Trenchless excavation may not be performed in locations where sags or obstructions occur. However, "spot repairs" may be allowed at the Engineer's discretion. In addition to the required pre and post construction CCTV inspection, a CCTV inspection shall be performed one year after completion of construction at all locations where trenchless excavations were performed to determine if any settlement has occurred. Any defects or settlement shall be repaired by the Contractor at no cost to the City. All CCTV inspections required shall be included in the unit price for sanitary sewer pipe.

Prior to commencing the trenchless operation the contractor shall CCTV the existing sewer as required in order to identify any sags or obstructions in the existing pipe. Pre-construction CCTV shall be at the expense of the Contractor. Existing sags or vertical offsets that would affect the alignment of the new pipe installed by trenchless excavation shall be corrected by the contractor prior to installation. Sags in the new replacement sewer that appears in the post construction video inspection tapes are to be removed and corrected by open trench at the expense of the Contractor with no additional compensation or cost to the City. Such repairs if necessary are at the expense of the Contractor.

The Contractor shall submit to the Engineer catalog cuts, specifications, dimensioned drawings, and installation details/sketches and other pertinent information for the polyethylene pipe and fitting installation work.

The Contractor shall verify with the pipe manufacturer all connection details and shall provide to the Engineer detailed drawings and a written description of the entire construction procedure to install pipe, by-pass sewage flow, and reconnection of sewer house connections, including launching pit, receiving pit, and pipe lay down areas for approval.

The Contractor shall furnish a certified affidavit of compliance for all high-density polyethylene (HDPE) pipe and fittings furnished under this section of the specifications confirming that the materials supplied fully conform to the requirements specified herein.

Trial fusion welds shall be performed by the Contractor and samples submitted to the Engineer for review prior to installation of the pipe and fittings. Full penetration welds shall provide a homogeneous material across the cross section of the weld. The fusion machine employed for the trial welds shall be the same machine to be utilized for the installation work.

All pipe and fittings shall be high molecular weight, HDPE pipe. The material shall be listed by the Plastic Pipe Institute (PPI) as having a material designation of PE 3408. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe.

Pipe and fittings shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions or other injurious defects. They shall be uniform in color, opacity, density, and other physical properties. Any pipe and fittings not meeting these criteria shall be rejected.

For trenchless excavation HDPE pipe and fittings shall have a standard dimensional ratio (SDR) of 17 or less, ASTM D1248/D3350/F714, and shall conform to the following:

Inside: The inner wall shall be white, light green or natural. Yellow, black, and light purple are not acceptable.

Outside: The outer wall shall be black, white, light green, or natural. Yellow and light purple are not acceptable.

The interior colored surface of the HDPE pipe shall be resistant to sewer abrasives and chemicals (including hydrogen sulfide) and over time will not fade or experience color loss.

Sections of HDPE pipe shall be joined into continuous lengths on the job site above ground. The joining method for pipe shall be the butt fusion and/or electro-fusion method and HDPE saddles shall be fused on. All fusion shall be performed in strict accordance with the pipe manufacturer's recommendations. Fusion equipment used in the joining procedure shall be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, fusion temperature, alignment and fusion pressure.

A fire retardant bag or suitable enclosure shall be used with the heater plate to facilitate control of heating process and to protect the heater plate surfaces from dirt and other debris when not in use. The heater plate surfaces shall be cleaned regularly as needed to prevent accumulation of fusion welding residues or other substances that may result in faulty pipe joining.

Butt fusion shall conform to ASTM D2657 and pipe manufacturer's criteria for the type of joining. Joint strength shall be equal to that of the adjacent pipe.

The inside and outside of pipe ends shall be cleaned with a cotton or non-synthetic cloth to remove dirt, water, grease and other foreign materials; cut square (face) the pipe ends and carefully align just prior to heating.

After achieving the proper melt pattern, the pipe ends shall be brought together in a firm, rapid motion applying sufficient pressure to form a pipe bead (1/8" to 3/16" in height) around and inside the entire circumference of the pipe.

The inside weld base shall be removed by cutting the polyethylene away while it is still warm. Without scoring the inside wall of the pipe, the bead shall be removed in less than 5 minutes after pipe joint has been made.

The upsizing process shall be guided by a constant tension system. The upsizing method shall not cause any disruption to the aboveground terrain or improvements except for at the launching and receiving pits. A bursting head shall be used to break apart the existing pipe and create a void space sufficient in size to accommodate the HDPE liner. The liner pipe shall be installed immediately after the void has been formed.

Low-pressure air testing, deflection testing, cleaning and video inspection of newly installed HDPE pipes (mains and laterals) shall be performed in accordance with Bid Item Replacing Existing SS Main with 8" Pipe (Open Trench), subsection, testing for PVC sewer lines.

Attention is directed to related Articles or Subsections of these specifications and the Standard Specifications, regarding all other aspects of construction pertaining to trenchless excavation.

Laterals installed by trenchless method shall be four inch (4") Polyethylene, ASTM D1248/D3350/F14, SDR 17, or less. Lateral shall be installed at a minimum slope of 1/4" per foot. Lateral shall be connected to main with fusion branch saddles having an SDR of 11 for HDPE pipe.

Lateral serving commercial or residential lots consist of lower portion and an upper portion. The lower portion (lower lateral) is defined as being between the main line and the property line. The upper portion (upper lateral) is defined as being between the property line and the building. All undeveloped lots fronting the "project" will be provided a new lower lateral and cleanout where none previously existed. The location will be determined by the Engineer.

The Contractor shall be responsible for determining if an existing lower lateral is inactive. An inactive lower lateral does not connect to an upper lateral serving a building. Inactive lower laterals shall not be reconnected to the new sewer main and shall be removed completely at least two feet (2') from the new sewer main. The removed section of inactive lower lateral shall be disposed of by the Contractor and the remaining portion of the inactive lower lateral shall be plugged with Class C grout.

The Contractor shall complete replacement and site restoration within **three (3) consecutive working days** after beginning construction on the lower lateral so as to inconvenience residents as little as possible. Service shall be maintained at all times. No temporary connections shall be made which are health hazard. All connections shall be made in such a manner that no rock, soil, piece of pipe, or other debris is allowed to enter the sewerage system.

Payment for trenchless excavation shall be linear foot of pipe and shall include full compensation for furnishing all labor, tools, equipment, and materials and doing all necessary testing and work specified herein for installing sewer mains, laterals, and tie-in to manholes

5. REPLACE EXISTING SANITARY SEWER LATERAL WITH 4" PIPE (OPEN TRENCH) (Bid Item #7). The bid item include excavation of trenches, installation of new house laterals and backfilling for laterals that will be installed by the open excavation method.

Laterals shall be four inch (4") PVC, ASTM D1784/D2241, SDR 26 or less for open excavation, or Polyethylene, ASTM D1248/D3350/F14, SDR 17, or less for trenchless method. Lateral shall be installed at a minimum slope of 1/4" per foot. Laterals shall be connected with factory fabricated in-line bell and spigot type wyes for PVC pipe. Fittings shall be PVC SDR 17.

Shielded Couplings. Laterals shall be connected with stainless steel shielded sewer couplings, coupling to meet ASTM C 1173, gasket to meet ASTM C 425 Table 2, 300 series stainless steel shear band with a minimum thickness of .012", 316 series stainless steel clamps with nut & bolt take up, shear ring and clamps to meet all requirements of ASTM A-240, transitional sizes to utilize a one piece gasket. Recommended manufacturers shall include Mission Rubber Company FLEX SEAL – MR 56 44 ARC or approved equal. **Provide Submittal to Engineer for review.**

Laterals shall be laid in crushed rock to the top of the pipe. Recompact subbase to the Inspector's satisfaction.

Lateral serving commercial or residential lots consist of lower portion and an upper portion. The lower portion (lower lateral) is defined as being between the main line and the property line. The upper portion (upper lateral) is defined as being between the property line and the building. All undeveloped lots fronting the "project" will be provided a new lower lateral and cleanout where none previously existed. The location will be determined by the Engineer.

The Contractor shall be responsible for determining if an existing lower lateral is inactive. An inactive lower lateral does not connect to an upper lateral serving a building. Inactive lower laterals shall not be reconnected to the new sewer main and shall be removed completely at least two feet (2') from the new sewer main. The removed section of inactive lower lateral shall be disposed of by the Contractor and the remaining portion of the inactive lower lateral shall be plugged with Class C grout.

The Contractor shall complete replacement and site restoration within three consecutive working days after beginning construction on the lower lateral so as to inconvenience residents as little as possible. Service shall be maintained at all times. No temporary connections shall be made which are health hazard. All connections shall be made in such a manner that no rock, soil, piece of pipe, or other debris is allowed to enter the sewerage system.

When trenching, the Contractor will not be permitted to tunnel under curb and/or gutter and or sidewalk for lower lateral installation. The curb, and/or gutter, and/or sidewalk will be saw cut at the nearest score marks and then removed and disposed of off-site. Upon completion of lateral replacement work, the curb and/or gutter, and/or sidewalk will be replaced per Standard Drawing No. 6297, Case 24.

Excavation shall be supported so that it will be safe and the ground alongside the excavation will not slide or settle. All existing improvements including structures, fences, walls, and foundations will be fully protected from damage.

Any damage to the existing improvements beyond the trench shoring or excavation limits due sliding, caving, or settling of ground or backfill, or from construction equipment shall be repaired to the satisfaction of the property owner and the City Engineer.

All existing improvements including irrigation system, brick walkways, brick walls, fences, electrical wires, driveways, pipelines, sprinkler heads, and landscaping damaged as a direct or indirect result of construction activity shall be replaced by the contractor at his expense at appropriate locations in a manner satisfactory to the property owner and the City Engineer. Continuous dewatering will be required due to high groundwater. Dewatering shall be in conformance with Section XII, K "Control of Water".

Contractor shall take extra care where trees are in conflict or in close proximity to laterals. See Section XII G. TREE ROOTS.

The Contractor shall complete replacement and site restoration within three consecutive working days after beginning construction on the lower lateral so as to inconvenience residents as little as possible. Service shall be maintained at all times. No temporary connections shall be made which are health hazards. All connections shall be made in such a manner that no rock, soil, piece of pipe, or other debris is allowed to enter the sewerage system.

Payment shall be at the contract unit price per linear foot of 4" PVC House Sanitary Sewer Lateral and shall include full compensation for furnishing all labor, tools, equipment, and materials and doing all work specified herein for installing laterals, including excavation, backfill, crushed gravel bed, laying and joining pipes and fitting, saddles, and testing of the pipes.

6. INSTALL NEW 4" 2-WAY KELLY CLEANOUT (Bid Item #10). 4-inch laterals installed shall have 4-inch two-way cleanouts installed if one does not exist in accordance with Drawing SS-1, and the manufacturer's specifications. The Contractor shall locate all new cleanouts unless directed by the Engineer to do otherwise. In concrete and landscape areas, boxes shall be set to grade. Lids shall be marked "Sewer". 4-inch cleanouts shall be installed and connected to existing 4 inch upper laterals.

New cleanouts shall not be installed in locations where existing cleanouts exist, unless instructed otherwise by the engineer. Where existing cleanouts exist, the Contractor shall reuse the existing cleanout and make all necessary connections to new sanitary sewer laterals at no extra cost.

Payment shall be at the contract unit price per 4-inch cleanout and shall include full compensation for furnishing all labor, tools, equipment, and incidentals required for doing all work involved in installing cleanouts as herein specified, including boxes, excavation, backfill, pea gravel, and fittings.

7. INSTALL NEW 6" 2-WAY KELLY CLEANOUT (Bid Item #11). 6-inch laterals installed shall have 6-inch two-way cleanouts installed if one does not exist in accordance with Drawing SS-2, and the manufacturer's specifications. The Contractor shall locate all new cleanouts unless directed by the Engineer to do otherwise. In concrete and landscape areas, boxes shall be set to grade. Lids shall be marked "Sewer". 6-inch cleanouts shall be installed and connected to existing 6-inch upper laterals.

New cleanouts shall not be installed in locations where existing cleanouts exist, unless instructed otherwise by the engineer. Where existing cleanouts exist, the Contractor shall reuse the existing cleanout and make all necessary connections to new sanitary sewer laterals at no extra cost.

Payment shall be at the contract unit price per 6-inch cleanout and shall include full compensation for furnishing all labor, tools, equipment, and incidentals required for doing all work involved in installing cleanouts as herein specified, including boxes, excavation, backfill, pea gravel, and fittings.

8. REMOVE EXISTING MANHOLE AND CONSTRUCT NEW MANHOLE (Bid Item #12). Shall include removing the existing manholes, careful excavation around existing utilities as necessary, disposal of excavated and removed materials, dewatering, control of sewage flow, and all other work necessary to remove the manhole, complete, in place. Construction of new manhole shall be performed in accordance with Bid Item INSTALL NEW MANHOLE.

Payment shall be at the contract unit price per removing each manhole and constructing a new manhole in place, complete with concrete collar, frame and cover; such payment shall include full compensation for furnishing all labor, material, tools, equipment, trenching, bracing, sheeting, shoring, excavation, backfill, pipe and lateral connections flexible connections, adjusting to grade, and doing all work involved in constructing the manhole complete in place, as shown on the plans, including the removal and offsite disposal of existing manholes, excluding frames and covers as specified in the Standard Specifications and these Special Provisions.

9. INSTALL NEW MANHOLE (Bid Item #13). Manholes shall be Type A, Drawing 2815, Case 34 (unless specified otherwise). No concrete shall be placed until the Engineer has approved the depth of the excavation and the character of the foundation material. All corners and the pipe openings shall be rounded off and pointed up and all voids shall be filled with mortar. The manhole frames and covers shall be properly matched so that the covers will not rock or rattle, and after installation shall be painted with asphalt black paint, subject to the approval of the Engineer.

Manhole frame and cover shall be cast to the lines and dimensions as shown on Standard Drawing No. 1115, Case 34. Frame and cover shall be machine finished to prevent rocking of the cover. Provide manhole cover submittal to the engineer.

Existing sanitary sewer mains laterals tying into the manholes to be replaced will be reconnected to the new manholes by the Contractor.

Manhole channels shall be constructed as shown on the Plans and Standard Details, and with smooth transitions to ensure an unobstructed flow through manhole. All sharp edges or rough sections, which tend to obstruct flow, shall be removed. Where a full section of pipe is laid through a manhole, a neatly cut half pipe shall be laid to form the channel. The exposed edge of the pipe shall be completely covered with mortar. All mortar surfaces shall be trowled smooth. Breaking out the top half section after installation is not acceptable. **Pre-cast manhole bases shall not be used.** All manhole bases shall be laid in crushed gravel at a minimum of twelve inches (12") below the base.

All pipe that is to be connected to a manhole shall have a flexible connection to account for any differential settlement. Flexible connection shall be used only to connect plastic pipe to plastic pipe, and not be installed at the manhole/pipe penetration. Flexible coupling shall be installed approximately 12" from the point of connection/penetration between pipe and manhole. Couplings to meet ASTM D 5926, ASTM C 1173 and CSA B 602. Acceptable manufacturers shall include Fernco, products include Fernco Flexible Couplings series 1056-88 or approved equal. Installation shall be as recommended by the manufacturer. **Provide submittal to Engineer for review.**

All sewer manholes shall be vacuum tested. Test shall be witnessed by the City Inspector. Contractor shall contact City 48-hours in advance of testing. Vacuum test procedure and requirements shall be as follows:

a) After completion of the manholes barrels but prior to backfilling and grade ring installation, all openings in the manholes are sealed with plugs and a rubber ring "donut" type plug inserted inside the opening of the cone.

b) A small vacuum pump shall be attached to a hose connected to the plug and 4 psi, plus .434 psi per foot of depth from channel to rim, of vacuum applied. The vacuum is permitted to stabilize at 0.5 psi less than above vacuum for one minute then the test is begun. The manhole must maintain vacuum such that no greater than 0.5 psi of vacuum is lost during the specified test period.

c) The specified test period is as follows:

Manhole Depth (ft)	Test Period (min)
0-5	4.5
5-10	5.5
10-15	6.0
Greater than 15	6.5

d) Manholes that fail the test shall be patched as required and retested.

e) A vacuum regulator shall be provided on the vacuum pump such that no greater than 15 psi can be applied to the manhole during the test. All manholes that do not meet the leakage test or are unsatisfactory from visual inspection shall be replaced to the satisfaction of the City Engineer.

Payment shall be at the contract unit price per Type A Manhole, in place, complete with concrete collar, frame and cover; such payment shall include full compensation for furnishing all labor, material, tools, equipment, trenching, bracing, sheeting, shoring, excavation, backfill, pipe and lateral connections flexible connections, adjusting to grade, and doing all work involved in constructing the manhole complete in place, as shown on the plans, including the removal and offsite disposal of existing manholes, excluding frames and covers as specified in the Standard Specifications and these Special Provisions.

10. REHABILITATE MANHOLE (Bid Item #14). The contractor shall manage, control, divert or bypass pump the sewage flow as needed for the manhole rehabilitation described below and shall clean, degrease, hydro blast, abrasive blast, chip, bush hammer and scrape off all loose, deteriorated and corroded concrete on the inside of the manhole to expose sound concrete, dispose of all spoils at a legal dump site, cut off and remove all manhole steps and stairs and burn back the steel to ½ inch below the surface, seal and plug any infiltration leaks into the manhole with high early non-shrink cement mortar and chemical grout if necessary to stop a leak, fill all bug holes, voids, pits and cracks to smooth the inside concrete surface, coat the entire internal surface of the manhole from the spring line of the sewer to the underside of the metal manhole frame with an approved corrosion protection coating system following the manufacturer's approved installation methods, including complete coating of the manhole channel and coating of the underside surface of the cast iron frame and cover with bituminous coating if the manhole frame and cover is to be retained, complete. Bid item includes acceptance testing.

Payment shall be at the contract unit price per manhole. Said contract unit price shall include full compensation for labor, material, tools, equipment, and incidental associated with the work.

11. REPLACE MANHOLE LID AND CASTING (Bid Item #15). Manhole lid and casting shall include all work and equipment and materials for the replacement and resetting manhole frame and cover, as shown on the plans including all sawcutting, excavation and disposal of excavated material at a legal disposal site, installation of new grade rings, reinforced concrete collar, restoration of all disturbed and damaged surfaces to pre-project conditions or better.

Payment shall be at the contract unit price per each lid and casting replaced. Said contract unit price shall include full compensation for labor, material, tools, equipment, and incidentals associated with the work.

12. RECONSTRUCT SIDEWALK (Bid Item #16), RECONSTRUCT CURB AND GUTTER (Bid Item #17). Concrete curb, gutter, sidewalk, residential and/or commercial driveways and approaches removed for installation of laterals, cleanouts, mains, and/or manholes, shall be reconstructed in accordance with Drawing 6297, Case 24, and in conformance with the applicable requirements of Section 73 of the Standard Specifications and these Special Provisions. Sidewalks shall be Portland cement concrete three inches (3") thick. Residential driveways and their approaches shall be of Portland cement concrete four inches (4") thick. Commercial driveways and their approaches shall be of Portland cement concrete six inches (6") thick. Concrete shall be saw cut and reconstructed to the limits shown on plan and established in the field by the Engineer. Concrete and saw cutting shall conform to Section XII. C.

Gutter shall be 8 inches (8") in thickness and 30 inches (30") in width, or as shown on plans, or as needed to conform with existing gutter.

All sidewalk constructed shall be given the same surface finish as the surrounding sidewalk, and the surface shall be colored by adding to the mix a proportionate amount of the best quality lampblack, such proportion to be determined by the Engineer (**add 1.5 pounds of Lump Black per cubic yard of Concrete**). Concrete, Curb, Gutter and Sidewalk replacements shall extend to the nearest score-mark or as directed by the engineer or his representative.

Damage to existing sidewalk, curb, gutter, or driveways beyond the limits shown on the plans, or reconstruction required by the Engineer, caused by carelessness or inefficiency of the Contractor, shall be repaired or replaced at the Contractor's expense.

Payment shall be at the contract unit price per square foot of concrete replacement for sidewalk which includes driveways, and approaches and at the contract unit price per linear foot of curb and gutter, including full compensation for all labor, tools, equipment, and materials, and doing all work involved in saw cutting, removal, and replacing concrete curb, gutter, sidewalk, driveways and approaches.

13. ASPHALT CONCRETE PATCH (Bid Item #18). Trenches opened for the installation of sewer mains, laterals, and manholes in pavement areas, shall be paved with four inches (4") minimum asphalt concrete on eighteen (18") inches of aggregate base over compacted backfill. If depth of existing asphalt concrete in the roadway is greater than four inches (4"), then the depth of the new asphalt concrete section shall equal existing. The work shall conform to Drawing No. 2930, Case 22 and as shown on the plans. Asphalt concrete shall be Type A, ½" maximum aggregate with medium gradation, and shall conform to applicable requirements of Section 39 of the Standard Specifications. Paving asphalt of the Viscosity Grade AR 4000 shall be used unless otherwise permitted by the Engineer. The AC shall be placed in 4" lifts. Aggregate base shall be provided and compacted in accordance with Drawing 2930, Case 22.

Aggregate base must be Class 2 in accordance with Section 26 of the Standard Specifications with maximum aggregate size of ¾". Asphalt overly along the trench sides within the one-foot saw cut limit shall be paid under Asphalt Concrete Bridge, see Bid Items.

At least 72 hours prior to beginning work on a section of street scheduled for asphalt concrete surfacing replacement, the Contractor shall notify all affected property owners, residents, business and agencies adjacent to that section of street, by flyer and by approved "No Parking - Tow Away" signs on barricades of the work to be done, dates and hours of work, and lack of access to and from driveways for brief periods. The "No-Parking" signs shall state the days, dates, and hours of lane closure, and shall be placed along the street on each side at no more than 50 feet spacing, including no-parking zones. The Contractor shall notify the Engineer at least one (1) working day in advance of the intent to post "No-Parking" signs and to distribute flyers, so that the timely posting can be verified by the Inspector. The Contractor is permitted to list up to one (1) working day before and one (1) working day after the scheduled days of work, as shown in the latest approved schedule, on signs and flyers, in order to bracket the approved scheduled date of work. The Contractor shall remove the "No Parking" signs as soon as the street is re-opened to traffic.

If the Contractor is unable to meet the scheduled and noticed time for the work, the Contractor shall immediately notify the Engineer and remove the posted "No-Parking" signs. The Contractor shall submit a new scheduling request in writing to the Engineer. Upon written approval of the Engineer, the Contractor shall post signs and notify residents with new flyers at least 72 hours prior to beginning work per the revised schedule.

Payment for asphalt concrete patch shall be paid at the contract unit price per ton of asphalt. Said contract unit price shall include full compensation for labor, material, tools, equipment, and incidental associated with the work.

14. ASPHALT CONCRETE BRIDGE (Bid Item #19). An asphalt bridge for street patch, having a width of one foot, shall be constructed on either side of the pipe trench according to Drawing No. 2930, Case 22. Asphalt concrete shall be Type A, ½" maximum aggregate with medium gradation, and shall conform to applicable requirements of Section 39 of the Standard Specifications. Paving asphalt of the Viscosity Grade AR 4000 shall be used unless otherwise permitted by the Engineer. The four-inch (4") section shall be placed in two-inch lifts.

Payment for Asphalt Bridge for street patch shall be at the contract unit price per ton. Said contract unit price shall include full compensation for furnishing all labor, tools, equipment and materials, and doing all the work involved in reconstructing the trenches complete and in place as herein specified, and all other incidental work connected herewith.

15. MECHANICAL SHEETING AND SHORING OF SEWER TRENCH (Bid Item #20). Due to the nature of soils along the sewer trench alignment, excavation should be shored using recommended shoring techniques. See Section XII.I. Excavation and Backfill. Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Occupational Safety and Health of the Industrial Relations Department. Contractor

shall submit sheeting and shoring proposal prepared, signed and stamped by a Civil or Structural Engineer, registered in the state of California for review and approval to the Engineer.

Sheeting and Shoring in this bid item shall be defined as mechanical trench stabilizing devices.

Payment for sheeting and shoring shall be at the contract unit price per linear foot of actual trench shored during construction and shall include full compensation for furnishing all labor, tools, calculations, equipment and, materials. The sheeting and shoring shall be measured along the center line of the trench. Measurement for shoring around manholes shall be along the trench length, plus the width that extends beyond the pipe trench width.

16. SIGNAGE AND STRIPING RESTORATION (Bid Item #21). Traffic stripe and marking removed shall be installed in accordance to the Standard Specifications Section 84. New striping must match the preexisting striping. Thermoplastic pavement striping and marking shall conform to Section 84-2.02 and 84-2.04 of the Standard Specifications. Painted striping and marking shall conform to Section 84-2.03C(3) of the Standard Specifications. Pavement marking damage or destroyed as a result of the work shall be replaced in kind in conformance with Section 84 of the Standard Specifications. **Pavement markings shall be replaced in full, partial replacement of words, symbols, limit lines and crosswalk lines will not be allowed.** Whenever the Contractor's operations obliterate pavement delineation (striping - either painted or pavement markers or both, stop bars and crosswalks), pavement delineation shall be temporarily replaced before opening the traveled way to public traffic. For lane or center lines temporary delineation shall consist of reflective traffic line tape applied in pieces not less than 4" long nor less than 4" wide, spaced no more than 12' apart on curve, nor more than 24' apart on tangents, or as required by the Engineer.

Reflective traffic line tape shall be applied in accordance with the manufacturer's instructions. Temporary delineation shall be the same color as permanent delineation. Full compensation for temporary delineation shall be considered as included in the prices paid for the contract items of work that obliterated the existing delineation and no separate payment will be made therefore. Traffic tape shall be removed when required and disposed of as specified under Section XII, E., Disposal of Excavated Materials. Striping for all other locations within the project boundaries shall be replaced in kind across full width of roadway, as directed by the Engineer.

Layout of traffic striping and pavement markings shall be subject to approval by the Engineer prior to placement of striping/markings, in accordance with Section 10-1.02 WORK SEQUENCING.

Payment for restoring existing traffic striping and marking, temporary striping and marking, new striping and marking shall be at the contract lump sum price and shall include full compensation for labor, materials, tools, equipment, and incidentals to furnish and install striping and marking.

17.STOCKPILING OF CONTAMINATED SOIL, IMPORT BORROW, CONTAMINATED GROUND WATER. The Contractor hazardous waste handlers for both water and soil handling shall have 40 hour Hazwopper training, with yearly eight (8) hour Hazwopper update. The Contractor shall submit a site Safety Plan. The Contractor shall retain a certified Industrial Hygienist. Attention is directed to the following specifications in the event contaminated soil is encountered during excavation.

A. **STOCKPILING OF CONTAMINATED SOIL (Bid Item #23).** In the event excavated soils are stockpiled onsite for the purpose of proper disposal at an accepting landfill, stockpiled soil shall be placed on and under 10-mil polyethylene sheeting and secured with a 6-foot high perimeter chain-link fence and lock. See quantities for estimated weight of contaminated excavated soil (based on soil weight at 130pcf). The Contractor shall be responsible for maintaining the integrity of the plastic sheeting during its use. If the sheeting is damaged during stockpiling and removal operations, the Contractor shall be responsible for replacing the sheeting with equivalent or greater thickness than that specified and shall be responsible for the cost of inspecting, sampling, and/or removing and disposal of soil affected by pollutants due to the damage sheeting.

Weighmaster Certificates. Weighmaster certificates will be required for this work.

Payment shall be at the contract unit price per ton of soil stockpiled, including off-hauling and disposal at an accepting landfill and shall include full compensation for furnishing all labor, material, fencing, tools, equipment and incidentals, and for doing all work.

B. **IMPORT BORROW (Bid Item #24).** In the event the Engineer has determined that contaminated soil shall be removed and disposed off-site, the Contractor shall back fill the affected excavation with on-site select material. Should import borrow be required, import borrow shall be of a quantity suitable for roadway construction and shall be free of organic or deleterious materials. It shall be granular with sand equivalent of 20 or higher, a maximum particle size of one inch (1") and no more than 15% passing the No. 200 sieve.

Payment of imported borrow shall be at the contract unit price per ton of import borrow and shall include full compensation for furnishing all labor, material, tools, equipment and incidentals and for doing all work in placing import borrow.

C. **CONTAMINATED GROUND WATER (Bid Item #25).** Should contaminated ground water be encountered, contaminated ground water shall be stored, treated and disposed at a City approved discharge point either storm or sewer. The City will test water for constituents. The treated water will be discharged to either sanitary sewer or storm drain. The City will obtain necessary permits for discharging treated water to these facilities. The ground water shall be pumped into baker tanks and treated through a carbon treatment absorption system. Water samples will be collected from sample ports located up gradient and down gradient of the carbon system. All influent and effluent samples will be analyzed for TPH, BTEX, and heavy metal by the City.

Payment shall be at the contract unit price per gallon of contaminated water and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all work, including storage, pumping, treatment and disposal.

D. EXPERIENCE WORKMANSHIP. The Contractor performing this work MUST be familiar with all applicable regulations covering the removal or disturbance of contaminated or hazardous material. The Contractor must possess all required licenses, certificates and training required to perform the type of work. The Contractor must be familiar with disposal requirements of contaminated or hazardous material.

A complete work plan, which shall be referred to as the Contractor's Written Compliance Program (as per 29 CFR 1926.62), shall outline the methods and controls to be followed by the Contractor and each Sub-contractor during the performance of their work. The Contractor's Written Compliance Program must be submitted to the Owner prior to the start of work.

It is the Contractor's responsibility to maintain adequate controls and perform any personal monitoring to insure worker safety for the duration of the work. An initial exposure determination shall be supplied to the Owner prior to the start of work.

Payment for experience workmanship which also includes submittal of site safety plan and retaining of an Industrial Hygienist shall be in the various contract bid items and no additional compensation shall be made.

E. APPLICABLE STANDARDS. Unless otherwise specified or defined, the Contractor shall follow all federal, state and local regulatory agency rules, regulations and standards regarding the excavation, stockpiling, transporting and disposal of contaminated soil.

All work shall be performed in accordance with the latest regulations from the Occupational Safety and Health Administration (OSHA), the State of California Division of Occupational Safety and Health (DOSH), the State of California Department of Industrial Relations (CAL/OSHA), the recommendations of the National Institute of Occupational Safety and Health (NIOSH), California Department of Health Services and any other applicable Federal, State and Local Government regulations. Whenever there is a conflict or overlap of the above references, the most stringent provision is applicable.

The Contractor shall give the City two (2) weeks to resolve the contaminated site issue. The Contractor shall include this period in the bid and no right of way claims shall be initiated by the Contractor or the City.

SECTION XIII. MANDATORY PRE-CONSTRUCTION MEETING SUBMITTALS

A. REQUIRED REPORTS. Contractor shall submit the following mandatory reports to the City Engineer at the pre-construction meeting:

- Construction Schedule
- Traffic Control Plan for each site
- Pothole Plan and Schedule

The Contractor shall not proceed with construction until these reports have been approved by the City Engineer and the Contractor has received such approval in writing (included in your Notice to Proceed letter). The potholing plan and schedule must be approved by the City Engineer at least two (2) weeks before construction may proceed.