

# **INVITATION FOR BIDS**



## **FOR CONSTRUCTING**

# **SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT**

CONTRACT NUMBER  
**C00189**

ISSUED BY  
CAPITAL PROJECTS ENGINEERING DIVISION  
CITY OF SANTA ROSA, CALIFORNIA

**2021**

ATTENTION  
Prebid Conference  
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**SLATER STREET & LEWROSA WAY SEWER & WATER  
MAIN REPLACEMENT PROJECT**

**Contract No. C00189**

# SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT

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CITY OF SANTA ROSA  
STATE OF CALIFORNIA

**NOTICE TO BIDDERS**

➤	For technical questions regarding this project, contact <b>Sara Mathews</b> at <b>(707) 543-3866</b> .
➤	For direct access to plans, specifications and planholders' lists, go to <a href="http://www.srcity.org/bids">www.srcity.org/bids</a> and click on <u>Bid/Proposal Opportunities</u> .
➤	For direct access to bid results, go to <a href="http://www.srcity.org/bids">www.srcity.org/bids</a> . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> .

**- IMPORTANT -**  
**REVISED BIDDING PROCEDURES DURING SHELTER IN PLACE ORDER**

Pursuant to Order No. C19-09, the Sonoma County Public Health Officer has extended the Shelter in Place Order, which will continue until it is extended, rescinded, superseded, or amended in writing by the Health Officer or the State Health Officer. City facilities are currently closed to the public and construction meetings will be held by teleconference calls.

All bids shall be submitted and opened according to the following procedure:

**Bid Acceptance Deadline**

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 2:00 p.m., July 15, 2021, for Slater Street & Lewrosa Way Sewer & Water Main Replacement Project, Contract No. C00189. (Engineer's Estimate: \$2,624,875.00).

**Bids tendered after this deadline will not be accepted.** The official time clock for accepting bids will be an electric date and time stamping clock, located in the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California. In order to be accepted, bids must be received prior to 2:00 p.m. Therefore, a bid stamped in at 1:59 p.m. will be accepted, but one delivered at or after 2:00 p.m. is late and will not be accepted.

- A. If you choose to mail your Bid Proposal via any of the overnight/express services, such as FedEx, UPS and USPS, the delivery **MUST** be a timed delivery. The delivery service **MUST** deliver the bid prior to the deadline time posted above. The outside envelope **MUST** be clearly marked as follows: [SEALED BID FOR: C00189 SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT].
- B. If you choose to deliver your Bid Proposal in person, the TIME TO DELIVER BIDS is within the one-hour WINDOW FOR DELIVERY prior to deadline posted above. No bids will be accepted outside of this time window.

**Bid Opening Teleconference Call**

Prospective bidders, subcontractors, and materials suppliers are invited to attend the Bid opening teleconference call scheduled to be held at 2:00 p.m., July 15, 2021. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 976-9218#.

### **Project Description/Scope of Work**

This project will replace about 1900 linear feet of water main and 2030 linear feet of sewer main in Lewrosa Way and in Slater Street between Dexter Street and Lewis Road. It will replace older deteriorated VCP and AC pipe with 8" PVC. This project also includes a water main crossing over Poppy Creek, secured underneath a concrete bridge deck, which will require a jack and bore installation. There is an easement that goes from Lewrosa Way east to Mendocino Ave, the sewer main will be replaced by the method of pipe bursting to minimize impacts to the apartment complex. The street is in need of a roadway reconstruction throughout the majority of the project area, as well as reconstruction of nine curb ramps to meet current ADA requirements. Trench paving will be applied for the remainder of work that does not require roadway reconstruction. There are also some storm water improvements such as installation of 93 linear feet of RCP and 4 catch basins.

### **Pre-Bid Meeting Teleconference Call**

Prospective bidders, subcontractors, and materials suppliers are invited to attend a pre-bid meeting teleconference call scheduled to be held at 10:00 a.m., July 1, 2021. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 013-5761#.

### **Subcontractor Information; Department of Industrial Relations Registration**

Bidders shall provide the names, business addresses and license numbers of all subcontractors listed on bidder's List of Subcontractors. No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

## Project Title: SLATER STREET &amp; LEWROSA WAY SEWER AND WATER MAIN REPLACEMENT PROJECT

Line #	Description	Units	Quantity
1	TRAFFIC CONTROL	LS	1
2	WATER POLLUTION CONTROL	LS	1
3	FURNISH STORAGE TANKS	MONTH	3
4	STORAGE, TREATMENT AND DISPOSAL OF GROUNDWATER	LS	1
5	SOIL SAMPLING AND TESTING	LS	1
6	CONTAMINATED SOIL DISPOSAL	CY	480
7	ADJUST MANHOLE TO GRADE	EA	1
8	ADJUST MONITORING WELL TO GRADE	EA	2
9	UTILITY CLEARANCES	LS	1
10	REMOVE & REPLACE WOOD FENCE	LF	70
11	IRRIGATION MODIFICATIONS	LS	1
12	SUBGRADE STABILIZATION/DIGOUTS	SY	98
13	ROADWAY EXCAVATION (F)	CY	1644
14	SOIL STABILIZATION FABRIC	SY	5956
15	ASPHALT CONCRETE	TON	2211
16	ASPHALT CONCRETE CONFORM	TON	6
17	PERMANENT TRENCH PAVING	TON	23
18	CATCH BASIN, TYPE I	EA	2
19	CATCH BASIN, TYPE II	EA	2
20	48" STORM DRAIN MANHOLE WITH REDUCER SLAB	EA	1
21	4' X 7' STORM DRAIN JUNCTION BOX	EA	2
22	15" CLASS III REINFORCED CONCRETE PIPE	LF	60
23	18" CLASS V REINFORCED CONCRETE PIPE	LF	33
24	TRENCH BRACING AND SHORING - REINFORCED CONCRETE PIPE	LS	1
25	COBBLE NON-WALKABLE SURFACE	SF	342
26	CURB AND GUTTER	LF	626
27	CURB RAMP	SF	862
28	SIDEWALK	SF	1418
29	DRIVEWAY	SF	175
30	VALLEY GUTTER	SF	255
31	REMOVE AND REPLACE ROADSIDE SIGN	EA	8
32	THERMOPLASTIC STRIPES AND PAVEMENT MARKINGS	SF	248
33	BLUE, RETROREFLECTIVE PAVEMENT MARKERS	EA	5
34	8" SEWER MAIN	LF	1704
35	8" SEWER MAIN, PIPE BURSTING	LF	324
36	ABANDON OR REMOVE EXISTING SEWER SYSTEM COMPONENTS	LS	1
37	4" SANITARY SEWER LATERAL	EA	63
38	48" SEWER MANHOLE	EA	7
39	48" SEWER MANHOLE WITH CHANNEL INVERT SLIDE	EA	1
40	60" SEWER MANHOLE WITH ECCENTRIC CONE	EA	1
41	8" MAINLINE SEWER CLEANOUT	EA	5
42	TRENCH BRACING AND SHORING-SEWER	LS	1
43	8" PVC (PC235/DR18) WATER MAIN	LF	1452
44	8" PVC (PC305/DR14) WATER MAIN	LF	142
45	8" PVC (PC305/DR14) WATER MAIN WITH CDF BACKFILL	LF	82

Line #	Description	Units	Quantity
46	8" DIP WATER MAIN	LF	211
47	WATER MAIN LOWERING	EA	2
48	HALF WATER MAIN LOWERING	EA	1
49	1" SINGLE WATER SERVICE	EA	48
50	1-1/2" DUAL WATER SERVICE	EA	1
51	2" SINGLE WATER SERVICE	EA	1
52	BACKFLOW DEVICE RE-CERTIFICATION	EA	2
53	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	EA	3
54	FIRE HYDRANT AND LATERAL ASSEMBLY	EA	3
55	COMMERCIAL FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1
56	8" GATE VALVE	EA	12
57	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	LS	1
58	TEMPORARY BLOW-OFF	EA	4
59	PERMANENT BLOW-OFF	EA	1
60	WATER MAIN TIE-IN	EA	6
61	TRENCH BRACING AND SHORING-WATER	LS	1
62	BORE AND JACK STEEL CASING	LF	20

The foregoing quantities are approximate only, being given as a basis for the comparison of bids, and the City of Santa Rosa 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, as may be deemed necessary or expedient by the Engineer.

Bids shall be made in accordance with the prevailing hourly rate of per diem wages for this locality and project as determined by the Director of the DIR pursuant to Labor Code sections 1770 *et seq.*

Contractor shall be responsible for compliance with the Immigration Reform Control Act of 1986.

If the project requires the employment of workers in any apprenticeable craft or trade, once awarded, Contractor and subcontractors must apply to the Joint Apprenticeship Council unless already covered by local apprentice standards (see Labor Code section 1777.5).

All bids are to be compared on the basis of the Engineer's estimate of the quantities of work to be performed. No bid will be awarded to a contractor who is not licensed in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code. Contractor must hold a **Class A** license for this project. Contractor must also meet additional requirements under Section 2 Bidding for five (5) years of experience with pipe bursting HDPE pipe and bore and jack projects.

Project plans, bid and contract forms for C00189 Slater Street & Lewrosa Way Sewer & Water Main Replacement Project may be obtained through PlanetBids at [www.srcity.org/bids](http://www.srcity.org/bids). These documents can no longer be obtained at the Transportation and Public Works Department.

No bid will be accepted unless it is made on the contract bid forms furnished by the Transportation and Public Works Department through PlanetBids. The original of the completed bid forms bearing original signatures must be submitted. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at [www.srcity.org/bids](http://www.srcity.org/bids), downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

The successful bidder will be required to hold a current City of Santa Rosa business tax certificate issued pursuant to Chapter 6.04 of the Santa Rosa City Code before commencing work on this project. For information regarding the business tax, contact Revenue and Collections at (707) 543-3170.

For any moneys earned by Contractor and withheld by the City of Santa Rosa to ensure the performance of the Contract, Contractor may, at its request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the California Public Contract Code.

The City of Santa Rosa reserves the right to reject any or all bids and the right to waive minor irregularities or informalities in any bid or bonds.



MARK KASRAIE, PE  
Supervising Engineer



# **SPECIAL PROVISIONS**

## **General Specifications**

### **CITY OF SANTA ROSA, CALIFORNIA**

#### **SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT**

## **1 GENERAL**

The work described herein shall be done in accordance with the "Contract Documents," which are the:

1. Special Provisions
2. Project Plans, consisting of 25 sheets entitled Slater Street & Lewrosa Way Sewer & Water Main Replacement Project, 2021-0011
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

In the event of a conflict in any of these documents, the order of precedence shall be determined by Section 5-1.02 of these Special Provisions.

Whenever the Standard Specifications use the terms State of California, Department of Transportation, Director, Engineer, or Laboratory, the following terms shall be substituted therefor, and any reference to any of the foregoing terms shall be understood and interpreted to mean and refer to such substituted terms as follows:

For State of California - the City of Santa Rosa;

For Department - the City of Santa Rosa Department of Transportation and Public Works or the City of Santa Rosa Water Department;

For Director - the City Engineer of the City of Santa Rosa;

For Engineer - the City Engineer of the City of Santa Rosa or the City Engineer's authorized agents;

For Laboratory – Materials Engineering of the City of Santa Rosa Transportation and Public Works Department, or such other laboratory as may be authorized by the City.

Unless otherwise provided, whenever in these Special Provisions attention is directed to specific provisions in the Standard Specifications, such direction shall not be interpreted as excluding other applicable provisions of the Standard Specifications.

Unless otherwise provided, when sections and subsections of the Standard Specifications are used in these Special Provisions, such use is not exclusive and shall not be interpreted as excluding other applicable provisions of said sections and subsections but is only intended to add to or modify such sections or subsections.

Unless otherwise provided, full compensation for compliance with these Special Provisions is included in the contract price and no additional allowance will be made to Contractor therefor.

The Standard Specifications are hereby modified to delete any reference or incorporation of provisions providing for or requiring arbitration of any and all claims and disputes arising under this contract.

## 2 BIDDING

**2-1.00 Eligibility Criteria:** To be eligible for award, all Bidders submitting bids for this project must meet the following eligibility criteria:

1. The bidder must have a valid Class A contractor's license at the time of contract award.
2. The bidder shall provide a list of related experience for similar pipe bursting with HDPE pipe and bore and jack projects (minimum of 3 projects) with client contact information for the past five (5) years.
3. The bidder must properly complete and submit the Eligibility Information Forms provided in these bid documents with the bid. The information provided on the forms must be accurate and complete, and where shown on the form provide certifications of individuals that will be responsible for fusing the HDPE pipe for this project.
4. If a bidder does not submit a properly completed Eligibility Information Forms with the bid, the bid will be considered non-responsive and will not be considered. Additionally, if during the checking of references and reviewing the information submitted, it is found that the bidder does not satisfy the requirements contained in this section, or that any information submitted is not complete and accurate, the submitted bid may be found to be non-responsive and be rejected, and/or the bidder may be found not responsible for purposes of this project.
5. The HDPE installation crew proposed for use and that is actually used on the project, if awarded, must include an individual that is certified in fusion welding of HDPE who has fusion experience for HDPE piping projects for sanitary sewer facilities in California.

**2-1.06 Bid Documents:** Prospective bidders will be furnished with an Invitation for Bids which will state the location and description of the contemplated public works project and will show the approximate estimate of the various quantities and kinds of work to be performed and materials to be furnished with a schedule of items for which unit prices are requested.

**2-1.07 Approximate Estimate:** The quantities given in the Contract Documents are approximate only, being given as a basis for the comparison of bids, and the City 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 part of the work or to omit parts of the work, as may be deemed necessary or advisable by the Engineer.

**2-1.31 Examination of Project Plans, Specifications, City Standards, Invitation for Bids and Work Site:** Prior to submitting a bid, the bidder shall carefully examine the Project Plans, Invitation for Bids, City Standards and the proposed work site. If any person contemplating submitting a bid for this public works project is in doubt as to the meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the Contract Documents, he or she may submit a written request for interpretation or correction to the Engineer. The written request must be received by the Engineer a minimum of 96 hours prior to bid opening. Any interpretation or correction of the Contract Documents prior to bid opening will be made only by written addendum issued by the City. A copy of such addendum will be mailed or faxed to each Planholder. The City will not be bound by any other explanations or interpretations of the Contract Documents.

**2-1.33 Bid Document Completion:** Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

**2-1.33A Bid Forms:** All bids shall be made on bid forms obtained from PlanetBids at [www.srcity.org/bids](http://www.srcity.org/bids). The bidder shall submit its bid on the original bid forms furnished by the City. Bids submitted on forms other than the forms furnished to the bidder by the City will not be considered.

The bid forms to be submitted at the time of and with the bid are:

1. Unit Price Schedule
2. List of Subcontractors
3. List of Previous Similar Jobs
4. Noncollusion Declaration
5. Bid Guaranty Information and Bidder's Information and Signature
6. Bid Guaranty (Bid Bond or alternate security)
7. Eligibility Information Form – Pipe Bursting with HDPE/HDPE Pipe Fusion
8. Eligibility Information Form – Bore and Jack

All bids shall give the proposed prices and must bear the original signature of the bidder. Bidders shall fill in all blanks on the bid forms where required. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at [www.srcity.org/bids](http://www.srcity.org/bids), downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

**2-1.33B Registration with DIR:** No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

**2-1.33C Subcontractors:** The Subletting and Subcontracting Fair Practices Act, Public Contract Code sections 4100-4113, inclusive (the "Act") shall apply to all subcontracts in excess of one-half of one percent of the total amount of a bid. The Act requires subcontractors, if used for such work, to be listed in the contractor's bid and prohibits the substitution of subcontractors, except as authorized by the Act. Each bidder shall, with respect to the work of any subcontractor in excess of one-half of one percent of the total amount of the bid, include as part of the bid on the bid form provided:

1. The name, business address and DIR registration number of each subcontractor who will perform work or labor or render services to the Contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Project Plans or other Contract Documents in an amount in excess of one-half of one percent of the Contractor's total bid; and
2. The portion of the work that will be done by each subcontractor. Only one subcontractor shall be listed for each portion.

The purchase of sand, gravel, crushed rock, batched concrete, aggregate, ready-mixed concrete, and/or any other materials produced and furnished by established and recognized commercial plants, together with the delivery of such materials to the work site by the source of the materials or by recognized commercial hauling companies, is not considered as subcontracting under this section.

**2-1.33E Rejection of Bids Containing Alterations, Erasures or Irregularities:** Bids may be rejected if they show any alterations of forms, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind.

**2-1.34 Bid Guaranty:** All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check, or by a bidder's bond made payable to the City of Santa Rosa and executed as surety by a corporate surety authorized and admitted to transact a surety business in

the State of California in an amount equal to ten percent of the amount of the bid. No bid shall be considered unless such cash, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

**2-1.40 Withdrawal of Bid:** A bid may be withdrawn prior to, but not after, the hour fixed in the public notice for the opening of bids, provided that a written request to withdraw the bid, executed by the bidder or the bidder's authorized representative, is filed with the Engineer before this deadline. The withdrawal of a bid shall not prejudice the right of a bidder to submit a new bid.

**2-1.43 Public Opening of Bids:** Bids will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.

**2-1.46 Disqualification of Bidders:** Serial bids from the same bidder will not be accepted. This section shall not be interpreted to mean that the same contractor may not be the contractor in one bid and listed as a subcontractor in another bid, provided that no collusion exists.

**2-1.48 Competency of Bidders:** No bid will be accepted from or contract awarded to a contractor that is not licensed in accordance with the law, that does not hold a license qualifying it to perform work under this contract, to whom a bid form has not been issued by the Engineer, or that has not successfully completed projects of similar character, scope and cost to the proposed project. Bidders will be required to provide a list of previous similar jobs with their bids.

### 3 CONTRACT AWARD AND EXECUTION

**3-1.04 Contract Award:** The City reserves the right to reject any or all bids. Bids are required for the entire work described herein. All bids will be compared with the Engineer's estimate of the quantities of work to be completed. Contract award, if any, will be made to the lowest responsible bidder within sixty days from the date bids are opened.

**3-1.05 Contract Bonds:**

Within ten days after receipt of the Notice of Award, the successful bidder shall provide the following bonds to the City:

- a. **Performance Bond:** A performance bond to guarantee the faithful performance of the terms and conditions of the Contract by Contractor, which shall be executed in a sum of not less than one-half of the Contract price;
- b. **Labor and Materials Bond:** A labor and materials bond (payment bond) in accordance with Part 6 of Division 4, sections 8000 *et seq.* of the California Civil Code, to guarantee against any and all claims of subcontractors or other third parties furnishing labor, materials, or supplies for the Contract, which shall be executed in a sum of 100% of the Contract price; and
- c. **Material Guaranty Bond:** A material guaranty bond (warranty bond) to serve as surety for the guarantee requirements outlined in Section 6-3.01B, which shall be executed in a sum of not less than one-half of the Contract price.

The bond(s) shall be provided in a form acceptable to the City and issued by a corporate surety in good financial standing and authorized and admitted to transact a surety business in the state of California for the purposes and in the amount(s) stated above.

Whenever the financial or legal status of any surety on any such bond(s) is/are unacceptable to the City, it may make a demand to Contractor for further bond(s) or additional surety, not exceeding the sums originally required. Thereafter, no payment shall be made upon the Contract to Contractor or any assignees of Contractor until such bond(s) or additional surety has/have been provided to the City.

**3-1.07 Indemnification and Insurance:** **Indemnification:** Contractor shall defend, hold harmless and indemnify City, its officers, agents and employees, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably incurred by City's staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death; damage to personal, real or intellectual property or the environment; contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with the performance of or the failure to perform the Contract by Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not such Liabilities are caused in part by a party indemnified hereunder, or such Liabilities are litigated, settled or reduced to judgment; provided, that the foregoing indemnity does not apply to liability for any damage or expense for death or bodily injury to persons or damage to property to the extent arising from (i) the sole negligence, or willful misconduct of, or defects in design furnished by City, its agents, servants, or independent contractors who are directly responsible to City (excluding Contractor), or (ii) the active negligence of City.

The existence of any of the insurance policies or coverages described in this Contract shall not affect or limit any of City's rights hereunder, nor shall the limits of such insurance limit Contractor's liability to the City hereunder. The provisions of this section shall survive any expiration or termination of the Contract.

Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1. Commercial general liability	\$5 million per occurrence \$5 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include products liability and completed operations coverage which shall continue for a period of three years after acceptance of the work by the City. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. Coverage may be met by a combination of primary and umbrella or excess insurance, but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Completed Operations Coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as ISO Form CG 20 37 04 13. See endorsements below for other Additional Insured Requirements. Coverage shall not exclude subsidence.
2. Business auto coverage	\$3 million	Coverage at least as broad as ISO Form Number CA 00 01 covering any auto (Code 1). Insurance shall cover owned, non-owned and hired autos.
3. Workers' compensation and Employer's Liability	\$1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than \$1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor, its employees, agents and subcontractors.
4. Contractor's pollution legal liability and/or asbestos legal liability and/or errors and omission	\$1 million per occurrence or claim \$2 million aggregate	If the work involves lead-based paint or asbestos identification/remediation, the pollution liability policy must not contain lead-based paint or asbestos exclusions. If the work involves mold identification, the pollution liability policy must not contain a mold exclusion and a definition of "Pollution" in said policy shall include microbial matter including mold.
5. Course of construction/builders' risk	Amount of completed value of project without co-insurance provisions	Required for construction projects over \$3 million. The City shall be named as loss payee.

**Insurance:** Contractor shall maintain in full force and effect all of the insurance coverage described in and in accordance with the insurance requirements set forth below. Maintenance of such insurance coverage during the entire performance of the Contract is a material element of the Contract. Failure by Contractor to (i) maintain or renew coverage, (ii) provide notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, if necessary, may be deemed a material breach of the Contract by Contractor, whereas the City

shall be entitled to all rights and remedies at law or in equity. Notwithstanding the foregoing, any failure by Contractor to maintain required insurance coverage shall not excuse or alleviate Contractor from any of its other duties or obligations under the Contract. In the event Contractor retains or utilizes any subcontractors or sub-consultants in performance of the work, Contractor shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverage requirements herein set forth below.

**Insurance Requirements:**

- A. Insurance Policies:** Contractor shall maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with an AM Best rating of no less than A-:VI or a rating otherwise acceptable to the City.
- B. Endorsements:**
1. All policies shall provide or be endorsed to provide that coverage shall not be canceled by either party, except after prior written notice has been provided to the City in accordance with the policy provisions.
  2. Liability policies shall provide or be endorsed to provide the following:
    - a. For any claims related to this Contract, Contractor's insurance coverage shall be primary, and any insurance or self-insurance maintained by City shall be in excess of Contractor's insurance and shall not contribute with it. Endorsements at least as broad as 20 01 04 13 or evidence of policy language will be required in non-ISO CGL policies.
    - b. **The City of Santa Rosa, its officers, agents and employees are to be covered as additional insureds on the CGL policy.** Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.
- C. Verification of Coverage and Certificates of Insurance:** Contractor shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Contract. The City reserves the right to require complete copies of all required policies and endorsements during the duration of the Contract and for a period of three years following City's acceptance of the work.
- D. Other Insurance Provisions:**
1. No policy required by this Contract shall prohibit Contractor from waiving any right of recovery prior to loss. Contractor hereby waives such right with regard to the indemnitees.
  2. All insurance coverage amounts provided by Contractor and available or applicable to this Contract are intended to apply to the full extent of the policies. Nothing contained in this Contract limits the application of such insurance coverage. Coverage for an additional insured shall NOT be limited to the insured's vicarious liability. Defense costs must be paid in addition to coverage amounts.
  3. Self-insured retentions above \$10,000 must be approved by the City. At the City's option, Contractor may be required to provide financial guarantees.
  4. City reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

**3-1.18 Contract Execution:** The fully executed Contract, original bonds and insurance certificates and endorsements required under the Contract shall be delivered to the City within ten calendar days of Contractor's receipt of the Notice of Award.

The Engineer will supply Contractor with up to ten sets of the Invitation for Bids and Project Plans. At least one complete set of the Invitation for Bids and Project Plans shall be kept at the construction site in good condition and made available to the Engineer at all times. Additional copies of the Invitation for Bids and Project Plans will be provided by the Engineer at Contractor's cost.

**3-1.20 Failure to Execute Contract:** Contractor's failure to deliver to the City the fully executed Contract within ten calendar days of Contractor's receipt of the Notice of Award shall be cause for the cancellation of the award and the forfeiture of the bid guaranty to the City. If the successful bidder refuses or fails to execute the Contract, the City may award the Contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible bidder. The refusal or failure by the second or third lowest responsible bidder to deliver to the City the fully executed Contract within ten calendar days of receipt of the Notice of Award to the respective bidder shall likewise be cause for the cancellation of the award and the forfeiture of the bid guaranty of the respective bidder. In its discretion, the City may then re-advertise the project or construct it by day labor.

**3-1.21 Return of Bid Guarantees:** Within ten days after the opening of bids, the City will return the bid guarantees to all bidders except the three lowest responsible bidders. The bid guarantees of the three lowest responsible bidders will be retained until the Contract has been fully executed. In the event all bids are rejected, all bid guarantees will be returned to the respective bidders.

**3-1.22 Subcontractors:** The successful bidder shall furnish a list of all subcontractors as required under Sections 2-1.33C. The list shall include the name, business address, DIR registration number and the state contractor's license number of each subcontractor on the list and the names of the responsible managing employees whose names appear on the subcontractors' licenses.



## 4 SCOPE OF WORK

**4-1.05 Changes and Extra Work:** All changes to the Contract shall be made by written change order only.

All extra work shall be recorded by Contractor on a daily report signed by both the City and Contractor. The “daily reports” shall thereafter be considered the true record of extra work performed. A copy of the daily reports will be furnished to Contractor. Contractor is directed to Section 9-1.04 of this Invitation for Bids.

**4-1.05C Compensation for Altered Quantities:** Payment and compensation for altered quantities shall conform to the provisions of Section 9-1.06 of the Standard Specifications, except as modified herein.

## 5 CONTROL OF WORK

**5-1.02 Contractor's Copies of Contract Documents:** In the event of a conflict in any of the Contract Documents, the order of precedence from highest to lowest shall be as follows:

1. Special Provisions
2. Project Plans, consisting of 25 sheets entitled Slater Street & Lewrosa Way Sewer & Water Main Replacement Project, 2021-0011
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

**5-1.05 Order of Work:** The work as shown on the Project Plans and as specified in the Invitation for Bids shall be constructed in a sequence that is satisfactory to and approved by the Engineer.

Contractor shall prepare a work schedule per Section 8-1.02 of the Standard Specifications.

With the exception of trenching, all existing street, street light base, curb and gutter, storm drain, water line, and sewer line work shall be completed before any existing street paving is removed.

Full compensation for the conformance to the requirements of this section is included in the Contract price and no additional allowance will be made to Contractor for this work.

**5-1.17 Character of Workers:** Contractor is directed to Section 5-1.17 of the Standard Specifications which states:

"If any subcontractor or person employed by the Contractor shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the request of the Engineer, and such person shall not again be employed on the work."

No additional compensation shall be granted to Contractor in the event City exercises any part of its rights under this section and any and all costs related to such exercise shall be borne by Contractor.

**5-1.20 Cooperation with Other Entities:** Attention is directed to Section 5-1.20 of the Standard Specifications.

Other construction including but not limited to utility, power, and pipe line relocation, may be in progress by other forces within and adjacent to the project area at the same time work is being performed under this Contract by Contractor.

Contractor shall cooperate with the forces performing other work, to the end that such forces may conduct their operations with as little inconvenience and delay as possible. Contractor shall grant such forces access to the project area as is reasonable and necessary to transport materials and equipment to the site of operations by the other forces.

**5-1.20B(4)(a) Offsite Staging Areas and Construction Yards:** Attention is directed to Santa Rosa City Code section 20-52.040, Temporary Use Permit.

A Temporary Use Permit shall be obtained for any offsite construction yard on private property to be used for any of the following:

- a. Stockpiling of equipment and/or materials;
- b. Staging of construction;

- c. Placement of work trailers or mobile offices;
- d. Storage of trench spoils; or
- e. Other construction related activities not specifically enumerated above.

**5-1.26 Lines and Grades:** Contractor shall carefully preserve all bench marks, grade stakes, and all other survey markers. In the case of willful or careless destruction, Contractor shall bear the cost of replacing the markers.

Contractor shall contact the Engineer directly for coordination of survey staking. Written staking requests must be submitted at least two working days in advance of the date and time stakes are needed.

**5-1.27B Examination and Audit:** Pursuant to California Government Code section 8546.7, any contract with the City involving expenditures in excess of \$10,000 shall be subject to the examination and audit of the California State Auditor for a period of three years after final payment is made to Contractor by City under this Contract. Any such examination and audit will be confined to those matters connected with the performance of this Contract.

**5-1.30A Inspection:** Contractor shall bear all costs associated with the re-inspection of any defective, rejected or unauthorized work as determined by the Engineer in Engineer's sole discretion. Such costs of re-inspection, including any costs incurred by the City for additional staff time or fees for third-party consultant inspectors, will be deducted from one or more progress payments hereunder.

**5-1.36A Property and Facility Preservation:** Attention is directed to Section 5-1.36 of the Standard Specifications.

At Contractor's sole expense, all fences, gates, landscaping, drainage ditches, sidewalks, irrigation systems, and any other improvements that are damaged, removed or destroyed because of Contractor's operations, shall be replaced in accordance with City Standards at a minimum and restored to the same or better condition. Concrete surface treatment and score marks shall match adjacent existing concrete improvements.

**5-1.36E Obstructions:** Attention is directed to Section 5-1.36 of the Standard Specifications and to the possible existence of underground gas mains, high voltage lines, telephone ducts, storm drains and water and sewers systems, the locations of which are not shown on the Project Plans. The determination of the location of these facilities and the cost of repair or replacement in the event of damage to such facilities are the sole responsibility of Contractor.

Should Contractor alter any public utility or private improvements to facilitate its operations or for its sole benefit, which alteration would not be otherwise required, Contractor shall make whatever arrangements are necessary with the owner or controlling authorities and shall bear all expenses in connection therewith. Any damages to any public utility or private improvement caused by Contractor shall be repaired by Contractor at its sole expense and to the full satisfaction of the Engineer or the controlling authority.

Any subsurface information and data furnished under any part of this Contract are not intended as a representation or warranty but are furnished for information only. It is expressly understood that the City will not be responsible for the accuracy thereof or for any deduction, interpretation or conclusion drawn therefrom by Contractor. The information is made available so that Contractor may have ready access to the same information available to the City and is not part of this Contract.

PRIOR TO STARTING ANY EXCAVATION, CONTRACTOR SHALL (AT LEAST TWO WORKING DAYS IN ADVANCE) CALL UNDERGROUND SERVICE ALERT (USA) toll free at (800) 227-2600 and provide USA with all necessary data relative to the proposed excavation. USA will accept calls

and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m., calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours, and on Saturdays, Sundays and holidays, Contractor shall contact the owner of the affected facility.

Contractor shall coordinate all work with the appropriate City field personnel. When City work forces are required at the job site to perform Contract items of work, Contractor shall give a minimum of two working days advanced notification to the appropriate field office:

Water Division:	(707) 543-4200
Sewer Division:	(707) 543-4200
Street Division:	(707) 543-3880
Survey Division:	(707) 543-3834

**5-1.43 Potential Claims and Dispute Resolution:** "Claim" means a separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City under the Contract; (B) Payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; or (C) Payment of an amount that is disputed by the City.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed, provided, the parties may extend the 45 day time period by mutual agreement.

If the City needs approval from the City Council to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the Claim, and the Council does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim, the City shall have up to three days following the next duly publicly noticed meeting of the City Council after the 45-day period, or extension expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion.

Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, the Claim shall be deemed rejected in its entirety.

If a Contractor disputes the City's written response, or if the City fails to respond to a Claim within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall conduct a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the Claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

## 6 CONTROL OF MATERIALS

**6-2.01 Source of Supply and Quality of Materials:** All materials required to complete the work under the Contract shall be furnished by Contractor and shall be free of hazardous substances.

**6-3.01 General:** Statistical means will not be used by the City for determination of Standard Specification compliance. Whenever both operating range test results and Contract compliance requirements are specified in these special provisions, the operating range requirements shall apply to the individual test results.

**6-3.01A Material Submittals:** Upon award of the Contract by City, Contractor shall submit to the Engineer a list of all materials proposed to be used on this project and any supporting documentation and/or samples required and source of supply.

For material listed on the "Engineer's List of Approved Items" which is located in the Sewer and Water sections only of the City Standards, the Engineer shall be provided with the name of the manufacturer and model/part number for all material proposed for this project, unless that item has been replaced as shown on the Project Plans or in the Invitation for Bids.

For all other materials used on this project, regardless of the type of work, Contractor shall provide to the Engineer the name of the manufacturer and model/part number along with supporting documentation and/or samples that will allow the Engineer to determine the material's acceptability.

The Engineer reserves the right to reject any proposed material, whether on the City's "Engineer's List of Approved Items" or not. If the City obtains information indicating that a listed item is not performing satisfactorily or is found to be defective, that item will be rejected and Contractor shall submit a replacement for review at no additional cost to the City.

**6-3.01B Material Guarantee:** Before any contract is awarded, the bidder may be required to furnish samples of materials and detailed descriptions of equipment to be used in the construction of the project. The materials samples may be subjected to the tests provided for in the Standard Specifications or in this Invitation for Bids to determine their quality and fitness for the project. The successful bidder shall unconditionally guarantee project materials and workmanship for a period of one year from the date of recording of the Notice of Completion. The guarantee shall cover 100% of all costs of repairs within the one year period, including all costs of labor, materials, equipment, and incidentals. Except as may be otherwise provided in Section 3-1.05, the successful bidder shall provide a surety bond executed by a corporate surety authorized and admitted to transact a surety business in the state of California in the minimum amount of one-half of the Contract price to cover this guarantee.

**6-3.05 Quality Assurance:** California Test 216 (Relative Compaction) testing will be modified as follows: A mechanical compactor (Ploog Engineering Co. Model M 100 or equivalent) with 10-pound hammer and split compaction molds shall be used in lieu of the specified manual compaction equipment.

California Test 231 (Nuclear Gage Determination of In-Place Density) will be modified as follows: In-place density and relative compaction may be determined on the basis of individual test sites in lieu of the area concept, at the discretion of the Engineer.

### **6-4 Water Utility**

**6-4.01A Construction Water:** All water required for the performance of the work shall be provided by Contractor. Prior to obtaining water from the City's water system, Contractor shall obtain a Water

Use Permit from the City of Santa Rosa Water Department and rent a hydrant or bridge meter. Contractor is responsible for the cost of all water and the cost of all deposits, permits and fees.

Contractor is prohibited from operating gate valves or fire hydrants on the City system.

The acquisition of water from the City's water system through un-metered hydrants or other facilities is a violation of City ordinance and State law. The use of water from sources other than the City's water system must be approved by the Engineer in advance of the use.

Citations and fines will be levied for violation of these and other utility regulations and deductions will be made from payments consistent with Section 7-1.02A(1) of the Standard Specifications.

**6-4.01B Water Utility Notification:** Contractors or parties requiring work of any kind by the City of Santa Rosa Water Department forces shall request such services a minimum of 48 hours in advance of the time such services are desired. Work requests which will involve the City of Santa Rosa Water Department forces for more than eight hours or an extensive number of City parts shall be requested a minimum of seven calendar days in advance.

If it is necessary to terminate or disrupt utility service to any customer, Contractor shall make the request for such work by City forces an additional 72 hours (three additional working days for a total of five working days advance notice) in advance of the time such services are desired to allow affected customers a minimum of 72 hours' notice. Contractors who fail to keep field appointments will be billed for scheduled City of Santa Rosa Water Department crew standby time which was used and the Contractor shall bear the costs incurred by the City of Santa Rosa's Water Department for re-notification of customers.

City of Santa Rosa Water Department crews work a 9/80 schedule. This schedule may prohibit shutdowns for tie-ins on alternating Fridays. After hours work or weekend work may be performed if prior authorization from the Engineer is obtained.

Other than the hours specified in this Invitation for Bids, requests by Contractor for after hours or weekend work is to be avoided whenever possible. Any overtime costs incurred by City for such work shall be borne by Contractor.

Interruption of utilities service to commercial customers shall be coordinated with the customer to minimize disruption to the enterprise to the greatest extent practicable. After notification by the Contractor of the need, the City of Santa Rosa Water Department will contact all commercial customers and inform Contractor accordingly.

**6-4.01C Water Facility Damage:** All damage caused to the City's water system shall be immediately reported to the Engineer.

Damage caused to the City's water system by Contractor's operations shall be repaired by the Contractor at Contractor's sole expense in a manner satisfactory to the City of Santa Rosa Water Department. Such repairs shall not be charged to the City or any City project. All repair work shall be witnessed and approved by the City of Santa Rosa Water Department prior to backfilling the excavation. The City will require re-excavation if backfilling occurs prior to inspection, which costs shall be borne by Contractor.

Contractor is responsible for, at its sole cost and expense, the repair and remediation of damage to property and facilities caused by any of the following circumstances:

- a. Contractor fails to make a written request for a markout or begins excavation without providing the City of Santa Rosa Water Department a reasonable opportunity to mark facilities;

- b. Contractor destroys markouts;
- c. Contractor fails to perform hand digging or probing for utilities near markouts; or
- d. Contractor fails to use reasonable caution, regardless of whether markouts are present or clear. Reasonable caution includes any efforts to avoid damaging existing facilities, such as when excavating in the vicinity of water mains.

City may, in its discretion, opt to make the repairs for which Contractor is responsible with its own forces. In such cases, the repairs will be made at Contractor's expense in accordance with the emergency repair rate schedule of the City of Santa Rosa Water Department. The City may make repairs whenever restoration of service requires extraordinary speed or special equipment. Contractor will be billed accordingly and City shall have the right and option to withhold payment hereunder, or a portion thereof, for any such costs billed but not promptly paid by Contractor.

**6-4.02 Salvage:** All valves, hydrants, and other appurtenances of the water system that are the property of City and removed by Contractor shall be delivered to the City's Municipal Services Center (55 Stony Point Road) unless Contractor has obtained specific written approval from the City of Santa Rosa Water Department to otherwise dispose of the materials.

**6-4.03 Trade Names and Alternatives:** Unless otherwise specified, material and equipment specifications that identify a particular patent, trade name or manufacturer, may be satisfied through substitute materials and equipment accepted by the City. Contractor may offer substitute materials and equipment of equal or better quality to the City. Any such offer shall be made in writing to the Engineer at least four weeks in advance of the time Contractor wishes to order the materials or equipment. Contractor shall include sufficient data which, together with any other information the Engineer may require, will enable the Engineer to determine the acceptability of the materials and equipment. When the substitute materials or equipment necessitate changes to any part of the work, the information shall include drawings and details showing all such changes and Contractor shall perform these changes as a part of any acceptance of substitute materials or equipment. The use of substituted materials and equipment will be permitted only after written acceptance of the materials and equipment by the Engineer. Such acceptance shall not relieve the Contractor from full responsibility for the sufficiency, quality and performance of the substitute materials and equipment.

The City will not, under any circumstances, acknowledge or consider any offers to accept substitute materials or equipment between the dates of public notice of advertisement and the bid opening.

## 7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

**7-1.02A(1) Forfeitures for Health and Safety Violations:** Contractor shall comply with all applicable provisions of the Santa Rosa City Code and any failure to do so shall constitute a breach of the Contract. In the event of any violation of the Santa Rosa City Code that may impact public health and safety, including, but not limited to Chapter 17-12, "Storm Water" and Chapter 13-04, "Street Encroachments," City shall have the right to impose a charge against Contractor in an amount equal to \$500.00 per violation per day. Prior to the imposition of any charge hereunder, City shall first provide a written notice to Contractor of the violation and setting forth a reasonable period of time for Contractor to cure the violation(s). In the event Contractor fails to cure any such violation within the time provided, City shall have the right, in addition to all other rights and remedies available to City, to deduct and withhold as a permanent forfeiture by Contractor the appropriate amounts from any payment otherwise due Contractor under this Contract.

**7-1.02K(2) Wages:** Pursuant to Labor Code sections 1770 *et seq.*, each laborer or mechanic of Contractor or any subcontractor engaged in work on the project under this contract shall be paid not less than the hourly wage rate of per diem wages set forth in the prevailing wage rate schedule published by the Director of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any subcontractor and such laborers and mechanics. A copy of the schedule of prevailing wage rates can be obtained online at [www.dir.ca.gov](http://www.dir.ca.gov) or from the Department of Transportation and Public Works at 69 Stony Circle, Santa Rosa.

Any laborer or mechanic employed to perform work on the public works project under this Contract, which work is not covered by any of the foregoing classifications, shall be paid not less than the prevailing wage rate of per diem wages specified herein for the classification which most nearly corresponds to the work to be performed by the worker.

The foregoing specified prevailing wage rates are minimum rates only, and Contractor may pay any wage rate in excess of the applicable rate.

Pursuant to Labor Code Section 1775, Contractor as a penalty to the owner shall forfeit not more than \$200.00 for each calendar day, or a portion thereof, for each worker paid less than the prevailing wage rate established by the Department of Industrial Relations for such work or craft in which such worker is employed. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage rate shall be paid to each worker by Contractor.

Contractor shall only provide prevailing wage reports upon written request from City. When requested, these prevailing wage reports must be redacted by the Contractor prior to providing them to City.

**7-1.02K(4) Apprentices:** Contractor agrees to comply with Chapter 1, Part 7, Division 2, sections 1777.5 *et seq.* of the California Labor Code. These sections require contractors and subcontractors to employ apprentices in apprenticeable occupations in a ratio of not less than one hour of apprentice work for each five hours of journeyman work (unless an exception is granted in accordance with Section 1777.5), and the contractors and subcontractors shall not discriminate among otherwise qualified employees as apprentices solely on the ground of sex, race, religion, creed, national origin, ancestry, or color. Only apprentices as defined in Labor Code section 3077, who are in training under apprenticeship standards and who have written apprentice agreements will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprenticeable occupations.



**7-1.02K(6)(a)(1) Notice to Vendors:** Attention is directed to the current OSHA Standards. All equipment, tools and materials which are furnished and/or installed as part of this Contract shall meet or exceed the aforementioned standards in order to be considered acceptable.

**7-1.02K(6)(b) Excavation Safety:** When the digging or excavation occurs during project construction, Contractor shall:

- a. Promptly notify City in writing of the following conditions before any such conditions are disturbed:
  1. Material that the Contractor believes may be hazardous waste as defined in Health and Safety Code section 25117 that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law;
  2. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
  3. Physical conditions at the site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in the type of work under the Contract.
- b. The City will investigate the conditions and will issue a change order under the terms of the Contract if it finds that the conditions warrant it.
- c. If a dispute arises between City and Contractor as to whether a change order is warranted, Contractor shall not be excused from any scheduled completion date provided for in the Contract but shall proceed with all work to be performed under the Contract.

**7-1.02K(6)(b)(1) Trench Excavation Safety Plans:** When the estimated cost for the excavation of any trench or trenches five feet or more in depth will exceed \$25,000.00, Contractor shall submit to the Engineer in advance of excavation a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards established by the construction safety orders, or if the trench is anticipated to be greater than 20 feet, the plan shall be prepared by a registered civil or structural engineer.

A permit to do the above described work shall be obtained from the State of California, Division of Industrial Safety. Proof of such permit shall be submitted to the Engineer prior to starting the trench work.

Full compensation for complying with the provisions of this section shall be considered as included in the Contract price and no additional allowance will be made for the work.

**7-1.02K(6)(d) Confined Space Safety:** Any confined space entry for this project, including but not limited to manhole or water storage tank entry, will require a confined space entry permit pursuant to Cal/OSHA regulations as set forth in title 8 California Code of Regulations (CCR) sections 5157 or 5158. Confined space entry shall have the meaning ascribed in title 8 CCR sections 5157 and 5158. For any confined space entry for construction operations regulated by title 8 CCR section 1502, Contractor shall comply with title 8 CCR section 5158, "Other Confined Space Operations." For any other confined space operations, Contractor shall comply with title 8 CCR section 5157, "Permit-Required Confined Spaces."

Attention is directed to the technical specifications in the Special Provisions for information regarding entry to any City maintained confined space. Pursuant to title 8 CCR section 5157, Contractor is required to obtain any available information regarding hazards and operations for any City maintained confined spaces. The City maintained Confined Space Entry Manual is available

for viewing at the City of Santa Rosa Water Department or Transportation and Public Works Department office at 69 Stony Circle, Santa Rosa.

Contractor shall immediately inform the Engineer of any previously unidentified hazards confronted or created during confined space entry.

**7-1.02L(2)(a) Patents and Royalties:** All fees, royalties, or claims for any patented invention, article, process or method that may be used upon or in any manner connected with the work under this Contract shall be paid by Contractor. Contractor and its sureties shall protect and hold harmless City and its officers, agents, and employees from any and all demands made for such fees royalties or claims brought or made by any third party, and before the final payment is made on the account of the Contract, Contractor shall, if requested by City, furnish acceptable proof of a proper release from all such claims and liabilities.

Should Contractor, its officers, agents, or employees, or any one of them be enjoined from furnishing or using any invention, article, material, or plans supplied or required to be supplied or used under the Contract, Contractor shall promptly substitute other articles, materials, or appliances in lieu thereof of equal efficiency, quality, finish, suitability, and market value, and satisfactory in all respects to the Engineer. In the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use any such invention, article, materials, or plans as may be required to be supplied by the Contract, Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary for City, its officers, agents, and employees, or any one of them to use such invention, article, materials, or appliance without being disturbed or in any way interfered with by any proceeding in law of equity on account thereof. Should Contractor neglect or refuse to make the substitution promptly or to pay such royalties and secure such licenses as may be necessary, then in that event the Engineer shall have the right to make such substitutions or City may pay such royalties and secure such licenses and charge Contractor even though final payment under the Contract may have been made.

**7-1.02M(3) Mined Materials:** California Public Contract Code section 20676 prohibits surface mining operators which are subject to the Surface Mining and Reclamation Act of 1975 (SMARA) from selling California mined construction material to the City unless the operator is identified in a list referred as the **3098 List**. The List, which is maintained by the Department of Conservation's Office of Mine Reclamation (OMR), changes throughout the year and can be viewed at the OMR website: [http://www.consrv.ca.gov/OMR/ab\\_3098\\_list/index.htm](http://www.consrv.ca.gov/OMR/ab_3098_list/index.htm). To confirm whether or not a specific operator is on the List at any given time, Contractor shall call the OMR at (916)323-9198.

**7-1.03A Maintaining Traffic:** Attention is directed to Sections 7-1.04 of the Standard Specifications and to the following modifications thereof.

If construction is within City owned right-of-way, provisions shall be made for the safe passage of public traffic through the work site at all times consistent with the requirements of Santa Rosa City Code Chapter 13-04.

Except for projects to be performed under a minor contract, Contractor shall install and maintain project identification signs at each end of the project or as directed by the Engineer two weeks prior to any construction activity. City shall furnish the appropriate sign panels upon request from Contractor. To mount the sign panels, Contractor shall furnish and install 4" X 4" posts or mount by other appropriate methods as approved by the Engineer. These sign panels shall be returned to the City Corporation Yard at 55 Stony Point Road after completion of the project.

Two weeks prior to any construction activity, advance notice signs for road closures shall be furnished and installed by Contractor at each end of the project and shall remain in place throughout the duration of the subject closure. Details of panel construction and lettering shall be approved by the Engineer.

Contractor shall furnish, install, and maintain at its expense all barricades, signs, lights, and other devices necessary to adequately warn of any obstructions to the traveled and pedestrian way and provide flaggers as necessary for the safety of public traffic and pedestrians and to provide access to property adjacent to the work site and Contractor shall comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101, *et seq.*) (ADA) and any regulations and guidelines issued pursuant to the ADA.

Contractor shall comply with the current edition of the California Manual of Uniform Traffic Control Devices (CA MUTCD) for all items related to traffic within the work site.

Rain and other occurrences that may cause the suspension or delay of the work shall in no way relieve Contractor of its responsibility to provide traffic control and public access through the work site as specified herein. At all times, Contractor shall keep at the work site such materials, forces and equipment as may be necessary to keep roads, streets, and driveways within the work site open to traffic and in good repair and shall expedite the passage of such traffic, using such forces and equipment as may be necessary.

Should Contractor fail, in the opinion of the Engineer, to provide all the materials, forces and equipment necessary to maintain traffic through the work site as set forth herein, City may take steps necessary to remedy any such failure, including but not limited to causing such work to be performed and/or suspending any further work under the Contract. Any such remedial cost and expense incurred by the City, plus an administrative charge of 15%, shall be immediately due and payable by Contractor and may be deducted from any amounts owed to Contractor hereunder. In the event there are insufficient sums owed to Contractor hereunder to cover the foregoing costs and charges, City shall have the right to pursue any other remedy to recover the same, including but not limited to, proceeding against any surety or bond in favor of City. City's rights under Section 7-1.02 are intended to be in addition to and not in lieu of any charges imposed by City against Contractor under Section 7-1.02A(1) above for violations of the Santa Rosa City Code.

Contractor shall be responsible for informing emergency response agencies operating within the area of the work of obstructions to either public or private roads caused by reason of Contractor's operations hereunder.

Contractor shall make provisions for the safe passage of pedestrians around the project work site at all times.

## 8 PROSECUTION AND PROGRESS

**8-1.01A Assignments:** Once awarded, this Contract shall not be transferred, assigned, or sub-contracted, except as herein expressly provided without the prior written consent of the City in the City's sole and absolute discretion. See Section 5-1.12 of the Standard Specifications.

**8-1.04B Standard Start:** Contractor shall begin work within ten calendar days after the date authorized in the Notice to Proceed and shall diligently prosecute the Contract to completion before the expiration of:

### 110 WORKING DAYS

**8-1.05 Time:** Working days will be counted beginning with the day the Contractor begins work or with the tenth day after the date authorized in the Notice to Proceed, whichever occurs first.

Unless otherwise directed by Engineer, Contractor shall not conduct any activities that generate noise earlier than 7:00 a.m. or later than 7:00 p.m.

**8-1.10 Liquidated Damages:** Contractor hereby agrees that Contractor shall pay to the City liquidated damages for each and every calendar day delay over and above the number of working days prescribed above for finishing the work in the amount shown in Section 8-1.10 of the Standard Specifications.

## 9 MEASUREMENT AND PAYMENT

**9-1.04 Force Account Work:** All work done on a force account basis shall be recorded daily on report sheets prepared by Contractor and signed by both the Engineer and Contractor. Such reports shall thereafter be considered the true record of force account work performed during the project. Such reports shall be furnished to the Engineer and a copy retained by Contractor.

All extensions of labor, equipment, and material costs shall be completed by Contractor and submitted to the Engineer within 30 days of the completion of the extra work. Completed and extended extra work reports received later than the times herein prescribed may be deemed invalid and rejected without payment at the discretion of the Engineer.

**9-1.07 Payment Adjustments For Price Index Fluctuations:** Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

**9-1.16 Progress Payments:** Once each month for progress pay purposes, the City will prepare a written estimate of the total amount of completed work and accepted materials purchased by Contractor but not installed. The City shall retain five percent of such estimated value of the completed work and the unused materials and pay Contractor the balance after deducting all previous payments and all sums to be retained under the provisions of the Contract. No such estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the Contract or when, in the Engineer's judgment, the total value of the completed work since the last estimate is less than \$500.00. No such estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

After Contract acceptance, the Engineer will prepare a written proposed final estimate of the proposed final quantities of work completed under the Contract and the value of such work and will submit such estimate to Contractor. The City shall retain five percent of such estimated value of the work done and shall pay to Contractor the balance after deducting all amounts to be retained under the provisions of the Contract.

The City may, at its option and at any time, retain out of any amounts due Contractor sums sufficient to cover any unpaid claims of City or others, provided that sworn statements of all non-City claims shall have been filed with the Director of Finance.

**9-1.16E(6) Substitution of Securities for Withheld Amounts:** Pursuant to Public Contract Code section 22300, securities may be substituted for any moneys withheld by City to ensure performance under this Contract, provided that substitution of securities provisions shall not be required in contracts in which there will be financing provided by the Farmer's Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (7 USC sections 1921 *et seq.*), and where federal regulations or policies or both do not allow the substitution of securities. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally chartered bank as the escrow agent, which shall then pay such moneys to Contractor. The Director of Finance is authorized to execute substitution of securities agreements on behalf of the City. The City will return the securities to Contractor upon satisfactory completion of the Contract as determined by City in its sole discretion and the resolution of all outstanding claims against the securities. Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit or any other security mutually agreed to by Contractor and the

City, provided that the substituted security is equal to or not less than five percent of the Contract amount.

Security substitutions must be submitted by Contractor and approved by City prior to the time of the first progress payment to be made under the Contract. No other method of substituting securities for retention will be accepted. The security substitution shall be done only upon execution of an agreement satisfactory to City which includes the following provisions:

- a. The amount of securities to be deposited;
- b. The terms and conditions of conversion to cash in case of the default of Contractor; and
- c. The procedure for return of securities upon completion of the Contract.

**9-1.17D Final Payment and Claims:** The processing of payment of the final estimate shall not be commenced less than 35 days after the date of recording of the Notice of Completion with the County Recorder's Office. Contractor is advised that it takes approximately ten days for a check to be issued following a request for payment.

Contractor shall submit its written statement of all claims for additional compensation under the Contract to the Engineer within 15 days after submission to Contractor of the proposed final estimate.

If Contractor does not file a claim within the 15 day period, or upon Contractor's approval, the Engineer will issue a final written estimate and the City shall pay to Contractor the entire sum due after deducting all previous payments, if any, and all amounts to be retained under the provisions of the Contract.

If Contractor files a claim within the 15 day period, the Engineer will furnish a semi-final estimate and pay the amount due under the semi-final estimate within 30 days. The semi-final estimate is conclusive as to the amount payable except as may be affected by claims and any amount retained. The Engineer shall then consider and investigate such claim and shall make such revision in the final quantities as the Engineer may find to be due and shall then make and issue a final written estimate. The City will pay the amount due, after deducting all previous payments, if any, and amounts to be retained under the provisions of the Contract.

Any and all prior partial estimates and payments shall be subject to correction in the final estimate and payment.

The final estimate shall be conclusive and binding against both parties to the Contract on all questions relating to the performance of the Contract and the amount of work done thereunder and compensation therefor, except in the case of gross error.

**9-1.17D(3) Final Determination of Claims:** Claims filed by Contractor shall be in sufficient detail to enable the Engineer to determine the basis and amount of the Claims. Contractor shall also furnish reasonable documentation to the City to support Claims. If additional information is required by the Engineer, Contractor shall provide such information to the Engineer no later than the 15<sup>th</sup> day after receipt of the written request from the Engineer. If the 15<sup>th</sup> day falls on a weekend, holiday, or day City offices are closed, then the information shall be provided to the Engineer no later than close of the next business day. Failure to submit the requested information to the Engineer within the time specified will be sufficient cause for denying the Claim.

Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated Claim investigator or auditor shall have access to those records and any other records as may be reasonably required by the Engineer to determine the facts or contentions in each Claim. Failure to grant access to such records shall be sufficient cause for denying the Claims.

**9-1.22 Arbitration:** Any references to Arbitration in the Standard Specifications are deleted in their entirety.



## Technical Specifications

### (Special Provisions)

for

### Slater Street & Lewrosa Way Sewer and Water Main Replacement Project

Contract No. C00189

June 2021

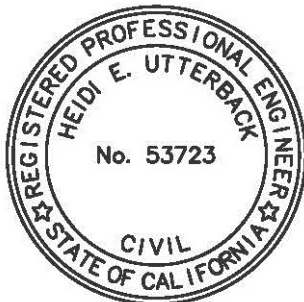
Prepared By:

*Heidi E. Utterback*

Heidi E. Utterback, RCE 53723

06/01/21

Date



**COASTLAND**

1400 Neotomas Avenue  
Santa Rosa, CA 95405  
(707) 571-8005

## 10 GENERAL CONSTRUCTION

**10-3 Mobilization:** Mobilization shall conform to Section 9-1.16D(2) of the Standard Specifications, and any modifications herein.

Mobilization shall include the obtaining of all permits; moving onto the site of all equipment and materials; and other construction facilities as required for the proper performance and completion of the work. Mobilization shall include demobilization as defined herein.

Mobilization shall include but not be limited to the following principal items:

- Preparation of Contract by the Contractor.
- Completion of all tasks and submittal of all documents (bonds, insurance, schedule, etc.) required as conditions of issuing the Notice to Proceed.
- Obtaining all required permits.
- Installation of project identification signs per Section 7-1.03A of these Technical Specifications. The Contractor shall consult with the Engineer for placement.
- Installing temporary construction water supply, power, wiring, and lighting facilities, as required at individual sites.
- Providing field office trailers if needed by the Contractor.
- Moving onto the site of all Contractor's equipment required for operations.
- Having all OSHA required notices and establishment of safety programs.
- Attendance at Pre-Construction Conference of Contractor's principal construction personnel.

Demobilization shall include, but not limited to, removal of all equipment, unused materials, all temporary utilities, job trailers and all temporary communication facilities.

**10-3.02 Payment:** Full compensation for Mobilization shall be considered as included in the prices paid for the **various contract items** of work involved, including demobilization, and no additional compensation will be allowed therefor.

**10-5 Dust Control:** Dust Control shall conform to Section 10-5 of the Standard Specifications, and any modifications herein.

1. All dust-producing work and unpaved construction sites shall require, at a minimum, watering in the late morning and at the end of the workday; the frequency of watering shall be increased if dust is mobilized by wind or construction activities. Watering shall not produce runoff.
2. Contractor shall maintain dust control to the satisfaction of the City Engineer, 7-days a week, 24-hours per day.
3. At the end of each workday the Contractor shall thoroughly sweep the work zone and remove any debris. Daily sweeping shall be performed in such a manner as to minimize airborne dust.
4. At the Engineer's discretion additional sweeping, watering or general site cleanup may be required, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place.

**10-8 Payment:** Full compensation for Dust Control shall be considered as included in the prices paid for the **various contract items** of work involved and no additional compensation will be allowed therefor.



# 12 TEMPORARY TRAFFIC CONTROL

## **12-1 General**

**12-1.01 General:** Construction area traffic control devices shall be installed and maintained in accordance with the applicable sections of these Technical Specifications., the Standard Specifications, the current Edition of the California Manual on Uniform Traffic Control Devices (CA MUTCD), the Americans with Disabilities Act (ADA) and as directed by the Engineer.

**12-1.03 Flagging Costs:** Section 12-1.04, "Payment," of the Standard Specifications is amended to read:

The cost of furnishing all flaggers, including transporting flaggers, to provide for passage of public traffic through the work under the provisions in Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," shall be considered as included in the contract lump sum price paid for traffic control and no additional allowance will be made therefor.

## **12-3 Traffic-Handling Equipment and Devices**

**12-3.01 General:** Prior to commencing construction which will affect existing vehicular and pedestrian traffic, the Contractor shall submit for review by the Engineer, Traffic Control Plans on 11" x 17" sheets of paper which contains only information specifically related to work zone vehicular and pedestrian traffic control. If the Contractor propose to use the current edition of the CA MUTCD published by Caltrans in lieu of a traffic control plan, in specific work operations, they shall submit in writing for consideration which Typical Application Diagram will be used and how it will be applied for each work operation. Traffic Control Plans or proposals shall be submitted for review at least two weeks prior to implementation.

Traffic Control Plans shall contain a title block which contains the Contractor's name, address, phone number, project superintendent's name, contract name, dates and hours traffic control will be in effect, and a space for review acknowledgment.

The content of the Traffic Control Plan shall include, but is not limited to, the following:

1. Show location and limits of the work zone.
2. Give dimensions of lanes affected by traffic control that will be open to traffic.
3. Indicate signing, cone placement, and other methods of delineation and reference to appropriate City or Caltrans Standards.
4. Dimension location of signs and cone tapers.
5. Identify side streets and driveways affected by construction and show how they will be handled.
6. Show how pedestrian traffic will be handled through the construction site. Pedestrian pathways through the work zone shall be in compliance with the requirements of ADA during and after work hours.
7. Identify message board locations. A minimum of 3 changeable message boards shall be required. Location to be determined by Engineer.
8. Demonstrate how two-way traffic will be maintained.

No work except for installation of project identification signs will be allowed to commence prior to approval of the Work Zone Traffic Control Plans.

## **12-4 Maintaining Traffic**

### **12-4.01 Maintaining Traffic:**

1. The full width of the traveled way shall be open for use by public traffic on Saturday, Sundays and designated legal holiday(s), after 4:00 p.m. on Fridays and the day preceding designated legal holidays, and when construction operations are not actively in progress; unless work has specifically been authorized by the Engineer.
2. The location of traffic control signing, barricades, and other facilities shall be monitored frequently (four to five times per day) by the Contractor to verify their proper location. All traffic signal and other traffic control devices shall be maintained at all times.
3. The Contractor shall conduct these operations so as to cause the minimum obstruction and inconvenience to traffic and to places of business, multiple dwelling units and residences adjacent to the work. The Contractor shall notify the Engineer of his planned work and utility service interruption at least five working days in advance to allow time to notify residents and businesses.
4. When construction activities will prevent vehicle access to individual driveways, the Contractor shall notify and receive permission from the affected businesses and residents. Attention is directed to Section 7-1.03, "Public Convenience." **Full access shall be provided to all driveways during non-working hours.**
5. At locations where traffic is routed perpendicular to trench excavation, the excavation shall be conducted in a manner to provide a surface reasonably satisfactory for traffic at all times. Substructure installation or construction shall be conducted on only one-half the width of the roadway at a time, and that portion of the roadway being used by traffic shall be kept open and unobstructed until the opposite side of the roadway is ready for use. Upon completion of the rough grading, the surface of the roadbed shall be brought to a smooth, even condition free from humps and depressions and made satisfactory for traffic.

**12-4.01A Construction Traffic:** The Contractor shall submit a trucking route along with the traffic controls plans for approval by the Engineer. The route must minimize traffic on residential streets that are not part of the project.

Existing pavement damaged by the Contractor's operations and not shown to be replaced shall be replaced at the Contractor's expense, per City Standards and to the satisfaction of the Engineer.

**12-4.02 Closure Requirements:** Attention is directed to Section 7-1.03, "Public Convenience," and Section 5-1.05, "Order of Work," of these Technical Specifications.

Exact locations of Project Identification signs and Advance Notice signs (7-1.03, "Public Convenience") shall be determined in the field by the Engineer.

Lane closures will be permitted between the hours of 8:30 a.m. and 4:00 p.m. only. Only one lane at a time may be closed and no lanes shall be closed at any other hours unless specifically approved by the Engineer. The Contractor shall maintain vehicle access to homes and other properties at all times while work is in progress.

The Contractor shall not park construction vehicles, contractor employee vehicles, stage materials or stockpiles in front of any business or residential driveway access and the Contractor shall maintain access to private parking lots within the block where work is in progress. Construction vehicles shall not be left running for any length of time if parked in front of a business or residential unit.

On identified local/residential streets, the Contractor will normally be allowed use of each block (between nearest intersections) for their sole use, without the need to provide 2-way traffic

through that block. The Contractor will be required to maintain vehicle access to homes and other properties within the block where work is in progress.

The Contractor shall keep the City of Santa Rosa Fire Department informed regarding the closure of any traveled way. At a minimum, the Contractor shall call the Fire Department at 543-3535 **and** the Communications Center at 543-3666 **daily** to report any traveled way closure. This means immediately upon closure for that day and again immediately after removal of the closure. For closures over multiple days, the daily notification still applies. This requirement does not apply for single lane closures on multiple lane streets.

The Contractor shall notify Sonoma County Transit at (707) 585-7516, Superintendent of Golden Gate Transit at (415) 257-4442, Santa Rosa City Bus at (707) 543-3922, Sonoma County Airport Express at (707) 837-8700, the local Postal Service at (707) 526-0113, and Recology at (800) 243-0291 5 calendar days prior to any lane closures or restrictions in turning movements.

If the Contractor has been given an approved Traffic Control Plan that includes road closures, they shall maintain vehicular access to homes and other properties where work is in progress within the closure area.

Where necessary, and only after receiving written approval from the Engineer, the Contractor may temporarily suspend curb side parking in their immediate work zone. Notification to businesses and residents shall be hand delivered at least 72 hours prior to construction in the affected areas.

Notification shall be as follows:

1. A notice placed on the front door of each home or business where curb side parking will be suspended and attempt made to notify each business or resident verbally that work will be underway within the block and that curb side parking will be suspended during stated working hours and request that vehicles be parked out of the roadway by 8:00 a.m. Service of notice shall not bar use of cars within the block, as individual plans change and emergencies arise.
2. Type 1 barricades every 100 feet adjacent to the curb where parking will be suspended with a notice posted on the barricade stating specific dates and times that curb side parking will be temporarily suspended. If work will not take place in the posted area, then the Contractor shall remove "No Parking" notices.

The Contractor shall maintain vehicle access to all homes and other properties along the work zone. During paving operations, the Contractor will be allowed to temporarily suspend vehicle access to a limited number of driveways when approved by the Engineer. When approved by the Engineer and at least 72 hours prior to suspending access to any driveway, the Contractor shall give both written and verbal notice to the affected businesses and residents and place barricades adjacent to the driveways with posted notices stating the specific dates and times of the suspension for that area. The notice shall also indicate an alternate parking location. Suspension of access to driveway will be permitted only as approved by the Engineer and only between the hours of 8:00 am and 4:30 pm.

Cross streets will require maintenance of at least one-half (1/2) width of each street for traffic purposes, unless a parallel route is approved by the Engineer. Flagging will only be allowed between the hours of 8:30 am and 4:00 pm.

Barricades and flaggers shall be positioned to allow safe turns at intersections and curves.

The Contractor shall maintain or provide traffic control as necessary and as directed by the Engineer for any project related operations that require the presence of City forces. Flaggers, barricades, signing, etc., shall remain in place for protection of City personnel until such time as all temporary lane delineation is complete.

## **12-4.04 Temporary Pedestrian Access Routes**

**12-4.04A(1) Summary:** The Contractor is directed to Chapter 6D, "Pedestrian and Worker Safety," in the CA MUTCD, the improvement plans, and these Technical Specifications.

Pedestrians shall be provided with a safe convenient and accessible path that, at a minimum, replicates the most desirable characteristics of the existing sidewalk, path or footpath. At no point along the road shall the sidewalks on both sides of the road be closed at the same time.

The Contractor shall construct and maintain temporary pedestrian pathways through the work zone, where required, that shall be in compliance with the requirements of the Americans with Disabilities Act (ADA), and the CA MUTCD.

Pedestrian routes shall not be impacted for the purposes of any non-construction activities such as parking of vehicles or equipment, or stock piling of materials. Pedestrians shall not be led into conflicts with work site vehicles, equipment, or operations.

Pedestrian routes shall be open and accessible at the end of the workday unless an alternate ADA compliant route has been approved by the Engineer. The construction of curb ramps and/or long sections of sidewalk do not alleviate the Contractor from this requirement.

## **12-9 Measurement and Payment**

**12-9.01 Payment:** **Traffic Control** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in **vehicular and pedestrian** traffic control, including but not limited to, providing, placing, maintaining, and removal of temporary paths and/or ramps, temporary relocation of regulatory signs, changeable message boards, project and public notification signs, flagging, excavation, compaction, furnishing, and placement of asphalt concrete and/or PCC, barricades, toe-rails, hand rails, complying with CA MUTCD Standards for Pedestrian Safety, coordination efforts and any other items necessary for vehicle and pedestrian traffic control not specifically enumerated in the plans or these specifications, and no additional allowance will be made therefor.

# 13 WATER POLLUTION CONTROL

## **13-1 General**

**13-1.01A Summary:** Water Pollution Control shall be performed in accordance with Section 13, "Water Pollution Control," of the Standard Specifications and these technical specifications. In addition, construction activities shall comply with:

1. The current California Water Quality Control Board, North Coast Region Order No. National Pollutant Discharge Elimination System Municipal Storm Water Permit, commonly referred to as the "Storm Water Permit." A copy of the Storm Water Permit is available for review at the City of Santa Rosa Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, CA, and at [www.srcity.org/stormwaterpermit](http://www.srcity.org/stormwaterpermit).
2. The California Stormwater Quality Association Storm Water BMP Handbook for Construction (CASQA Handbook) BMPs shall be selected, installed, and maintained in accordance with the latest edition. A copy of the handbook can be viewed at the City of Santa Rosa Department of Transportation and Public Works office at 69 Stony Circle or downloaded from CASQA, <http://www.casqa.org/>.

In this technical specification the CASQA Handbook BMP numbers are appended to the associated Standard Specification sections. If a conflict occurs the CASQA Handbook BMP's shall govern.

**13-1.01B Definitions:** **Construction phase:** The construction phase starts at the start of job site activities and ends at Contract acceptance.

**13-1.01C(4)(c) Water Quality Monitoring Reports:** The Contractor shall complete and sign the Storm Water Correction Notices (below) with the City as part of the Storm Water Permit.

# STORM WATER CORRECTION NOTICE

FAILURE TO CORRECT BY DUE DATE MAY RESULT IN STOP WORK NOTICE!

PROJECT NAME: \_\_\_\_\_

JOB ADDRESS: \_\_\_\_\_

PROJECT / PERMIT #: \_\_\_\_\_ DATE: \_\_\_\_\_

☐ No storm water deficiencies identified.

**I HAVE INSPECTED THIS PROJECT SITE. THE FOLLOWING ISSUES AND DEFICIENCIES HAVE BEEN IDENTIFIED AND REQUIRE CORRECTIVE ACTION:**

## STORMWATER BMPs:

- |   |  |                           |                         |
|---|--|---------------------------|-------------------------|
| <input type="checkbox"/> <b>Storm Drain Protection:</b> | Install                                      | Maintain                  | Replace                 |
| <input type="checkbox"/> <b>Perimeter Controls:</b>     | Install                                      | Maintain                  | Replace                 |
| <input type="checkbox"/> <b>Housekeeping:</b>           | Sweep  | Clean                     | Remove Garbage & Debris |
| <input type="checkbox"/> <b>Stockpiles:</b>             | Cover  | Perimeter Controls        | Remove                  |
| <input type="checkbox"/> <b>Debris Bins:</b>            | Cover  | Perimeter Controls        |                         |
| <input type="checkbox"/> <b>Tracking:</b>               | Clean-Up                                     | Install Tracking Controls |                         |
| <input type="checkbox"/> <b>Portable Toilet:</b>        | Secondary Containment Required               |                           |                         |
| <input type="checkbox"/> <b>Concrete:</b>               | Install BMPs for Pumper or Concrete Truck    |                           |                         |
|   | Cover / Maintain Concrete Washout Containers |                           |                         |
| <input type="checkbox"/> <b>Sediment &amp; Erosion:</b> | Install Appropriate Controls                 | Dust Controls             |                         |
| <input type="checkbox"/> <b>Other:</b>                  |  |                           |                         |

**\*ALL DEFICIENCIES MUST BE CORRECTED PRIOR TO NEXT RAIN EVENT OR NO LATER THAN DUE DATE, WHICHEVER IS SOONER.**

DATE REQUIRED (SEE NOTE\*): \_\_\_\_\_

INSPECTOR: \_\_\_\_\_ PH #: ( ) \_\_\_\_\_

CONTRACTOR SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**Inspection Type:** ☐ **Monthly** (Oct 1<sup>st</sup>-April 30<sup>th</sup>)

☐ **Deficiency Re-Inspection**

☐ **Pre-Rain** (Sept 1<sup>st</sup>-Oct 1<sup>st</sup>)

☐ **Following First 0.25" Rain**  
(within 2 business days)

## **13-2 Water Pollution Control Program**

**13-2.01B Submittals:** The program to control water pollution required to be submitted under this section of the Standard Specifications shall include a spill contingency plan that establishes clean-up procedures that will be followed in the event of a spill of potentially hazardous, toxic, or polluting materials.

**13-2.04 Payment:** The City pays the Contractor to prepare a Water Pollution Control Program as **lump sum** price for **Water Pollution Control**.

## **13-3 Storm Water Pollution Prevention Plan**

**13-3.01A Summary:** This project is exempt from the State Water Resources Control Board General NPDES Permit for the Discharge of Storm Water related to Construction Activities (Construction General Permit), and not required to have a Storm Water Pollution Prevention Plan (SWPPP), therefore Section 13-3, "Storm Water Pollution Prevention Plan," of the Standard Specifications does not apply to this project.

## **13-4 Job Site Management**

**13-4.03B: Spill Prevention and Control:** The Contractor shall also comply with CASQA Spill Prevention and Control (BMP WM-4). If a spill occurs at the construction site and the Contractor does not take immediate and adequate steps to contain and clean up the spill, especially if rain is threatening or if a discharge to a storm drain or creek could occur, the City shall have the right, in its sole and absolute discretion, to clean up the spill using City forces or an independent contractor. The cost of any such cleanup, in addition to recovery of any penalty or fine imposed upon the City, plus an administrative charge of fifteen percent (15%) of the costs incurred by the City, shall be deducted from any amounts owed to the Contractor hereunder.

In the event there are insufficient amounts owed to the Contractor hereunder to cover the foregoing costs and charges, the City shall have the right to pursue any other remedy to recover same, including, but not limited to, proceeding against any surety or bond in favor of the City. The City's rights under this section are intended to be in addition to and not in lieu of any imposed by the City against the Contractor for violations of City Code Chapter 17-12, "Storm Water."

**13-4.03C(3): Stockpile Management:** The Contractor shall also comply with CASQA Stockpile Management (BMP WM-3). Do not block storm water flows.

**13-4.03D(1): General:** The Contractor shall also comply with Waste Management/CASQA Solid Waste Management (BMP WM-5). The Contractor shall dispose of all trash, rubbish, and waste materials of any kind generated by the Contractor, subcontractor, or any company hired by the Contractor on a daily basis.

**13-4.03D(3): Concrete Waste:** The Contractor shall also comply with CASQA Concrete Waste Management (BMP WM-8). Ensure the containment of concrete washout areas and other washout areas that may contain pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

**13-4.03D(4): Sanitary and Septic Waste:** The Contractor shall also comply with CASQA Sanitary and Septic Waste Management (BMP WM-9). Sanitation facilities must be maintained periodically by a licensed service to keep them in good working order and prevent overflows. Portable toilets are required to have secondary containment.

**13-4.03D(5): Liquid Waste:** Liquid waste includes water generated from excavation dewatering. Minimize transfer piping by locating containers near the excavation to be dewatered while protecting the containers from moving vehicles and equipment.

Groundwater may be encountered during the course of excavation. If ground water is encountered, the Contractor shall immediately notify the City. The Contractor shall **remove all water** which accumulates in the excavation during the progress of work until the pipe or other structures are installed and until backfilling has progressed to a sufficient height to anchor the work against possible flotation or leakage. The Contractor shall have a minimum of 2 working pumps available for immediate use at all times.

Ground water will be stored and tested as required in Section 13-8. No groundwater encountered shall be pumped or otherwise discharged to any watercourse, storm drain system or ground surface.

For trench groundwater encountered along Slater Street between station 20+00 and 26+00 it has the potential to contain TCE and PCE contaminants and shall be pumped and discharged to a Baker Tank or similar vessel for storage and testing. The City will be available to conduct the EPA 8260 testing which includes TCE/PCE. If no TCE/PCE contaminants are found and all other constituents added together is less than 2.13mg/L the stored groundwater can be discharged into the City sanitary sewer in accordance with the Discharge Permit attached in Section A Fees and Permits of these Technical Specifications. If TCE/PCE are found or if all other constituents are greater than 2.13mg/L the Contractor shall filter and treat stored groundwater per Section 13-8 and shall coordinate with the City for retesting. Stored groundwater may only be discharged into the sanitary sewer upon the approval of the City Environmental Compliance personnel and when sediment and contaminant removal complies with City requirements. Attention is also directed to Section 13-8 Temporary Active Treatment System of these Technical Specifications.

**If any odor, sheen or other visual discrepancy is noted during excavation or discharge, stop pumping and immediately notify the Engineer.** Pumping may only continue if the discharge is re-routed to a Baker Tank or similar vessel for storage until the water can be characterized.

Contractor shall be responsible for constructing, operating and maintaining all necessary features to complete the work including furnishing, installing and maintaining all pumping and other equipment required to dewater any trenches containing water as may be encountered during performance of the work. Dewatering plan for each occurrence shall be approved by the Engineer prior to implementation. At the permanent conclusion of dewatering operations, all dewatering equipment shall be removed from the job site.

**13-4.03E(1): Water Control and Conservation:**

The Contractor shall also comply with CASQA Water Conservation Practices (BMP NS-1 and NS-2).

**13-4.03E(3): Vehicle and Equipment Cleaning:**

The Contractor shall also comply with CASQA Vehicle and Equipment Cleaning (BMP NS-8).

**13-4.03E(4): Vehicle and Equipment Fueling and Maintenance:**

The Contractor shall also comply with CASQA Vehicle and Equipment Fueling (BMP NS-9) and CASQA Vehicle and Equipment Maintenance (BMP NS-10).

**13-4.03E(7): Paving, Sealing, Saw cutting, Grooving, and Grinding Activities:** As listed in Part 9, sections 4 and 5 of the Storm Water Permit, the following additional BMPs shall be implemented for street paving, repaving, reconstruction, patching, dig-outs or resurfacing.



1. Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
2. Install BMPs at all susceptible storm drain inlets and manholes to prevent paving products and tack coat from entering
3. Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses
4. Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt
5. Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
6. Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled, or disposed of properly 13-4.03D(5)
7. Collect solid waste by shoveling and vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled, or disposed of properly 13-4.03D(5)
8. Cover "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm 13-4.03C(3)
9. Cover loads with tarp before haul-off to a storage site, ensuring that trucks are not overloaded
10. Minimize airborne dust by using water spray during grinding 14-9.03
11. Protect stockpiles with a cover or sediment barriers during a rain event and
12. Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses 13-4.03C(1)

**13-4.03F: Sweeping:** The Contractor shall also comply with CASQA Street Sweeping and Vacuuming (BMP SE-7).

**13-4.04 Payment:** Job Site Management shall be paid for at the contract **lump sum** price for **Water Pollution Control**.

### **13-6 Temporary Sediment Control**

**13-6.03C Temporary Drainage Inlet Protection:** The Contractor shall also comply with CASQA Storm Drain Inlet Protection (BMP SE-10).

**13-6.04 Payment:** Temporary Sediment Control shall be paid for at the contract **lump sum** price for **Water Pollution Control** which includes all maintenance costs.

### **13-8 Temporary Active Treatment System:**

**13-8.01A Summary:** Water removed from excavations in some areas may contain contaminants at levels requiring treatment prior to discharge.

**13-8.01C(2) Active Treatment System Plan:** The Contractor is responsible for having a minimum of two (2) 21,000 gallon nominal capacity, “closed top” type mobile storage tank(s) available if groundwater is encountered and ensure it is secure from public access. The storage tank(s) shall be filled to the manufacturer’s recommended maximum water surface level prior to filling any additional tanks. Unused tanks brought to the site shall be at the Contractor’s expense.

Submittals: In accordance with Section 13-8.01B(2) of the 2010 Standard Specification Contractor shall prepare a plan for the treatment of water containing TCE/PCE, including filtering and treatment of groundwater; and pumping required to fill and empty tanks.

Once water in any given tank has been sampled, no further uncharacterized water shall be pumped into the tank. The Contractor shall furnish a sufficient number of tanks on site at any given time to facilitate groundwater storage for continuous excavation operations as well as to for filtering and treating contaminated groundwater.

The tanks shall not encroach into any travel lanes and shall be restricted to no more than a period of 5 days at the same location.

**13-8.01D Quality Assurance:** The City will collect samples and perform the analytical testing of stored water.

**13-8.02D Quality Control:** Water removed from excavations shall be discharged to the publicly owned sanitary sewer under the conditions set forth in the discharge permit issued by the City, a copy of which is included in Section A, Fees and Permits, of these Technical Specifications.

**13-8.04: Payment:** **Furnish Storage Tanks** shall be paid for at the **monthly** cost for 2-21,000 gallon tanks. The provisions of Section 4-1.05 and 9-1.06, “Increased or decreased quantities of more than 25 percent,” of the 2010 Standard Specifications does not apply. Temporary Active Treatment System, except for furnishing tanks, shall be paid for at the contract **lump sum** price for **Storage, Treatment and Disposal of Ground Water** to and from a storage Tank which shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in removing tank(s), filtering and treating groundwater; performing all pumping required to fill and empty tank; coordination with City for testing and disposal of groundwater and no additional allowance will be made therefor. This item may be eliminated in its entirety based on field conditions, and no adjustment in the contract bid price will be made therefor. The provisions in Section 4-1.05 and 9-1.06 of the 2010 Standard Specifications shall not apply.

## 14 ENVIRONMENTAL STEWARDSHIP

### **14-9.03 Dust Control**

**14-9.03A General:** Sweeping per section 14-9.03C shall also be performed to prevent and alleviate dust.

Sweeping, covering stockpiles, applying water, and/or dust palliative, to control dust caused by public traffic is not change order work.

**14-9.03C Construction:** All dust-producing work and unpaved construction sites shall require a minimum watering in the middle and ending of each workday. The frequency of watering shall increase if dust is airborne. Watering shall not produce runoff.

Contractor shall maintain dust control to the satisfaction of the Engineer, 7 days a week, 24 hours per day.

At the end of each workday the Contractor shall thoroughly sweep all streets in the work zone to minimize airborne dust.

At the end of each work week the Contractor shall sweep all streets in the work zone with a commercial street sweeping truck equipped with a rear pick up broom.

At the Engineer's discretion additional sweeping or watering may be required, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place.

**14-9.03D Payment:** Full compensation for conforming to this section shall be considered as included in the prices paid for the **various contract items** of work and no additional compensation will be allowed.

**14-10.01 General:** The Contractor shall dispose of all portland cement concrete and asphalt concrete, generated from removal or demolition activities on the project, at a recycler for these materials.

All other excess materials from the project shall become the property of the Contractor and shall be disposed of by him, at his expense.

**14-10.02 Solid Waste Disposal and Recycling Report:** Submit a Solid Waste Disposal and Recycling Report prior to final acceptance of work performed under the Contract. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

Submit a Solid Waste Disposal and Recycling Report prior to Contract acceptance. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

The Contractor shall provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to a material recycler.

**14-10.03 Payment:** Full compensation for conforming to this section shall be considered as included in the prices paid for the **various contract items** of work and no additional compensation will be allowed.

## **14-11 Hazardous Waste and Contamination**

**14-11.07A General:** Based on communications with the Regional Water Quality Control Board, a portion of this project runs adjacent to or within an area that has contained subsurface TCE/PCE contamination.

The following files are on record with Regional Water Quality Control Board, located at 5550 Skylane Blvd., Santa Rosa (707) 576-2220:

600 Lewis Rd., Santa Rosa CA 95404

Excavation along Slater Street between station 20+00 and 26+00 have the potential to have groundwater and/or soil contamination.

The balance of the project limits contains no **known** subsurface TCE/PCE contamination, again based on communications with the Regional Water Quality Control Board.

The Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the City immediately upon discovery of any potential soil or groundwater contamination. The Contractor shall perform sampling and testing of the soil to determine the requirements for disposal of the material.

Upon the identification of contaminated material, the Contractor shall provide 40-hour OSHA-HAZWOPER certified workers in the contaminated area and provide a field Site Safety Officer that is also an 8-hour OSHA-HAZWOPER Supervisor trained to directly oversee the contaminated materials removal and handling operation. All workers in this circumstance must have their initial and annual renewal refresher training, medical clearance and personal protection equipment in accordance with 8CCR Section 5192.

**14-11.07B Transport and Disposal of Department-Generated Hazardous Waste:** Some soil from excavations on this project (along Slater Street between station 20+00 and 26+00) could be contaminated and shall be sampled, tested and transported to and disposed of at an approved landfill. For the area noted for potential contaminated soil, the Contractor shall take four (4) soil samples and have tested at laboratory. Laboratory analysis of the soil samples shall include: total petroleum hydrocarbons as gasoline, diesel, and motor oil by EPA Method 8015B; volatile organic compounds by EPA Method 8260B; and Title 22 Metals by EPA Method 6010/7470.

For areas where the laboratory analysis indicates contamination, the Contractor shall transport and dispose of the soil excavations at an approved landfill. The Contractor will furnish completely filled out hazardous waste manifests ready for the Engineer's signature.

The Contractor is responsible for disposal of contaminated soil, including trucking, disposal site fees, and additional testing if required by disposal sites. The Contractor shall comply with all disposal regulations, such as City, County, and/or State permits and licenses, as may be required.

Prior to disposal of any excess material from the work site, submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. The Contractor shall disclose in landfill applications the existing conditions and the written disposal and entry permission shall include acknowledgement of such disclosure.

The Contractor shall be responsible for separating asphalt, concrete, base rock, asbestos cement pipe, and other non-contaminated debris from the soil prior to loading the soil for transport to disposal sites. Dispose of asphalt, concrete, and base rock at a recycler of these materials as specified in Section 124 of these Technical Specifications. Dispose of asbestos cement pipe as specified in Section 15-2.02N of these Technical Specifications.

Within 5 business days of transporting Department-generated hazardous waste, submit documentation of proper disposal from the receiving landfill.

**14-11.08 Payment:** **Soil Sampling and Testing** shall be paid for at the contract price per **lump sum**, which price shall include full compensation for all work as specified herein including but not limited to extraction of soil samples, laboratory testing and analysis and no additional allowance will be made therefor.

**Contaminated Soil Disposal** shall be paid for at the contract price per **cubic yard**, which price shall include full compensation for all work as specified herein including but not limited to disposal of contaminated soil, trucking, disposal site fees, and additional testing if required by disposal sites and no additional allowance will be made therefor. This item may be eliminated in its entirety based on field conditions, and no adjustment in the contract bid price will be made therefor. The provisions in Section 4-1.05 and 9-1.06 of the 2010 Standard Specifications shall not apply.

## 15 EXISTING FACILITIES

**15-1.03A General:** Existing facilities disturbed by construction shall conform to the applicable provisions of Section 5-1.36A. All existing active utilities found to reside in excavated areas shall be supported in place with service maintained during construction. The Contractor shall be responsible for any damage caused by their operations and any needed repairs shall be completed to the Engineer's satisfaction.

Existing storm drains found to reside in excavated areas shall be supported, removed, or replaced at the Contractor's option and at no additional cost to the City. The Contractor shall be responsible for maintaining the existing line and grade of the storm drains. If the Contractor elects to remove and replace, it shall be done per applicable City Standards and Specifications.

Existing utility trenches and/or structures that are in close proximity to proposed trenches shall be safeguarded in an appropriate manner from damage.

**15-1.04 Payment:** Full compensation for supporting, removal and disposal of existing utilities and their appurtenances is considered as included in the contract prices paid for **various contract items** of work and no additional allowance will be made therefor.

**15-2.02C Traffic Stripes and Pavement Markings:** All traffic stripes, pavement markings or any other traffic markings shall be removed by the Contractor to the satisfaction of the Engineer and in accordance with Section 84 of the Standards and the Plans.

**15-2.02D Pavement Markers:** All raised pavement markers shall be removed by the Contractor to the satisfaction of the Engineer and in accordance with Sections 82 of the Standard Specifications, City Standards, and the Plans.

**15-2.02E Payment:** Full compensation for the replacement of all traffic stripes, pavement markings, and other traffic markings and all raised pavement markers disturbed by construction and not specifically shown to be replaced on the Project Plans shall be considered as included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

**15-2.02N Asbestos Cement Pipe:** The Contractor are advised that asbestos cement pipe (ACP) will likely be encountered on the project and must be cut, handled, and disposed of according to the Contractor's State Licensing Law and all other applicable laws and regulations.

**15-2.02O Payment:** Full compensation for the cutting, removal and disposal of asbestos cement pipe shall be considered as included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

## **15-2.10 Existing Frames, Covers, Grates, and Manholes**

**15-2.10A General:** Reset existing City facility boxes and lids to grade. The City will furnish at no cost to the Contractor new material to replace existing boxes and lids that do not comply with current City Standards or damaged prior to Contractor's operations.

**15-2.10B Adjust Frames, Covers, Grates, and Manholes:** Existing manhole frames and covers, valve boxes, mainline cleanouts and monuments adjusted to grade shall conform to City Standards. Existing water valve boxes to be adjusted to grade shall be replaced with new valve boxes, frames, and covers conforming to current City Standards.

The Contractor shall accurately locate and record the location of existing and new manholes, valve boxes, mainline cleanouts, and monuments to be adjusted to grade and shall furnish the Engineer a copy of said record prior to starting construction.

All facilities on active systems shall be accessible at all times to City personnel unless otherwise stated in these Technical Specifications or approved by the Engineer.

After placement of the finish course of asphalt concrete, the Contractor shall mark all overlaid manholes, valve boxes, mainline cleanouts and monuments, whether new or existing, with white paint by the end of that working day.

All new and existing manholes, valve boxes, mainline cleanouts and monuments shall be accessible within 48 hours after they are covered.

Final grade adjustments and installation of concrete collars shall be done on the same working day. Final paving around manholes, valve boxes, mainline cleanouts and monuments shall be completed the following working day.

All silt and debris shall be removed from finished structures. This shall include all existing silt and debris plus material caused by the Contractor's operation.

If new or existing water valve riser pipe needs to be extended after paving to conform to City STD-877, the Contractor shall use either a slip x slip glued PVC coupling or a transition coupling with sheer bands as directed by the Engineer. Upsizing the existing riser pipe to 8-inch will not be required unless otherwise directed by the Engineer. Any added extension must be a minimum of 12 inches. The lower section of riser pipe shall be adjusted to accommodate this requirement.

In the event that the Contractor encounters water valve boxes with round lids or sanitary sewer frame and covers with open pick holes which must be adjusted to grade. The Contractor is to provide a count to the Engineer a minimum of two days prior to paving to obtain replacements that complies with current City Standards. The City will provide replacements provided the Contractor is not required to replace them as part of the contract or due to damage by the Contractor's operations. Valve boxes and frames and covers on facilities to be abandoned shall not be included in the count provided to the Engineer. The Contractor shall be responsible for delivery of new frames, boxes, and covers from the City warehouse to the job site. Prior to removal of an existing manhole frame, a platform shall be constructed in the manhole above the top of the sewer to prevent any dirt or debris from falling into the sewer. The platform shall remain in place until all work on the manhole has been completed and the asphalt concrete has been placed around the manhole. Prior to the removal of the platform from the manhole, all dirt and debris shall be removed.

All grade rings shall be set in cement mortar the same day they are placed. All joints shall be smoothly plastered inside and out.

Existing grade rings removed in the adjustment of manhole frames shall become the property of The Contractor and if undamaged and thoroughly cleaned of mortar may be reused in the work. If not so used, they shall be disposed of away from the site of work at the Contractor's expense.

Manhole frames shall be reinstalled to align directly over the grade rings. Any frames misaligned by more than 1/2 inch shall be removed and reinstalled.

Existing Monuments adjusted shall conform to City Standards 280 to 284 and 78-2 Survey Monuments, of the specifications.

**15-2.10C Payment: Adjust Manhole to Grade** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all the work involved in adjusting manholes to grade, including but not limited to: required excavation and backfill; additional grade rings if required; furnishing location of manholes to be adjusted to grade; removing and delivering silent night frames and covers to the City MSC; and transporting new frames and covers to job site, as specified herein, and no additional allowance will be made therefor.

**15-2.10D Adjust Monitoring Well:** Existing monitoring wells shall be protected and maintained by the Contractor during construction. No backfill or other material shall be stockpiled over the well. Chemicals, solvents, or other volatile organic compounds shall not be used in the vicinity of the well. The Contractor shall maintain a clear area around the well and shall coordinate with and provide access to the well owner for groundwater sampling and for adjustment of the well head.

Monitoring well boxes within the limits of the area that will undergo reconstruction or receive an overlay shall be carefully removed and salvaged by the Contractor at the start of excavation or grinding operations. No monitoring well boxes shall be removed by the Contractor until one day prior to the start of the aforementioned activities. The Contractor shall carefully remove any remaining monitoring well boxes in such a manner as to ensure that no damage occurs to the well casings and shall protect the well casings during the excavation and paving operations. Prior to removing the well boxes, the Contractor shall accurately locate and record the location and elevation of the well and furnish the Engineer a copy of the record. Upon re-installation and adjustment of the well boxes to finish grade, the Contractor shall accurately record the elevation of the well and furnish a copy of the record to the Engineer.

**Adjust Monitoring Well to Grade** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in protecting existing monitoring wells and adjusting monitoring well boxes to grade, including riser pipe, grout, concrete collar, coordinating with and providing access to the well owner, excavation, backfill, removing silt and debris, as specified herein, and no additional allowance will be made therefor.

**15-3.03 Construction:** All removed concrete and asphalt concrete shall become the property of The Contractor and shall be immediately off-hauled. None of the removed concrete shall be dumped or stockpiled on the work site. The Contractor shall dispose of all removed concrete and asphalt concrete at a recycler for this material. Burying of broken concrete or asphalt concrete within the limits of the project will not be allowed.

All concrete which is to be removed from sidewalk, curb, gutter and driveway areas shall be removed to the nearest score mark or construction joint as directed by the Engineer unless otherwise noted on Project Plans. The edge of existing concrete to remain shall be neat and free of defects. Saw cutting may be required to achieve this.

Concrete removal includes removal of any reinforcing steel embedded in the concrete and no additional allowance will be made for the removal of such steel.



Aggregate base shall be removed as required to accommodate the proposed improvements.

Irrigation facilities may be encountered during concrete removal and replacement. The Contractor shall exercise care in this area and repair any damage done by their operations at no additional cost to the City.

Landscaping and other surfaces or structures damaged or destroyed during the removal of existing concrete or asphalt concrete shall be restored to original condition at no additional cost to the City. Your attention is directed to Section 5-1.36A "Property and Facility Preservation" of these Technical Specifications.

**15-3.04 Payment:** Payment for saw cutting, removal and disposal of concrete sidewalk, curb and gutter, driveway areas, and valley gutters shall be included in the contract prices paid for **various contract items** of work and no additional allowance will be made therefor.

Full compensation for repair of existing irrigation facilities damaged during any phase of the work shall be included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

**15-7 Utility Clearances:** *All items noted in this Section shall take place prior to any other construction activities.*

Pothole information provided on the Project Plans shall be for reference use only and shall not be considered as accurate information for any other areas within the project limits.

The Contractor shall investigate, confirm and/or determine the exact locations of existing utilities, and verify clearances between existing and proposed utilities at crossings and/or known potential conflicts. The Contractor shall determine elevations and alignments of existing utilities at connection points.

The Contractor shall determine elevations and alignments of existing sewer laterals, at the back of sidewalk, if a new proposed sewer main is at a higher elevation than the existing sewer main.

*The Contractor shall provide all relevant information in writing to the Engineer immediately upon discovery of any conflict. Any delay in notification to the Engineer may delay direction and/or corrective action and a delay claim due to this reason shall not be considered by the City. The Contractor shall not proceed with any work that is in conflict until direction is provided by the Engineer and shall redirect crews to other contract work. All the information required to be obtained per this Section and any other information not noted but relative to the project shall be provided to the Engineer on a set of Plans when the investigative effort is complete.*

**15-7.01 Payment: Utility Clearances** shall be paid for at the contract **lump sum** price, which price shall not exceed 5% of the contract amount and shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in verifying utility clearances, including but not limited to: potholing to verify potential conflicts, grades and alignments of existing facilities to be connected to; excavation; backfill; notification; and coordination and redirection of crews to other contract work *if required*, as specified herein, and no additional allowance will be made therefor.

**15-8 Tree Root Pruning:** All tree roots two inches and greater which are encountered during excavation must be pruned by hand. The root shall be cut cleanly with a saw to avoid splits. When digging within the drip line of trees, the Contractor shall exercise extreme caution to avoid pulling on roots with excavation equipment. Hand dig around all roots greater than one inch in diameter. The Contractor shall notify the Engineer when encountering roots within the drip line of trees which are greater than one inch. If the Engineer elects to get direction from an arborist, the Contractor shall redirect crews to other contract work after safeguarding the area.

**15-8.01 Payment:** Full compensation for removing and pruning tree roots, hand digging to avoid root damaging roots, and excavating cautiously with respect to tree roots is considered as included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

**15-9 Remove and Replace Wood Fence:** Where required to accommodate the proposed improvements, the Contractor shall remove and replace the existing fence in kind where shown on the plans. Existing posts and concrete base shall be completely removed. Cutting posts at ground level is not allowed. Depressions left after removal of fence posts shall be immediately backfilled with native material or Class 2 Aggregate Base and compacted sufficiently to obtain an unyielding surface. New fence posts and boards or chain link fabric shall be of the same type and size as existing. New posts shall be set in 30" of concrete as directed by the Engineer.

**15-9.01 Payment:** **Remove and Replace Wood Fence** shall be measured and paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work included in removing and constructed the fence complete in place as specified, including fence removal, excavation for new posts, concrete, posts, fence boards, chain link fabric, concrete curb, and any other items necessary to remove and replace fence not specifically enumerated in the plans or these specifications, and no additional allowance will be made therefor.

**15-10 Irrigation Modifications:** Where required to accommodate the sidewalk and ramp improvements at 590 Lewis Rd, the Contractor shall remove and replace existing irrigation piping and sprinkler heads behind new concrete sidewalk and ramps. Materials used shall closely match the same type of pipe and sprinkler head materials that were used in the existing irrigation system and are to be field determined during initial excavation for the new sidewalk and ramps. The contractor shall coordinate this work with the property owner and minimize impact to their irrigation schedule during construction.

**15-10.01 Payment:** **Irrigation Modifications** shall be measured and paid for at the contract **lump sum** price, which price shall include full compensation for modifying and/or furnishing and installing new irrigation piping, sprinkler heads, coordination with property owner, and any other items necessary to modify the existing irrigation facilities not specifically enumerated in the plans or these specifications, and no additional compensation will be made therefor.

**15-11 Preservation of Survey Monuments:** Contractor shall be responsible for preservation and/or perpetuation of existing survey monuments (iron pipes on lot lines and corners, centerline well monuments, etc.). Damaged or disturbed monumentation shall be replaced and reset in accordance with the business and professions code and the requirements of the Sonoma County Surveyor. A corner record shall be submitted to the Sonoma county surveyor for any replacement or resetting of existing survey monuments.

**15-11.01 Payment:** Full compensation for Preservation of Survey Monuments is considered as included in the contract prices paid for **various contract items** of work and no additional allowance will be made therefor.

# 19 EARTHWORK

## **19-1 General**

**19-1.01 General:** Potential Contaminated site area (Slater Street between station 20+00 and 26+00): Technical Specifications for handling and disposal of contaminated soil and water are included in Section 14-11, "Hazardous Waste and Contamination," and Section 13-8, "Temporary Active Treatment System," respectively.

Non-contaminated site (remaining project area): See Section 19-2.03B, "Surplus Material," of these Technical Specifications.

**19-1.01A Summary:** Earthwork shall also include excavation for trenching.

**19-1.03B Unsuitable Material:** Stabilization of unsuitable material shall comply with the following provisions:

- A. Unsuitable material may be processed in place, may be excavated and placed on the grade or other locations suitable for further processing, or may be partially excavated and partially processed in place.
- B. Processing may consist of drying to provide a stable replacement material.
- C. Stabilized material shall be placed and compacted in layers as hereinafter specified for constructing embankments.

**19-1.03B(1) Subgrade Stabilization/Digouts:** Any area of the subgrade determined by the Engineer to be unsuitable shall be stabilized per 19-1.03B.

For roadway reconstruction per section 19-2.03A of these Technical Specifications where processing of unsuitable subgrade material is not allowed, the areas to be stabilized will be marked in the field by the Engineer after roadway excavation of the area is complete. Use of a pavement grinder shall be considered an acceptable method of excavation of areas requiring subgrade stabilization.

**19-1.03C Grade Tolerance:** When aggregate subbase or aggregate base are to be placed on the grading plane, the grading plane shall not vary more than 0.05' above or 0.1' below the grade established by the Engineer.

**19-1.04 Payment:** **Subgrade Stabilization/Digouts** shall be paid for at the contract price per **square yard** as measured in the field. Price shall include full compensation for stabilization fabric, asphalt concrete base, compaction, doing all work involved in stabilizing the subgrade as specified herein including labor, materials, tools and equipment, excavation, and no additional allowance will be made therefor.

In the event of an increase or a decrease in the amount of the engineer's estimated quantity of Subgrade Stabilization/Digouts, such increase or decrease shall not be considered an alteration in excess of the 25 percent of the contract amount of such items under provisions of Section 4-1.05 of the Standard Specifications and no adjustment of the contract price for Subgrade Stabilization will be made.

No additional compensation will be made for excavation and stabilization beyond the limits of the areas marked by the Engineer or for excavation and stabilization of locations other than those marked by the Engineer. Any excavation for subgrade stabilization done by the Contractor to accommodate equipment width beyond the limits of the areas marked by the Engineer shall be at the Contractor's expense.

Quantities of Subgrade Stabilization/Digouts to be paid for shall be computed on the basis of the exact amount of area covered in the field.

The cost for the asphalt concrete base shall be included with the contract unit price for Subgrade Stabilization/Digouts.

## **19-2 Roadway Excavation**

**19-2.03A General:** The Engineer shall provide reference points and cut sheets for the excavation of the roadway. The Contractor shall furnish an excavation and paving plan and a qualified grade setter to ensure that the subgrade conforms to the lines and grades established by the Engineer.

For roadway reconstruction, Roadway Excavation shall be performed with a pavement grinder. No other construction equipment including rubber-tired equipment shall be allowed on the subgrade.

Roadway excavation and asphalt concrete base paving, including Stabilization Fabric per section 19-8.02, paving shall be completed for half the street width before beginning excavation of the remaining street.

The Contractor shall note that there are street trees near areas intended for roadway excavation. The Contractor's operation, including the size of the grinding equipment, shall be such, so as to ensure that existing street trees are not damaged. Where limited clearance under the street trees prevents the use of a grinder, excavation shall be performed by an alternate method as approved by the Engineer. Alternate methods may include jackhammering and removal of existing pavement and base materials by hand, or by use of smaller grinding equipment.

Where tree roots are encountered during roadway excavation, the Contractor shall cut the roots off six inches below the planned subgrade. Each cut shall be clean with no torn bark or splintered wood remaining on the root and shall be accomplished by use of a saw appropriate for the size of the root to be cut.

**19-2.03B Surplus Material:** None of the excavated material shall be disposed of on the work site. All material excavated from trenches in the project area shall be the property of the Contractor. Prior to disposal of any excess material from the work site, the Contractor shall submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

See also Section 14-11 "Hazardous Waste and Contamination" for possible areas of the project site that could contain contaminated material and testing and disposal requirements.

**19-2.04 Payment:** **Roadway Excavation** shall be a final pay quantity (F) paid for at the contract price per **cubic yard**, which price shall include full compensation for all work as specified herein and no additional allowance will be made therefor.

Removal of existing bituminous pavement and base materials will be paid for as roadway excavation.

## **19-8 Subgrade Enhancement Geotextile**

**19-8.02 Materials:** Subgrade enhancement geotextile (aka soil stabilization fabric) shall be installed per manufacturer's recommendations and shall meet or exceed the following specifications:

Grab Tensile Strength (ASTM D4632)	290 lb.
Mullin Burst Strength (ASTM D3786)	500 psi
Trapezoid Tearing Strength (ASTM D4533)	113 lb.
Modulus (Load at 10% Elongation) (ASTM D4632)	120 lb.
Apparent Opening Size (ASTM D4751)	40-70 sieve
Permittivity (ASTM D4491)	0.05 sec <sup>-1</sup>

Soil stabilization fabric shall be Mirafi 600-X, GeoTex 315ST, Carthage Mills FX-66, TerraTex HD, or approved equivalent.

Prior to placement of soil stabilization fabric, the Contractor shall remove all loose dirt left from excavation operations.

Soil stabilization fabric shall be placed over the entire subgrade area. The soil stabilization fabric shall be held in place with wooden stakes driven through the fabric into the subgrade at the beginning and the end of the fabric and at 50-foot intervals. A minimum of three stakes shall be placed across the width of the fabric roll at each interval. The stakes shall be a minimum length of 8-inches and shall be driven at an angle opposite to the direction of pull exerted on the fabric by the paving machine.

**19-8.04 Payment:** **Soil Stabilization Fabric** shall be paid for at the contract price per **square yard** as measured in the field. Payment shall include full compensation for doing all work involved in placing the fabric including root pruning labor, materials, tools and equipment, and no additional allowance will be made therefor.

## 26 AGGREGATE BASE

### **26-1.01 General**

**26-1.01A Summary:** Aggregate base shall be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the Standard Specifications, with the following modifications and additional requirements.

Rolling shall commence immediately after spreading of the damp material and before the material has dried sufficiently to allow separation between the fine and coarse particles.

**26-1.02B Class 2 Aggregate Base:** The minimum sand equivalent shall be 31 for any individual test.

**26-1.03E Compacting:** The surface of the finished aggregate base shall be firm and unyielding. Any visible movement vertically or horizontally of the aggregate base under the action of construction equipment or other maximum legal axle loads shall be considered as evidence that the aggregate base does not meet this requirement.

**26-1.04 Payment:** Full compensation for aggregate base shall be considered as included in the prices paid for **various contract items** of work and shall include all compensation for furnishing all labor, materials, tools and equipment and doing all the work involved in furnishing and placing the base material as specified, including furnishing, hauling and applying water as specified and directed by the Engineer, and no additional allowance will be made therefor.

## 39 HOT MIX ASPHALT

### **39-1.01 General:**

**39-1.01A Summary:** Section 39 includes specific specifications for producing and placing Hot Mix Asphalt (HMA) by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

**39-1.01B Definitions:** For these specifications, HMA and asphalt concrete shall be the same.

At the Contractor's option, and at no additional expense to the City, a Cal-trans approved Warm Mix Asphalt (WMA) technology may be added to the HMA. However, the asphalt concrete shall be manufactured at HMA temperatures (300F +/- 25F) at a dosage rate approved by the Engineer. All other HMA project specifications shall be adhered to.

Use Section 39-3 Method construction process of these specifications for HMA production and construction.

**39-1.01C Description:** Asphalt concrete shall be placed in separate lifts as shown on the Project Plans.

Roadway excavation and asphalt concrete base paving shall be completed for half the street width before beginning excavation of the remaining street.

Asphalt concrete surface shall be placed no more than 7 days after the placement of the asphalt concrete base.

All existing asphalt concrete that is adhered to the top of gutters shall be removed prior to placement of new asphalt concrete surface in a manner satisfactory to the Engineer and that does not damage the gutter.

Asphalt concrete base shall be placed on the same day the area is excavated so that all areas will either have existing asphalt surface or new asphalt concrete base by the end of each working day. No subgrade areas shall be exposed or open to traffic during non-working hours.

Asphalt concrete base paving shall be accomplished by use of a paving machine. The asphalt mix shall be transferred from the trucks to the hopper of the paving machine by means of a shoulder machine equipped with a side caster. Any equipment used to transfer asphalt concrete to the paving machine shall not exceed the load capacity of any surface it is driven over and shall not produce rutting or pumping of the existing roadway surface or newly placed asphalt concrete base at any time.

Construction vehicles/equipment shall not be allowed on the newly placed asphalt concrete base until the day after it is placed. Super Dumps or other trucks with liftable trailing load bearing axles shall not be allowed on the newly placed asphalt concrete base at any time. All trucks or other construction equipment to be driven on the newly placed asphalt concrete base shall not exceed the surface load bearing capacity and shall not produce rutting or pumping at any time.

All longitudinal surface paving joints shall fall on a lane line. Longitudinal Subsurface paving joints shall be offset by at least 6 inches.

No longitudinal vertical drop offs will be allowed between the lanes when the roadway is opened to traffic. Where a longitudinal vertical drop off occurs along the roadway crown between the existing street surface and the new asphalt concrete base, the Contractor shall grind a 10:1 taper in the existing surface to make a temporary conform to accommodate traffic. The temporary taper shall be ground after the asphalt concrete base paving has been completed each day.

Where a vertical drop off will occur between the top of the new asphalt concrete base and a valley gutter, driveway, or side street conform, the Contractor shall install a temporary 10:1 asphalt taper.

Where a vertical drop off would occur between the asphalt concrete base and a pedestrian ramp, the Contractor shall install a temporary 12:1 asphalt taper.

All ground edges adjacent to curb ramps and driveways shall have temporary asphalt concrete ramps (tapers) installed if the asphalt concrete surfacing cannot be placed back the same day the existing pavement is removed. Kraft paper or other bond breaker shall be placed under the conform ramps to facilitate removal when paving operations start.

Kraft paper or other bond inhibitor shall be placed under the temporary asphalt taper to facilitate removal when paving operations resume.

Temporary asphalt tapers and associated bond breaker material shall be removed prior to placement of the asphalt concrete surface lift. Where the bond breaker material adheres to the asphalt concrete base course it shall be fully removed with a method, approved by the Engineer that will in no way degrade the quality of the final product.

The Engineer shall provide reference points and cut sheets for the placing of asphalt concrete base and asphalt concrete surface.

The Contractor shall furnish an excavation and paving plan which shall include the following:

1. Requested location for survey staking of reference points
2. Asphalt plant supplying mix including aggregate source
3. Disposal site for spoils
4. Type of trucks and equipment to be used
5. Haul routes through adjacent residential streets
6. Staging locations
7. Sequencing
8. Taper grind locations

The Contractor shall set a string line based on the reference points to control the grade of the paving machine along the crown line. A rotary laser level may be used in lieu of a string line provided the level can be accurately set to the design centerline slope, and the detector is directly mounted to the paving machine screed to control the grade of the paving along the crown line. The Contractor shall also furnish a grade setter to ensure that the asphalt concrete base and asphalt concrete surface paving conforms to the lines and grades established by the Engineer.

A tack coat of SS-1h or SS-1 emulsified asphalt shall be applied to all asphalt concrete and concrete surfaces and allowed to break immediately in advance of placing all lifts of asphalt concrete. Tack coat applied to horizontal surfaces shall be applied with a tack truck, at a minimum residual rate of 0.02 gal/sqyd. Unless otherwise shown on the Plans, tack coat shall also be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints, and allowed to break immediately in advance of placing all lifts of asphalt concrete. The tack coat shall be reapplied 1) where it becomes contaminated, and 2) where it is significantly tracked (removed) from the surface.



The asphalt concrete base and asphalt concrete surface courses shall be allowed to cool to 160° F at mid depth before the roadway is opened to traffic each day.

At the end of each working day the Contractor shall place retro reflectorized signs and delineators, as required for nighttime use in accordance with the Standard Specifications and Section 12 of these Technical Specifications to warn the public of the existing conditions.

At the end of each workday during paving operations the location of all valves, manholes, monuments and any other facility overlaid with asphalt concrete and required to be raised to grade shall be marked in white paint.

All ground edges adjacent to curb ramps and driveways shall have a temporary asphalt concrete ramps (tapers) installed if the asphalt concrete surfacing cannot be placed back the same day the existing pavement is removed. Kraft paper or other bond breaker shall be placed under the conform ramps to facilitate removal when paving operations start.

**39-1.01D Asphalt Concrete Conform:** Asphalt concrete conform will be used where shown on plans and as directed by the Engineer and shall conform to these Technical Specifications. Asphalt Concrete Conform shall consist of removal of existing asphalt concrete and aggregate base as required to provide an asphalt concrete conform a minimum two feet in width and a minimum six inches thick.

Existing asphalt concrete pavement and aggregate base course shall be removed to accommodate the asphalt concrete conform and disposed of as specified in these Technical Specifications. Existing asphalt concrete shall be sawcut and removed at the locations and to the dimensions shown on the plans. Any removal performed by the Contractor beyond the limits of the asphalt concrete conform shown on the Project Plans shall be replaced to match existing.

### **39-1.02 Materials:**

**39-1.02B Tack Coat:** Tack coat must comply with the specifications for asphaltic emulsion or asphalts. Tack coat shall be diluted SS1 or SS1h.

**39-1.02C Asphalt Binder:** Asphalt binder in HMA must comply with the specifications for asphalts.

Asphalt binder to be mixed with aggregate for asphalt concrete surface, leveling and base shall be PG64-16 grade paving asphalt.

The amount of asphalt binder to be mixed with the aggregate shall be specified by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location.

Liquid anti-stripping agent (LAS) shall be added to the asphalt binder at a rate of 0.5 to 1.0% by weight of asphalt binder. The LAS shall be AD-here LOF 65-00 or equivalent, and shall be stored, measured, and blended with the asphalt binder in accordance with the anti-stripping agent manufacture's recommended practice.

The LAS can be added at the asphalt plant or at the refinery. When added at the asphalt plant, the equipment shall indicate and record the amount of LAS added. If added at the refinery, the shipping ticket from the refinery shall certify the type and amount of LAS added.

**39-1.02E Aggregate:** The aggregate grading of the various types of asphalt concrete shall conform to one of the following as directed by the Engineer:

Surface or Leveling Course    ½-inch Coarse HMA Type A,

Base Course                      ¾-inch HMA Type A

Aggregates should be of high abrasion resistance and durability. Excessively soft and friable aggregates are not allowed.

The specified aggregate gradation must be determined before the addition of asphalt binder and includes supplemental fine aggregate.

The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

**Aggregate Gradation  
(Percentage Passing)  
HMA Types A  
¾-inch HMA Type A**

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
¾"	95–100	TV ± 5
⅜"	65–80	TV ± 5
No. 4	49–54	TV ± 5
No. 8	36–40	TV ± 5
No. 30	18–21	TV ± 5
No. 200	2.0–8.0	--

**½-inch Coarse HMA Type A**

Sieve sizes	TV limits	Allowable tolerance
¾"	100	—
½"	94–100	--
⅜"	70–90	--
No. 4	55–61	TV ± 5
No. 8	40–45	TV ± 5
No. 30	20–25	TV ± 5
No. 200	2.0–8.0	--

Before the addition of asphalt binder and lime treatment, aggregate must have the values for the quality characteristics shown in the following table:

Quality characteristic	Test method	HMA Type A
Percent of crushed particles Coarse aggregate (% min.) One fractured face Two fractured faces Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	90 75    70
Los Angeles Rattler (% max.) Loss at 100 rev. Loss at 500 rev.	California Test 211	10 45
Sand Equivalent (min.) <sup>a</sup>	California Test 217	50 <sup>b</sup>
Fine aggregate angularity (% min.)	California Test 234	45
Flat and elongated particles (% max. by weight @ 5:1)	California Test 235	10

<sup>a</sup> Reported value must be the average of 3 tests from a single sample.

<sup>b</sup> Minimum Sand Equivalent of 45 for asphalt concrete base.

**39-1.02F Reclaimed Asphalt Pavement:** Reclaimed Asphalt Pavement (RAP) may be used at the Contractor's option. If RAP is used, the Contractor shall provide the proposed mix design and the quality control for all HMA that includes RAP, in accordance with the following requirements:

1. Contractor shall provide City with a mix design per California Test 384 for the proposed RAP HMA.
2. As part of City's evaluation of RAP HMA, Contractor and City shall perform bitumen ratio tests on at least six split samples of Contractor's RAP to establish correlation between respective binder ignition ovens.
3. RAP shall be processed from reclaimed Asphalt Concrete pavement only.
4. RAP pile(s) shall be separate from the stacker pile, not intermingled with other materials, and stored on smooth surfaces free from debris and organic material.
5. The project RAP pile shall be processed and mixed, identified, and of adequate quantity for the proposed project. "Live" piles shall not be permitted.
6. Contractor shall sample the RAP pile and determine the bitumen ratio (using same binder ignition oven used in #2 above) and provide the test results to the City at least one week prior to producing RAP HMA.
7. A minimum of three samples shall be tested for bitumen ratio for RAP pile of 1500 tons, or portion thereof.
8. RAP pile shall be mixed such that individual bitumen ratio test results of RAP pile so not vary more than +/- 0.5%.
9. During RAP HMA production, RAP shall be sampled by the Contractor off of the belt (into the batch plant), per method established by the City, and samples provided to the City.
10. Bitumen ratio of RAP sampled off of the belt shall be 4.0% minimum, as determined by City binder ignition oven. City shall select binder content for RAP HMA mix per Specifications.

11. RAP content shall be no more than 20% by dry aggregate mass in the HMA. If proposing a change in the RAP content, the Contractor shall notify the Engineer. If the content changes more than 5%, the Contractor shall submit a new mix design.
12. Moisture content of RAP pile shall be 4.0% maximum and shall be tested the day prior to the day of paving and tested/monitored during each day of HMA production.
13. RAP pile(s) shall be protected from exposure to moisture.
14. RAP HMA shall comply with all the specifications for HMA.
15. If batch mixing is used, RAP shall be kept separate from the virgin aggregate until both ingredients enter the weigh hopper or pugmill. After introduction to the pugmill and before asphalt binder is added, the mixing time for the virgin aggregate and RAP shall not be less than five seconds. After asphalt binder is added, the mixing time shall not be less than 30 seconds.
16. If continuous mixing is used, the RAP shall be protected from direct contact with the burner flame with a device such as a shield, separator, or second drum.
17. If any of the above criteria are not satisfied, or if the RAP HMA test result determined by the City are inconsistent, RAP HMA production shall stop for City projects until the issue(s) are corrected.

### **39-1.03 HOT MIX ASPHALT MIX DESIGN REQUIREMENTS:**

#### **39-1.03E Job Mix Formula Verification:**

**(Not Applicable)**

#### **39-1.08 Production:**

**39-1.08A General:** During production, with approval of the Engineer, you may adjust hot or cold feed proportion controls for virgin aggregate and RAP.

#### **39-1.12 Smoothness:**

**39-1.12A General:** Determine HMA smoothness with a straightedge. The completed surfacing shall be thoroughly compacted, smooth and free from ruts, humps, depressions or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations or other objectionable marks in the asphalt concrete shall be discontinued, and acceptable equipment shall be furnished by the Contractor.

**39-1.13 Hot Mix Asphalt over Concrete Culvert:** The aggregate grading of the asphalt concrete shall be ½-inch Coarse HMA Type A.

**39-1.14 Miscellaneous Areas:** The aggregate grading for asphalt concrete placed on miscellaneous areas shall conform to that specified for the asphalt concrete placed on the traveled way, unless otherwise directed by the Engineer.

#### **39-1.15 Minor Hot Mix Asphalt: (Not Applicable)**

### **39-3.02 Acceptance Criteria:**

**39-3.02A Testing:** The acceptance testing requirement for Sand Equivalent shall be 50 (minimum) for asphalt concrete surface and 45 (minimum) for asphalt concrete base. HMA shall meet the following requirements.

Aggregate Micro-Deval (ASTM D6928-10) <sup>1</sup>	Tensile Strength Ratio, TSR (ASTM D7870) <sup>2</sup>
≤16.0%	Not Required
16.1-18.0%	70 (minimum)
18.1-21.0%	80 (minimum)

<sup>1</sup> Asphalt concrete with an aggregate Micro-Deval loss greater than 21.0% shall be removed and replaced at the Contractor's expense. In addition, no single source of asphalt concrete aggregate shall have a Micro-Deval loss greater than 21.0%.

<sup>2</sup> TSR testing shall be performed on re-compacted asphalt concrete (per ASTM D7870), obtained from field cores, and tested within 30 days of asphalt concrete placement. Specimens tested shall include 1 unconditioned sample, and 2 conditioned samples as follows:

- a) 20.0 hour Adhesion cycle @ 60°C
- b) 3500 cycles @ 40 psi and 60°C

A single TSR test shall not represent more than 750 tons of asphalt concrete.

Asphalt concrete not meeting the above requirements shall be removed and replaced at the Contractor's expense.

### **39-3.04 Transporting, Spreading, and Compacting:**

Test sections shall be approved on the basis of the attainment of 93% relative compaction and a satisfactory surface condition following final rolling. The number of coverages required shall be the minimum number required to obtain 93% relative compaction. Relative density shall be the ratio of in-place density (ASTM Test Method D2950) to test maximum density (California Test 309, Method of Test for Determining Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt) determined during production paving.

The HMA may be cored during paving of the test sections, and the in-place density for each test section shall be the average of three core densities determined per California Test 308.

**39-6 Payment:** **Asphalt Concrete** shall be paid for at the contract price per **ton**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in placing asphalt concrete, including tack coat, and temporary tapers, and no additional allowance will be made therefor.

**Asphalt Concrete Conform** shall be measured and paid for at the contract price per **ton** in place, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work involved in placing asphalt concrete, including but not limited to pavement preparation, tack coat, spreading and compacting, and no additional compensation will be allowed.

Full compensation for furnishing weigh master's certificates shall be considered as included in the contract price paid per ton for asphalt concrete and no additional allowance will be made therefore.

## 39A HOT MIX ASPHALT CONCRETE TRENCH PAVING

**39A-1.01 Description:** Hot mix asphalt concrete surfacing and asphalt concrete base and the placing thereof shall conform to the requirements of the Standard Specifications, Section 39 of the City Specifications and these Technical Specifications.

**39A-2.01 Asphalts:** Temporary paving on all utility trenches and any other excavated areas shall be ½-inch maximum, medium grade aggregate hot mix asphalt concrete installed a minimum of two inches thick **placed each day** over the work.

Temporary paving around edges of steel plates shall be a hot mix ½-inch maximum, medium graded aggregate.

The amount of asphalt binder to be mixed with the aggregate will be specified by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location. Asphalt concrete trench paving shall be per Section 39-1.02E for surface and base requirements.

**Cutback shall not be stockpiled or used anywhere on the job site.**

**39A-5.01 Spreading Equipment:** When trench width is three feet or less, the asphalt concrete used for trench paving may be deposited directly from the haul vehicle into the trench. The asphalt shall then be raked smooth prior to compaction.

**39A-6.01 General Requirements:** Areas outside of reconstruction or overlay limits shall receive permanent trench paving per City STD-215, the modified detail on the Plans or as specified herein.

Areas requiring permanent trench paving per City STD-215 shall have a minimum surface A.C. thickness of 0.35 feet, and will use the 6" thick AC alternative in Note 1 of Standard 215

The Contractor shall provide compaction of backfill and base material as the job progresses. All trench back-fill required per STD-215 on all trenches within the project shall use aggregate base class 2 material as required in Section 26. Temporary paving, as specified in Section 39A-2.01, shall be placed over the work each day, leaving not more than 25 feet unpaved. This temporary paving shall be removed for final street reconstruction and/or trench paving. The 25 feet of unpaved trench shall be covered with skid resistant steel plates (with a coefficient of friction of 0.35 or greater per CTM342), capable of sustaining normal (H20) traffic loads without shifting or bouncing and shall be secured per Caltrans requirements. Plates that have areas where the skid resistant material is missing shall not be used and must be removed from the job site. Hot mix asphalt concrete shall be placed and compacted around all edges of steel plates with a sufficient width and gradual slope in order to provide a smooth transition to existing pavement. The Contractor shall only be allowed to plate one lateral trench at a time.

Temporary and permanent asphalt trench paving shall be even and smooth riding.

The Contractor shall monitor and maintain all temporary paving to the satisfaction of the Engineer.

Asphalt concrete used for temporary trench paving shall be removed and disposed of in accordance with Section 124 "Material Recycling" of these Technical Specifications.

Any existing manholes or valves that are encountered within the trench paving limits must be adjusted to grade per the requirements of Section 15 of these Technical Specifications. The

Contractor is responsible for all coordination with the various utility company owners and their representatives, as well as the cost to adjust the various utilities to grade.

**39A-6.03 Compacting:** Compaction shall be in accordance with Section 39-6.03 of the City Specifications, except as modified below.

The basis for approval shall be the attainment of 93% relative compaction and satisfactory surface condition following final rolling. The number of coverages required shall be the minimum number required to obtain 93% relative compaction, in accordance with Section 39-3.04 of these Technical Specifications.

**39A-8.02 Payment:** Full compensation for furnishing and installing temporary paving asphalt shall be considered as included in the prices paid for the **various contract items** of work and no additional allowance will be made therefor.

**Permanent Trench Paving** shall be paid for at the contract price per **ton** of asphalt concrete surface paving only, which price shall include full compensation for furnishing all labor, materials, tools, equipment and doing all work involved in placing permanent trench paving, including but not limited to: saw cutting, tack coat, compaction and any other work required for permanent trench paving not specifically enumerated in the City Standards, these Technical Specifications or on the Project Plans and no additional allowance will be made therefor.

Asphalt concrete base used in the Permanent Trench Paving structural section is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefore.

The estimated quantity of Permanent Trench Paving is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer and no adjustment in the contract bid price or other contract items shall be made therefor. The provisions in Section 9-1.06(B)(C) of the Standard Specifications shall not apply.

[Revised: 8/28/13 STD2010]

## 51 CONCRETE STRUCTURES

**51-7.01A General:** Minor Structures shall be constructed in accordance with Section 51 of the City Standards, Section 51-7 of the Standard Specifications, the details shown on the plans, and these Technical Specifications. Minor concrete structures are catch basins, junction structures and manholes.

Catch basins and manholes shall be City standards.

Storm drain junction structures shall be per the details on the plans.

Concrete shall be cured in accordance with Section 90-1.03B of the Standard Specifications.

Minor Concrete shall conform to the provisions of Section 90-2 of the Standard Specifications.

Placing of concrete under water will not be permitted.

**51-7.01D Payment:** **Catch Basin, Type I and Catch Basin, Type II** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all the work involved in placing drainage structures including; excavation, removal of existing drainage structure, trench dewatering, trench plates (as needed), disposal of soil and groundwater, placing and compacting all required bedding and backfill, concrete drainage structure, metal frames and covers or frames and grates, storm drain labels, and connection to the existing storm drain system.

**48" Storm Drain Manhole with Reducer Slab** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of storm drain manhole, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; couplings and pipe if connecting to existing mains; water tight sealing of penetrations; coating and patching; removal and disposal of existing storm drain pipe, *as necessary*; supporting or removal and disposal of existing utilities in the same trench, *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates as needed; temporary trench paving; concrete collar; installing and adjusting the cast iron frame and cover to grade after final paving is complete; testing; as specified herein, and no additional allowance will be made therefor.

**4' x 7' Storm Drain Junction Box** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of storm drain junction box, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; couplings and pipe if connecting to existing mains; water tight sealing of penetrations; coating and patching; removal and disposal of existing storm drain pipe, *as necessary*; supporting or removal and disposal of existing utilities in the same trench, *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates as needed; temporary trench paving; concrete collar; installing and adjusting the cast iron frame and cover to grade after final paving is complete; testing; as specified herein, and no additional allowance will be made therefor.



## 65 REINFORCED CONCRETE PIPE

**65-1.01 Description:** Reinforced concrete pipe shall be installed on the alignment and grade as shown on the plans and in accordance with the provisions of Section 65 of the City Technical Specifications and the Standard Specifications.

**65-1.08 Video Inspection of Reinforced Concrete Pipe:** The contractor shall hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed reinforced concrete pipe systems per Section 79 of the City Standards.

**65-1.10 Payment: 15" Class III Reinforced Concrete Pipe** shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in installing the pipe complete in place as shown on the plans, including but not limited to potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; fittings/couplings; felt expansion joint material *if required*; temporary connections; modifications to existing structures to accept new mains; connections to new or existing structures or mains, including sealing of penetrations water tight; supporting or removal and disposal of existing utilities in the same trench *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; cleaning and flushing; testing; as specified herein, and no additional allowance will be made therefor.

**18" Class V Reinforced Concrete Pipe** shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in installing the pipe complete in place as shown on the plans including but not limited to potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; fittings/couplings; felt expansion joint material *if required*; temporary connections; modifications to existing structures to accept new mains; connections to new or existing structures or mains, including sealing of penetrations water tight; supporting or removal and disposal of existing utilities in the same trench *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; cleaning and flushing; testing; as specified herein, and no additional allowance will be made therefor.

Compensation for Video Inspection of reinforced concrete pipe systems shall be considered included in **various contract items**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in recording the storm drain pipes per these specifications, including production and delivery of a color DVD or electronic video file to the Engineer and no additional compensation will be made therefor.

### **65-2 Trench Bracing and Shoring**

**65-2.01 Description:** All bracing and shoring shall conform to Section 7-1.02K(6)(b) of the Standard Specifications and the Division of Industrial Safety Construction Safety Orders which are currently in use.

The Contractor shall take all necessary measures to protect the workmen and adjacent areas and structures from the hazards of the trenching or excavation operations.

**65-2.05 Payment: Trench Bracing and Shoring – Reinforced Concrete Pipe** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all work involved in trench bracing and shoring as specified herein, and no additional allowance will be made therefor.

## 73 CONCRETE CURBS AND SIDEWALKS

**73-1.01 General:** This work shall consist of curbs, gutters, sidewalks, driveways, curb ramps, and valley gutters and shall be constructed in accordance with the details and at the location shown on the plans, City Standards, and in conformance to the requirements of Section 73 of the City Specifications, and Standard Specifications.

Soft or spongy material shall be removed and replaced with suitable material as required by the Engineer.

All new concrete construction joints shall be of the same type as those removed with the existing concrete unless otherwise stated herein or on the plans.

All oil, paint, tire marks, and other discoloring due to the Contractor's operations shall be removed from concrete by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface shall be removed. If it cannot be removed from the surface, then the vandalized concrete shall be removed and replaced to the nearest score-mark.

**73-1.02D Color:** A colored pigment designed for the integral coloring of concrete shall be added to the concrete mix. The pigment shall contain pure concentrated mineral pigments specifically processed for mixing into concrete and complying with ASTM C979.

The colored pigment shall be Davis Colors color #860, applied in a dosage of 1/3 pound per 94 pound sack of cement (approximately 2 pounds per cubic yard of concrete for a 6 sack mix), or L. M. Scofield color #SG860 applied in a dosage to produce an equivalent color, or an approved equal.

**73-2.03 Curb Construction:** Curb construction shall be in accordance with Section 73-1.05 of the City Standards.

Curb and gutter shall be constructed per City STD-241, the details and locations shown on the plans and in accordance with the City Specifications.

Expansion joint material shall be installed on at least one side of new curb and gutter when length of the new install is over ten feet, and on both sides when over 15 feet.

When length of new curb and gutter is 7 feet or less, both sides shall be dowelled to the adjacent existing curb and gutter. Dowels shall be 8-inch long #4 dowels with two equally spaced in the curb (vertical) and two in the gutter (horizontal).

Where new curb is installed adjacent to existing trees, root barrier, "Biobarrier" manufactured by Typar or approved equivalent, shall be installed a minimum of 14" deep in accordance with City Standard 101-A and as directed by the Engineer.

Where noted on plans, native backfill shall be placed behind new curb. Native backfill shall be suitable material for planting and shall be free from stones larger than 1 in. in size, refuse, plants or roots, clods, weeds, sticks, or other extraneous material. Soil shall be compacted to 85% relative compaction. No separate payment will be made for backfilling and compaction of native soil.

All concrete which is to be removed from curb and gutter, areas shall be removed to the nearest transverse score mark or construction joint or as directed by the Engineer.

No deduction in measured length of curb and gutter to be paid for will be made for curb openings for driveways.

**73-3.03 Sidewalk, Valley Gutter, Curb Ramp, and Driveway Construction:** Sidewalk, valley gutter, curb ramp, and driveway shall be constructed in accordance with the details and at the location shown on the plans and in conformance to the requirements of Section 73-1.07 of the City Specifications with the following modifications and additional requirements.

All concrete which is to be removed from sidewalk and driveway areas shall be removed to the nearest transverse score mark across the full width of sidewalk or construction joint or as directed by the Engineer.

Curb Ramp shall be constructed in accordance with the details and at the locations shown on the plans per Caltrans Standard Plan A88A except the thickness shall be 4" minimum. For purposes of payment, curb ramp will be measured between the outside border of the ramp and landing and exclude the curb and gutter. The area of concrete beneath the detectable warning surface shall be paid for at the contract price per square foot of curb ramp.

Expansion joint material shall be installed full width from gutter to back of sidewalk on both sides of the curb ramp structure.

Curb ramp detectable warning surfaces shall consist of prefabricated raised truncated domes constructed with curb ramps in conformance with the details shown on the plans and Caltrans Standard Plan A88 and these Technical Specifications. The color of the detectable warning surface shall be yellow conforming to Federal Standard 595B, Co. No. 335838. Prefabricated detectable warning surfaces shall be installed in accordance with the manufacturer's recommendations.

Valley Gutter shall be constructed in accordance with City STD-243 the details and locations shown on the plans and in accordance with the City Specifications.

Cobbles embedded in concrete shall be set in four inches of Class A, six sack pea gravel concrete. Cobbles shall be four to six inches in size with a smooth texture, with 1/3 exposed above the top of curb as shown on the plans. Concrete shall be poured over four inches of Class 2 aggregate base prior to cobbles being placed. Cobbles shall then be placed in a timely manner to allow for proper embedment into the concrete. Contractor to provide samples of cobbles to the Engineer for review and approval prior to placement.

**73-3.04 Payment:** **Cobble Non-Walkable Surface** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing cobbles embedded in concrete complete in place as specified, including furnishing a cobble sample, furnishing and placing expansion joint filler, aggregate base, cobbles, constructing weakened plane joints, excavating, and backfilling.

**Curb and Gutter** shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing and applying curing materials, forming and constructing curb openings for driveways, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing curb and gutter complete in place as specified, including furnishing and placing expansion joint filler, Class II Aggregate base, root barrier, native backfill *if required*, constructing weakened plane joints, excavating, and backfilling.

**Curb Ramp** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing curb ramp complete in place as specified, including furnishing and placing expansion joint filler, sand base layer, Class II Aggregate base, vertical curb, detectable warning surface, removal and restoration of irrigation and landscaping, constructing weakened plane joints, excavating, and backfilling.

For purposes of payment, curb ramp will be measured between the outside border of the ramp and landing and exclude the curb and gutter. The area of concrete beneath the detectable warning surface shall be paid for at the contract price per square foot of curb ramp.

**Sidewalk** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing sidewalk complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

**Driveway** shall be paid for at the contract price **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing driveway complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

**Valley Gutter** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing valley gutter complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

## 82 SIGNS AND MARKERS

**82-1.01 General:** This work shall consist of installation, removal, and relocation of roadside signs as shown on the plans, where directed by the Engineer, and shall conform to the City Specifications.

Signs and hardware which are not to be mounted on traffic signal mastarms or poles shall be provided and installed by the Contractor at the locations shown on the plans per Part II of the City Traffic Standards.

Existing signs which are not on traffic signal mastarms or poles shall be relocated as shown on the plans by the Contractor.

Where signs are shown on the plans as relocated or removed, the signpost and foundation shall be removed if no longer in use. Existing signposts removed from sidewalks shall be ground flush with the existing sidewalk surface, and the void filled with grout.

Salvaged signs shall be returned to the City of Santa Rosa Sign Shop at 55 Stony Point Road. All poles being removed and not relocated shall become the property of the Contractor.

Where traffic regulatory signs (i.e. STOP and crosswalk warning) are removed for construction, Temporary Signs shall be placed and maintained on barricades at stop controlled intersections and the crosswalk until permanent traffic regulatory signs are installed. Temporary stop bars and crosswalks shall be installed in accordance with Section 84 of these specifications.

If existing signs and poles are in good and re-useable condition as determined by the Engineer, the existing signs and poles may be able to be reused on site or may not require removal for replacement depending on existing site conditions at each location. If no new sign and pole is installed and the existing pole and sign are reused, there will be no bid item payment and no additional allowance will be made therefor for reusing the existing pole and sign.

**82-2.01 Payment:** Remove and Replace Roadside Sign shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all work involved in removal and replacement, and relocation of signs and posts complete, including new poles, excavating, coring sidewalk, backfill, concrete, replacing landscaping, and sign mounting hardware, as specified herein, and no additional allowance will be made therefor.

Full compensation for installing and maintaining Temporary Signs, including all labor, materials, tools and equipment, complete as herein specified shall be included in the prices paid for various contract items of work and no additional allowance will be made therefor.

## 84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

**84-1.01 General:** Attention is directed to Section 12, "Temporary Traffic Control," and Section 15, "Existing Facilities," of these Technical Specifications. Traffic stripes and pavement markings shall conform to the applicable provisions of Section 84 of the Standard Specifications, the City Traffic Standards, and these Technical Specifications and shall be placed at the locations shown on the Plans.

The Contractor shall provide and install temporary retro-reflective pavement markings on the same day as the existing permanent markings are removed or destroyed, or as directed by the Engineer, and maintain them until the new permanent markings are in place.

Temporary striping on all ground surfaces shall be paint (white and/or yellow) with retro-reflective glass beads or an approved equivalent and shall be installed the same day as the existing permanent striping is removed, or as directed by the Engineer. Temporary striping shall be maintained until new permanent striping is in place.

Existing pavement markings, including crosswalks, disturbed by construction activities shall be replaced in their entirety.

All striping to be replaced shall match existing sections in kind unless approved by the Engineer.

The Contractor shall remove all existing traffic striping and pavement marking in conflict with proposed improvements, as shown on the Plans, and as directed by the Engineer, and shall be responsible for the proper disposal of their grindings away from site work.

Permanent traffic stripes and pavement markings shall be installed after all iron has been raised for that particular street section, but no more than five days after final paving for that section of roadway.

Existing stripes and pavement markings to remain, which are damaged by the work shall be replaced at the Contractor's expense. This includes areas outside the immediate project limits.

Painted curbs which are damaged or replaced as part of the work shall be repainted to match existing conditions.

**84-1.02 Inspection:** The Engineer shall inspect completed lines and markings as conditions may require and may inform the Contractor of any faulty methods or unsatisfactory results.

**84-1.03 Payment:** **Thermoplastic Stripes and Pavement Markings** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all equipment, tools, and labor, and doing all the work involved, as herein specified, including but not limited to, pavement surface preparation, glass beads, thermoplastic material, tape, removal of existing and temporary stripes and pavement markings, replacement of damaged stripes and markings, all temporary traffic measures, and any other work required to install thermoplastic stripes and pavement markings not specifically enumerated in the City Standards, the Project Plans, and these Technical Specifications., and no additional compensation will be made therefor.

## 85 PAVEMENT MARKERS

**85-1.01 General:** Raised pavement markers shall be placed at the locations shown on the Project Plans and in accordance with the applicable provisions of Section 81-3 of the Standard Specifications, these Technical Specifications, and the City of Santa Rosa Traffic Standards. Attention is directed to Section 15, "Existing Facilities," of these Technical Specifications.

**85-1.02 Materials:** All raised pavement markers (RPM) shall conform to the most current State Specifications.

**85-1.02B Nonreflective Pavement Markers:** All non-reflective pavement markers shall be ceramic.

**85-1.02C Retroreflective Pavement Markers:** Blue reflective raised pavement markers are to be placed per City STD-857 for each fire hydrant within the construction limits of the project. Where a hydrant, whether existing or new, is located at the corner of two streets, a blue RPM shall be placed in each street.

**85-1.03 Construction:** Existing raised pavement markers to remain, which are damaged by the Contractor, shall be replaced as determined by the Engineer, at the Contractor's expense. This includes areas outside the immediate project limits.

The exact locations and limits of raised pavement markers will be determined in the field by the Engineer.

The Contractor shall provide, install, and maintain temporary markers on the same day that the existing permanent markers are removed, or as directed by the Engineer, and maintain this delineation until new permanent markers are in place. Temporary markers on non-ground surfaces shall be plastic adhesive retroreflective delineators.

Existing raised pavement markers conflicting with the proposed striping shall be removed immediately prior to placement of new markers.

Holes left in the pavement due to the removal of raised pavement markers shall be filled with enough adhesive to replace any asphalt which comes off with the removal of the pavement marker, leaving a level driving surface.

Permanent raised pavement markers shall be installed within 5 days following final pavement operations. Temporary markings shall be in place the same day of pavement operations.

**85-1.04 Payment:** **Blue, Retroreflective Pavement Markers** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work involved in placing raised pavement markers, complete in place, including adhesives, removing existing pavement markers, and no additional allowance will be made therefor.

With the exception of Blue, Retroreflective Pavement Markers, pavement markers of the various types shall be included in the linear foot price paid for traffic striping and no additional compensation shall be made.

## 90 CONCRETE

**90-1.01C(6) Mix Design:** The proportions of the water, sand and aggregate shall be regulated so as to produce a plastic, workable and cohesive mixture.

**90-1.01D(2) Cementitious Material Content:** Concrete shall contain a minimum of 564 pounds of cementitious material per cubic yard. The amount of cement by weight of the specified cementitious material shall be 75 to 85 percent.

**90-1.01D(5) Compressive Strength:** The 28-day compressive strength of concrete shall be 4000 pounds per square inch (psi) or greater.

**90-1.01D(6) Curing Compound:** Concrete shall be cured per Section 90-1.03B of the Standard Specifications. Pigmented curing compound or any other material that will leave a noticeable residue shall not be allowed.

**90-1.02E(2) Chemical Admixtures:** An admixture shall not be used to reduce the amount of cementitious material content.



# 112 TREE PROTECTION

**112-1.01 General:** The following requirements shall apply to any contractor who works on any property upon which a protected tree is located.

Protected tree means any tree, including a Heritage tree, designated to be preserved on the plans, or as directed by the Engineer. Heritage tree is any of the trees listed under Section 17-24.010 of the City of Santa Rosa Tree Ordinance.

**112-1.02 Scope:** Before the start of any clearing, excavation, construction or other work on the site, every protected tree shall be securely fenced off at the protected perimeter. Protected perimeter shall be either the root zone or other limit as directed by the Engineer. Such fences shall remain continuously in place for the duration of all work undertaken in connection with this project. The area so fenced off shall not be used as a storage area, altered, or disturbed except as may be permitted under this section.

If any of the site work encroaches upon the protected perimeter of a protected tree, special measures shall be utilized as approved by the Engineer to ensure that the roots obtain oxygen, water, and nutrients as needed. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter, if authorized by the Engineer, shall be minimized and subject to such conditions as may be imposed by the Engineer. No significant change in existing ground level shall be made within the drip line of the protected tree except as directed by the Engineer and as shown on the plans. No burning or use of equipment with an open flame shall occur near or within the protected perimeter. All brush, earth, and other debris shall be removed in a manner which prevents injury to the protected tree.

No oil, gas, chemicals, or other substances that may be harmful to trees shall be stored or dumped within the protected perimeter or any other location on the site from which such substances might enter the protected perimeter.

Underground trenching for utilities shall avoid major support and absorbing tree roots of protected trees. If avoidance is impracticable, tunnels shall be made below the roots. Trenches shall be consolidated to serve as many units as possible. Trench within the drip line of the tree shall be avoided and only be done at the approval and direction of the Engineer.

No concrete or asphalt paving shall be placed over the root zones of protected trees. No artificial irrigation shall occur within the root zone of oaks.

No compaction of the soil within the root zones of protected trees shall occur.

**112-1.03 Payment:** Full compensation for work in this section shall be considered as included in the prices paid for the **various contract items** of work and no additional allowances will be made therefor.

## 121 NOTIFICATION

**121-1.01:** The Contractor shall notify the Engineer of any work to be performed on any given workday either on the afternoon of the prior working day or before 8:30 a.m. on the given working day. Any work completed for which the Engineer has not received prior notification of its scheduling may not be accepted for payment.

The Contractor shall provide a written notice of pending construction to, and attempt to make personal contact with all businesses and residents in the vicinity of the project 5 working days prior to mobilizing to the site. The notice shall inform the recipients of the type of work, the scheduled date(s) and work hours, and the potential impacts for the neighborhood, such as road closures and/or detours. Provide a map for any approved detour. The notice shall inform all recipients that they will be allowed access to their property at all times. The notice shall also request that cars be parked out of the roadway by 7:30am and shall have contact information for the following personnel: Contractor's onsite Supervisor, Contractor's Project Manager and the City of Santa Rosa's onsite Inspector.

If loading or unloading of equipment and/or materials has the possibility to impact access to private property, the Contractor shall notify and coordinate this work with the business or resident.

The Contractor shall keep the City of Santa Rosa Fire Department, City Bus, Postal Service, Recology and other related City services informed of any roadway and lane closures in accordance with Section 12-4.02 of these Technical Specifications.

If unanticipated work requires the Contractor to access private property the Contractor shall first notify the business or resident and the Engineer, and all work shall be coordinated through the Engineer or their representative.

All written notices to residents or businesses shall be submitted to the Engineer for approval prior to distribution. The Engineer shall be allowed two working days to review notices.

**121-3.01 Payment:** Full compensation for conforming to the provisions of this section shall be considered as included in the prices paid for the **various contract items** of work involved and no additional compensation will be allowed therefor

## 124 MATERIAL RECYCLING

**124-1.01 Description:** The Contractor shall dispose of all portland cement concrete and asphalt concrete, generated from removal or demolition activities on the project, at a recycler for these materials. The Contractor shall provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to a material recycler.

All other excess materials from the project shall become the property of the Contractor and shall be disposed of by him, at his expense.

**124-1.02 Payment:** Full compensation for material recycling as specified herein shall be considered as included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefor.

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## 130 SANITARY SEWER SYSTEM

**130-1 General:** Sanitary sewer system components and related appurtenances shall conform to the requirements as specified in the City of Santa Rosa Sanitary Sewer Standards Specifications Section 130, the Project Plans, and modifications herein.

**130-1.03 Excavation, Backfill, and Resurfacing:** The Contractor shall remove and replace sidewalk and planter strips as required for all sewer work to the nearest transverse score mark on both sides and full sidewalk width. All areas of sidewalk removed for construction shall be backfilled and compacted level with temporary asphalt concrete or covered with 1 inch thick plywood, laid flat with ADA compliant temporary asphalt concrete taper on both ends.

**130-1.05B Sewer Main Construction by Pipe Bursting:** Pipe shall be installed in accordance with IPBA/NASSCO Guideline Specification for the Replacement of Mainline Sewer Pipes by Pipe Bursting and ASTM F585.

- A. High-density polyethylene (HDPE) conforming to ASTM F714 (PE 3608/3408), minimum DR 17 with thermal-fused butt joints.
- B. The pipe and fittings materials shall meet the requirements for Type III, Class B, Category 5, Grade P34 material as described in ASTM D 1248. Pipe and fittings shall be made in conformance with ASTM F 714 and ASTM D 3261 as modified for the specified material. 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.
- C. The inner wall of the pipe shall be white, light green, or gray. Black, yellow, and light purple are not acceptable.
- D. The outer wall shall be black, white, light green, or gray. Yellow and light purple are not acceptable.
- E. The inside and outside may be the same or different color.
- F. Pipe materials shall be legibly marked at 5-foot intervals by the pipe manufacturer. The following shall be printed on the pipe:
  - 1. Name and trademark of manufacturer.
  - 2. Nominal pipe size.
  - 3. Dimension Ratio.
  - 4. The letters PE followed by the polyethylene grade per ASTM D1248, followed by the Hydrostatic Design Basis in hundreds of psi.
  - 5. Manufacturing Standard Reference.
  - 6. A production code from which the date and place of manufacture can be determined.
- G. All polyethylene pipe without an ultraviolet inhibitor shall not be stored uncovered outside.
- H. Pipe and Fittings shall be homogeneous throughout and free of:
  - 1. Serious abrasion, cutting, or gouging of the outside surface extending to more than 5 percent of the wall thickness in depth.
  - 2. Cracks
  - 3. Kinking (generally due to excessive or abrupt bending)

4. Flattening
5. Holes
6. Blisters
7. Other injurious defects

I. Polyethylene Fittings:

1. All polyethylene fittings shall have butt end outlets. Molded and fabricated fittings shall have a pressure rating equal to the pipe.
2. Minimum pipe wall thickness for fitting butt outlets shall be equal to the pipe wall thickness.
3. The fittings shall be as uniform as commercially practicable in color, opacity, density, and other physical properties. Any pipe and fittings not meeting these criteria shall be rejected.
4. Fittings shall be no older than 6 months from the date of manufacture to the date of shipment to City. All fittings shall be packaged in standard commercial cardboard boxes that provide protection from shipping injuries.
5. Fittings shall be molded except fittings larger than 12" which are allowed to be factory fabricated (unless molded fittings are available). Fabricated fittings shall be manufactured using Data Loggers recording heating iron face temperatures, fusion pressure and a graphic representation of the fusion cycle. The Data Logger printout shall be part of the required submittal for the fabricated fitting. Fabricated fittings shall be manufactured by ISCO or approved equal. All fabricated fittings must be approved by the Engineer prior to installation.
6. Fittings shall be marked with the following: ASTM D3261 (Butt type); manufacturer's name or trademark; material designation; date of manufacture or manufacturing code; size (including the sizing system used, such as IPS, CTS or OD). Where the fitting size does not allow complete marking, marking may be omitted in the following sequence: size, date of manufacture, material designation, manufacturer's name and trademark.

J. Joints:

1. Pipe lengths shall be assembled in the field with butt-fused joints in accordance with ASTM F2620 and the pipe manufacturer's written instructions shall apply. Butt-fused joints shall have internal bead projections of not more than 1/4 inch. Bead projections on the outside of the pipe shall be removed. Joint strength shall be equal to or greater than the pipe and shall indicate a ductile rather than brittle fracture when tested.
2. Joint with Fusion Equipment: The fusion machine shall have hydraulic pressure control for fusing two pipe ends together and shall be equipped with gauges to monitor fusion pressures. The machine shall be equipped with an electric or gasoline engine powered facing unit to square and trim the pipe ends smooth and provide full surface contact with the heating plate. The heating plate on the fusion machine shall be electrically heated and thermostatically controlled with a temperature gauge and be capable of maintaining 500°F with a tolerance of 10°F. Fusion temperature shall be as recommended by the pipe manufacturer.
3. Where excavations for pipe installation are made between manholes, the pipe shall be joined by butt-fusion or per contractor's recommendations.

The pipe bursting unit shall be designed and manufactured to force its way through the existing line by fracturing the pipe and compressing the broken pieces into the surrounding soil as the equipment progresses. The bursting unit shall generate sufficient force to burst and compact the existing pipeline. The bursting unit shall pull the polyethylene pipe with it as it moves forward. If pipe obstructions or pipe materials prevent the existing pipe from being burst properly and cannot be removed by conventional cleaning equipment, the Contractor shall make a point repair as approved by the Engineer. Excavation of the insertion pits shall be at locations determined by the Contractor. The Contractor shall utilize existing manholes where practical. Insertion pits shall be of sufficient length to allow the bursting head and pipe to enter the host pipe at an angle that will maintain the grade of the existing sewer.

Manhole inverts and bottoms shall be removed to permit access for installation equipment. Structural damage to manholes during pulling operations shall be repaired at no extra cost.

Fused joints shall be watertight and shall have tensile strength equal to that of the pipe.

Manhole inverts and bottoms shall be removed as required to permit access for installation equipment. Pipe to manhole connections shall be made with ISCO HDPE thermal-fused pipe restraints or approved equal, installed on the top of the pipe inside the manhole. The pipe shall be allowed to relax for a minimum of 12 hours (or longer period of time as determined by the Contractor based upon soils conditions and pulling force) prior to installation of the restraint and trimming any excess from the end of the pipe.

**130-1.06 Sewer Laterals:** Sewer lateral rehabilitations shall be conducted as specified herein and/or on the Project Plans.

The estimated location of the existing sewer laterals as depicted on the Project Plans are based on record information, television inspection and field evidence. This information is available for review upon request. The City assumes no responsibility for the accuracy of this information or the inadvertent omission of any such information. Not all existing sewer laterals are guaranteed to be located through these means and the Contractor may, therefor, encounter sanitary sewer laterals not specified on the Project Plans. The Contractor shall have the sole responsibility for locating all existing live laterals within the project limits. Prior to the replacement of each individual new sewer lateral, the Contractor shall determine the exact location of the existing sewer lateral at the back of sidewalk or PUE. Two acceptable methods of locating a sewer lateral at the back of sidewalk are:

1. Removing sidewalk and/or potholing by hand digging at the back of sidewalk to locate the existing lateral pipe a minimum of 24 hours prior to sewer main installation in that area.
2. Inserting a metallic electrician's "fish tape" into the existing lateral pipe after the pipe is exposed during sewer main excavation and tracing the "fish tape" using a pipe and cable metal locator.

If the Contractor chooses to use method No. 2 and cannot locate the existing sewer lateral at the back of sidewalk or PUE, they shall locate the lateral by potholing at the back of sidewalk or PUE prior to the installation at the Contractor's expense.

The Contractor shall promptly notify the Engineer if they encounter an active sewer lateral not depicted on the Project Plans or any sewer lateral that is shown to be replaced but appears to be inactive.

Sewer laterals shall be installed perpendicular to the main unless otherwise depicted on the Project Plans. Any lateral that is not installed perpendicular to the main shall have one continuous piece of No.12 insulated solid copper wire installed in the following manner:

1. Wrap wire two times around wye connection at main and secure.
2. Lay both ends on top of and along the lateral to the cleanout and up the cleanout riser. Both ends of wire shall extend approximately 6 inches beyond riser.
3. Secure wire to top of lateral pipe at approximately 5 feet intervals. Ends of wire must be easily accessible inside the cleanout box.

Active sewer laterals are to remain in service at all times except where necessary for the work. The Contractor shall notify, schedule and coordinate any service interruption with the Engineer, and property owners as specified, prior to the interruption taking place.

Plastic flex pipe may be used for temporary connections between active existing sewer laterals and the new wyes on the main. Plastic flex pipe shall be the same size as the existing lateral pipe and shall be connected to the new wye and the existing lateral by means of a Fernco coupling, or approved equivalent. Squeezing the flex pipe and inserting it into the cut end of the existing lateral or into the lateral opening of the wye will not be allowed. All temporary connection material shall be removed from the trench prior to final compaction.

Temporary sewer lateral connections shall be replaced with permanent laterals after installation of the sewer mainline is completed for each block, or at a maximum of 20 calendar days, whichever is sooner.

Lateral to HDPE pipe main connections shall be made with thermal-fused fittings. Couplings for connection of dissimilar materials shall be Mission Flex-Seal Adjustable Repair Couplings or Fernco Strong Back RC Couplings.

If it comes to the Contractor's attention that the existing gas service may or will be within three feet of the new sanitary sewer lateral, they shall notify the Engineer immediately for direction prior to continuing work on this lateral. Where direction cannot be given immediately, the Contractor shall safeguard the area and redirect crews to other contract work until direction is provided.

Where an excavation for a new sanitary sewer lateral occurs within the drip line of any tree the Contractor shall hand dig to protect tree roots as directed by the Engineer. Root pruning shall be accomplished by use of sharp tools appropriate for the size of the root to be cut. Each cut shall be clean with no torn bark or splintered wood remaining on the root. Roots shall not be pulled on by excavating equipment.

Existing irrigation facilities not shown on Project Plans may be encountered during sewer lateral installation. The Contractor shall repair any damage to existing irrigation facilities caused by their operations at the Contractor's expense.

The Contractor shall notify and coordinate the rehabilitation of individual sewer laterals with the effected resident or business.

**130-1.12 Payment:** 8" Sewer Main shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; fittings/couplings; felt expansion joint material *if required*; temporary connections; modifications to existing manholes to accept new mains; connections to new or existing manholes or mains, including sealing of penetrations water tight; supporting or removal and disposal of existing utilities in the same trench *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and

replacement of valley gutter, median curb and island *as needed*; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

The actual quantity of sewer main to be paid for will be the length measured from center of manhole to center of manhole/mainline cleanout along the finished grade to the nearest foot, excluding the sweep and the portion of pipe used for constructing the mainline cleanout. Pipe purchased by the Contractor in excess of the measured amount will not be paid for by the City.

8" Sewer Main, Pipe Bursting shall include payment for all work, equipment, materials, and incidentals necessary to replace size for size the existing sanitary sewer using pipe bursting method. **8" Sewer Main, Pipe Bursting** shall be paid for at the contract price per 3-D **linear foot** length from the center of the upstream and downstream cleanouts or manholes shown on the drawings and shall be full compensation for:

- a) locating, exposing, and measuring cleanout or manholes not previously surveyed
- b) pre and post CCTV inspections
- c) submittals, locating/potholing and protecting existing utilities, surveying
- d) saw cutting, grinding, surface demolition; excavation, removal and proper disposal of concrete, asphalt, and asphalt containing reinforcing fabric
- e) excavation, dewatering, spoil handling and proper disposal for all insertion and receiving pits
- f) protection of all existing utilities and service laterals within trench
- g) disconnection of existing laterals
- h) equipping of insertion and receiving facilities, furnishing, installing, and operating all pneumatic or static-pull pipe bursting equipment, or specialized equipment required for bursting pipe
- i) removal and disposal of existing sewer pipe and fittings where necessary
- j) removal of manhole inverts as required for new pipe installation, including reconstructing flow channels
- k) furnishing and installing pipe and fittings
- l) connection to mains and manholes, pipe restraints
- m) repairing all defects (sags) after bursting, and installing CDF saddles
- n) furnishing, preparing and compacting pipe subbase, bedding and backfill at insertion and receiving pit locations
- o) furnishing, placing and compacting asphalt concrete
- p) restoring all surfaces including sidewalks, concrete paving, curbs, gutters, median, pavement striping and marking
- q) restoring landscape and ground cover, repairing irrigation system; resetting valve boxes, monuments, and other surface features disturbed by the work
- r) repair of pavement and surface improvements damaged by surface heave
- s) furnishing personnel, and materials necessary for the installation

**Abandon or Remove Existing Sewer System Components** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to abandon or remove existing sewer system components, included but not limited to: modifications to existing manholes to remove existing mains and reform channels *as necessary*, excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; contamination



awareness; supporting or removal and disposal of existing utilities in the same trench, *if required*; abandonment or removal and disposal of existing sewer system components; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; bypass pumping *if needed*; as specified herein, and no additional allowance will be made therefor.

**4" Sanitary Sewer Lateral** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer lateral installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; investigation for existing cleanout within three feet of back of walk; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; fittings/couplings; temporary connections; connection to main and existing lateral; supporting or removal and disposal of existing utilities in the same trench, *if required*; tracer wire *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways *if needed*; setting cleanout to grade and installing concrete collars *as required*; restoration of irrigation and landscaping; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

**Sewer Manholes** shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of sewer manholes, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; couplings and pipe if connecting to existing mains; water tight sealing of penetrations; coating and patching; channel invert slide, *if required*; inside drops, *if required*; removal and disposal of existing sanitary sewer structures, *as necessary*; supporting or removal and disposal of existing utilities in the same trench, *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; concrete collar; installing and adjusting the cast iron frame and cover to grade after final paving is complete; testing; as specified herein, and no additional allowance will be made therefor.

**8" Mainline Sewer Cleanouts** shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of mainline cleanouts, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench, *if required*; placing and compacting all required bedding and backfill, including control density fill *if required*; trench plates *as needed*; temporary trench paving; installing and adjusting the cast iron frame and cover to grade after final paving is complete; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

**Trench Bracing and Shoring - Sewer** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment, Trench Bracing and Shoring Plan and doing all work involved for trench bracing and shoring and no additional allowance will be made therefor.

Full compensation for television inspection shall be considered as included in the prices paid for the various contract items of work involved and no additional allowance will be made therefor.

Full compensation for bypass pumping shall be considered as included in the prices paid for the various contract items of work involved and no additional allowance will be made therefor.

## 132 WATER DISTRIBUTION SYSTEM

**132-1.01 Description:** Water Distribution System and related appurtenances shall conform to the requirements as specified in the City of Santa Rosa Water Distribution System Construction Standard Specifications Section 132, the Project Plans, and modifications herein.

**132-1.02 Pipe:** Where shown on the plans and as required by the City of Santa Rosa Blanket Waiver 2, 3 or 4, water distribution pipe shall be Polyvinyl Chloride (PVC) Pipe with a minimum pressure class (PC) rating of PC305, DR 14 conforming to the requirements of AWWA C900 "Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4" through 12" for Water Transmission and Distribution."

**132-1.03B Backflow Device Re-Certification:** The Contractor shall coordinate their work to provide minimum out of service time to the customer.

After service installation, if existing backflow prevention device is present, device must be re-certified. Certifications shall be completed by a certified tester off the Approved List of Backflow Contractors herein. All necessary paperwork shall be completed by the Tester and one copy given to the property owner and one to the City within 72 hours after connection to the service line.

Submittals are required for all backflow device related materials.

**132-1.09 Fire Hydrants and Lateral Assembly:** Existing fire hydrants on existing mains shall be kept operational until the new main is pressurized, and new water services have been pressurized. New fire hydrants shall be operational the day following old main shut down. Notify the City Fire Department prior to any hydrant shut down.

**132-1.11 Excavation, Backfill, and Resurfacing:** The Contractor shall remove and replace sidewalk and planter strips as required for all water work to the nearest transverse score mark on both sides and full sidewalk width. All areas of sidewalk removed for construction shall be backfilled and compacted level with temporary asphalt concrete or covered with 1-inch thick plywood, laid flat with ADA compliant temporary asphalt concrete taper on both ends.

**132-1.12 Laying and Handling Pipe Materials:** If the Contractor installs a highpoint in the water system not shown on the Project Plans the Engineer may require the installation of a new combination air and vacuum valve, per City Standards, at no additional cost to the City.

**132-1.15A Water Services:** All existing meter box lids to be removed shall be salvaged and delivered to the City's Corporation Yard located at 55 Stony Point Road.

New service laterals shall be installed with a minimum horizontal clearance of 3 feet from gas laterals and a minimum of 5 feet from sewer laterals. Water services shall be installed via 'open trench' construction methods only, unless otherwise specified herein.

**132-1.20 Boring and Jacking:** Installation of bore and jack facilities shall be constructed in accordance with City Standard 872 "Water Main Encasement and End Seal" and as specified in these Technical Specifications.

The Contractor shall submit a jacking and boring plan for review by the Engineer at least 15 working days prior to beginning jack and bore operations. The plan shall include a safety plan for the jack and bore operations. Unless otherwise specified, the methods and equipment used in jacking casing shall be optional with the Contractor, provided that the proposed method is approved by the Engineer. Such approval, however, shall in no way relieve the Contractor of the responsibility for making a satisfactory installation meeting the criteria set forth herein. Only workers experienced in jacking operations shall be used in performing the work.

The Contractor shall confirm location of all existing utilities within and adjacent to the proposed location of the bored and jacked casing by potholing prior to excavating the boring/jacking and receiving pits. Where a utility goes through a boring or receiving pit it shall be adequately supported and protected. The Contractor shall be aware that underground utilities such as electrical, gas, sewer, and water lines may exist near the drill path.

Contractor shall have all materials and equipment on site prior to beginning bore and jack operations.

The Contractor shall apply for an underground classification for the jack and bore operation from Department of Industrial Relations, Mining and Tunneling Unit, 2211 Park Towne Circle, Sacramento, CA 95825, Telephone: 916-574-2540.

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

The boring pit shall have a minimum of 10 inches of crushed rock base and a sump to provide a safe dry working area and prevent deterioration of the subgrade soils. All boring pits, receiving pits, and shored structure excavations shall have barricading from traffic, fall protection handrail and access ladders in accordance with OSHA requirements.

The drilling shall be performed only with equipment adequate for the length and diameter of the bore.

The leading section of casing shall be equipped with a jacking head securely anchored thereto to prevent any wobble or variation in alignment during the jacking operation.

Casing shall be jacked true to line and grade and the Contractor shall modify the jacking operation to correct any deviation.

The driving ends of the casing shall be properly protected against spalling and other damage, and intermediate joints shall be similarly protected by the installation of sufficient bearing shims to properly distribute the jacking stresses. Any section of the casing showing signs of failure shall be removed and replaced with a new section that is adequate to carry the loads imposed upon it.

Excavation of boring and receiving pits shall be the minimum size necessary to complete the work. The excavations for the boring or jacking operations shall be adequately shored to ensure against ground movement in the vicinity of the jack supports. Boring and receiving pits shall be kept dry at all times.

Excavation shall not be made in excess of the outer dimensions of the casing being jacked unless approved by the Engineer. Every effort shall be made to avoid any loss of earth outside the jacking head. Excavated material shall be removed from the casing as excavation progresses, and no accumulation of such material within the casing will be permitted.

Steel casings shall be in accordance with ASTM A53, Grade B or ASTM A139, Grade B with a minimum yield strength of 35,000 psi. The minimum casing inside diameter shall be at 24 inches, and the minimum casing wall thickness shall be 0.375 inch. The joints of sections of casing to be jacked shall be welded with a continuous circumferential weld. It shall be the Contractor's responsibility to provide stress transfer across the joints that are capable of resisting the jacking forces involved. Welding shall be performed by a certified welder with at least three years experience in continuous circumferential welds.

Contact grouting shall commence immediately once the casing is installed and the auger boring equipment has been removed from the tunnel. The Contractor shall inject the approved eight sack sand slurry grout mix through the 2-inch threaded steel grout ports in such a manner as to completely fill all voids outside the casing pipe resulting from the boring or jacking operations.

The 2-inch ports shall be regularly spaced at 10 feet on center alternating at 30 degrees from plumb each side of the vertical centerline. Longitudinal spacing between the grout connections may be decreased to provide more frequent grouting, but in no case shall the spacings specified be exceeded. Grout pressure shall be controlled at 5-psi so as to avoid deformation of the steel casing and avoid movement of the surrounding ground. In subsequent order, each port shall be connected and pumped to 5-psi or until grout is exposed in subsequent open port. If pressure exceeds 5-psi the pump hose will be moved to the next open port. Each grout port shall be closed with a cast-iron threaded plug prior to moving on to the next grout port. This process shall be repeated until every grout port has been closed. Grout pressure shall be monitored and controlled by the pump operator who is positioned so that all gauges on the pump are clearly visible.

The Contractor shall provide casing spacers per City Standard 872. Casing spacers shall be installed in accordance with City Standard 872 and the manufacturer's recommendations.

Casing end seals shall be standard wrap around end seals, Model "W" as manufactured by Calpico or approved equal. End seals shall be installed as shown on City Standard 872 and in accordance with the manufacturer's recommendations.

Testing of the carrier pipe shall be performed in accordance with these Technical Specifications.

After jacking equipment and excavated materials from boring or jacking operations have been removed from the jacking pit, the Contractor shall remove all loose and disturbed materials below pipe grade to undisturbed earth. Backfill for boring pits and trench shall be Class 2 aggregate base  $\frac{3}{4}$ " maximum conforming to Section 26, "Aggregate Base," of these Technical Specifications. No separate measurement or payment will be made for aggregate base used to backfill bore pits. Backfill for boring pits shall be compacted to not less than 90 percent relative compaction, except that when placed under roadbed, relative compaction shall not be less than 95 percent within three feet of finished grade, as determined by California Test 216 and 231.

Upon completion of the pipeline installation work, all rubbish, excess materials, temporary structures and equipment are to be removed and the area cleaned and restored to pre-construction condition.

**132-1.30 Payment:** **8" PVC (PC 235/DR18) Water Main** shall be paid for at the contract price per **linear foot** for the specified materials (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of valley gutter, median curb and island *as needed*; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor.

**8" PVC (PC 305/DR14) Water Main** shall be paid for at the contract price per **linear foot**, (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing

utilities in the same trench *if required*; water main and fittings *as required*; pipe roping *as required*, restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill; trench plates *as needed*; temporary trench paving; removal and replacement of valley gutter, median curb and island *as needed*; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor.

**8" PVC (PC 305/DR14) Water Main With CDF Backfill** shall be paid for at the contract price per **linear foot**, (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; pipe roping *as required*, restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill; trench plates *as needed*; temporary trench paving; removal and replacement of valley gutter, median curb and island *as needed*; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor.

**8" DIP Water Main** shall be paid for at the contract price per **linear foot**, (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill; trench plates *as needed*; temporary trench paving; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor. Ductile iron pipe used in Water Main Lowering or Half Water Main Lowering shall be measured and paid for under the Water Main Lowering or Half Water Main Lowering contract item.

**Water Main Lowering** shall be paid for at the contract price **each** for the specified sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main lowering installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; pipe required to provide the horizontal distance under the structure, pipe in excess of horizontal distance between beginning and end of lowered section for lowering; connecting to non-lowered or non-raised portion of water mains; fittings *as required*; installing restrained joints, thrust blocking and harnesses; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving;; as specified herein, and no additional allowance will be made therefor.

**Half Water Main Lowering** shall be paid for at the contract price **each** for the specified sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in half water main lowering installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; pipe required to provide the horizontal distance under the structure, pipe in excess of horizontal distance between beginning and end of lowered section for lowering; connecting to non-lowered portion of water mains; fittings *as required*; installing restrained joints, thrust blocking and harnesses; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving;; as specified herein, and no additional allowance will be made therefor.

**1" Single Water Service** shall be paid for at the contract price **each** for the specified sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in water service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; saddle and valve; proper size penetration in main; water service tubing and fittings *as required*; meter box and lid to grade; meter shut off valves; tie-in at back of sidewalk; meter transfer; salvaging of existing meter box lid, placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation or rock wall *as needed*; as specified herein, and no additional allowance will be made therefor.

**1-1/2" Dual Water Service** shall be paid for at the contract price **each** for the specified sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in dual water service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; saddle and valve; proper size penetration in main; water service tubing and fittings *as required*; manifold; meter boxes and lids to grade; meter shut off valves; tie-ins at back of sidewalk; meter transfers; placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of, curb, gutter, sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation *as needed*; as specified herein, and no additional allowance will be made therefor.

**2" Single Water Service** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in water service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; saddle and valve; proper size penetration in main; water service tubing and fittings *as required*; manifold; meter boxes and lids to grade; meter shut off valves; tie-ins at existing meter;; placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation *as needed*; as specified herein, and no additional allowance will be made therefor.

**Backflow Device Re-certification** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved to perform backflow device testing, including but not limited to: coordination, notification, preparatory work, testing, and all paperwork as specified herein, and no additional allowance will be made therefor.

**Remove and Salvage Existing Fire Hydrant** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in removing and salvaging existing fire hydrant, including but not limited to: excavation and disposal of excavated material; dewatering and disposal of trench groundwater; contamination awareness; removal and salvage of existing fire hydrant; removal and separating existing hydrant barrels from risers and buries; removal and disposal of riser, break-off check valve, bury and associated appurtenances; transporting existing fire hydrant barrels to the City Municipal Services Center; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; removal and replacement of curb, gutter, and sidewalk *as needed*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Fire Hydrant and Lateral Assembly and Commercial Fire Hydrant and Lateral Assembly** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved to install fire hydrant and lateral assemblies, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; tapping saddle or tee; valve; fire hydrant and lateral assembly; half water main lowering *as required*; fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; hot tap preparation if needed (City to perform actual hot tap); connection to saddle or tee; valve box to grade; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of curb, gutter, and sidewalk *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

**8" Gate Valve** installed on a new main or as part of a cut-in tee or cross assembly shall be paid for at the contract price **each** for the specified sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in gate valve installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; valve; valve box and riser set to grade; concrete collar; valve stem riser *if required*; pier blocks; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Abandon or Remove Water System Components** shall be paid for at the contract **lump sum** price, including furnishing all labor, materials, tools and equipment, incidentals, and doing all work involved in abandoning and/or removal of water system components, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; abandonment and/or removal and disposal of old sections of main and fittings; abandonment of pipe ends 2-inch and larger; removal and/or abandonment of valves; removal of old tees and installing like size ductile iron pipe with couplers when water main is to remain active; removal of valve boxes and risers; removal of thrust blocks; removal and disposal of abandoned blow offs and appurtenances; abandoning unused or replaced water services on existing main; removing and disposing of meter boxes and lids, valves, saddles, curb stops and installing a full circle clamp; installing blind flanges *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

**Temporary Blow-off** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in temporary blow installation, including but not limited to: potholing other than as

specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; pipe; fittings *as required*; valve box; trench plates *as needed*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Permanent Blow-off** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in permanent blow off installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; pipe; fittings *as required*; valve box and lid to grade; trench plates *as needed*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Water Main Tie-in** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main tie-in installation, including but not limited to: scheduling and notifications; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings, including tee, reducers and couplings, *as required*; removal of temporary blow-offs; temporary restrained caps or plugs required to facilitate tie-in operations; partial water main lowerings at tie-in locations; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; pressure testing large scope tie ins *if required*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

Work under water main tie-ins excludes that portion of pipe paid for as under the Water Main pay item.

**Trench Bracing and Shoring - Water** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, Trench Bracing and Shoring Plan and any other work involved in trench bracing and shoring, as specified herein, and no additional allowance will be made therefor.

**Bore and Jack Steel Casing** will be paid for at the contract **linear foot** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all work involved, including, as specified herein:

- potholing,
- excavation,
- keeping the pits dry,
- disposal of contaminated soil and groundwater in conformance with these Technical Specifications,
- shoring,
- steel casing,
- pipe welding,
- contact grouting,
- casing spacers,
- testing and inspection of carrier pipe,
- end seals,
- backfill of boring pit areas,
- compaction,
- removing loose material from pits,
- disposal,
- necessary permits,

and any other work required for bore and jack steel casing not specifically enumerated on the plans or in these specifications and no additional compensation will be allowed.



**APPROVED LIST OF BACKFLOW CONTRACTORS  
INSTALLATION, TESTING & REPAIR**

<b>ACCO ENGINEERED SYSTEMS</b> 1111 ALADDIN AVE. SAN LEANDRO, CA 94577 PHONE: (510) 346-4300 LICENSE #: 120696	<b>AIR SYSTEMS SERVICE</b> 1900 BATES AVE., SUITE E CONCORD, CA 94520 PHONE: (888) 504-2772 LICENSE#: 406794	<b>ALL OUT PLUMBERS/C. CROSS</b> P.O. BOX 599 CLOVERDALE, CA 95425 PHONE: (707) 894-8434 LICENSE #: 812540
<b>ALL PRO BACKFLOW/J.LOTITO</b> P.O. BOX 2193 FOLSOM, CA 95763 PHONE: (916) 276-7162 FAX: (916) 435-4167 LICENSE #: 934557	<b>APB BACKFLOW, INC.</b> 1599 FELTA RIDGE ROAD HEALDSBURG, CA 95448 PHONE: (888) 356-7761 LICENSE: 1032328	<b>A.S.T.I SERVICES/M.DESCHLER</b> 102 COUCH ST. VALLEJO, CA 94590 PHONE: (707) 645-1782 FAX: (707) 645-1807 LICENSE #: 742693
<b>C.V. PLUMBING/C. VINE</b> P.O. BOX 219 CLOVERDALE, CA 95425 PHONE: (707) 894-8580 FAX: (707) 894-9642 LICENSE #: 843366	<b>CAGWIN &amp; DORWARD</b> P.O. BOX 1600 NOVATO, CA 94948-1600 PHONE: (800) 891-7710 FAX: (415) 897-7864 LICENSE #: 202399	<b>CARRIER CORPORATION</b> 600 MCCORMICK ST., SUITE B SAN LEANDRO, CA 94577 PHONE: (510) 347-2000 FAX: (510) 347-2099 LICENSE #: 499642
<b>CHECKRITE BACKFLOW SERV.</b> 3618 CHANATE RD. SANTA ROSA, CA 95404 PHONE: (707) 575-5296 FAX: (707) 578-6595 LICENSE #: 836022	<b>DEVOTO PLUMBING*</b> 1345 TRIPLE OAK WAY FULTON, CA 95439 PHONE: (707) 545-0734 LICENSE #: 824608	<b>ECONOMY PLUMBING</b> P.M.B. #287, 1275 4 <sup>TH</sup> ST. SANTA ROSA, CA 95404 PHONE: (707) 545-4455 FAX: (707) 543-8111 LICENSE #: 748220
<b>GROUND HOG CONSTRUCTION</b> 5353 HESSEL RD. SEBASTOPOL, CA 95472 PHONE: (707) 529-2085 FAX: (707) 823-9389 LICENSE #: 723766	<b>JV PLUMBING &amp; BACKFLOW*</b> 2911 MONTECITO AVE. SANTA ROSA, CA 95404 PHONE: (707) 799-2692 LICENSE #: 955698	<b>LEDUC &amp; DEXTER PLUMBING</b> 2833 DOWD DR., SUITE A SANTA ROSA, CA 95407 PHONE: (707) 575-1500 FAX: (707) 527-0281 LICENSE #: 651401
<b>NORTHBAY BACKFLOW</b> P.O. BOX 2765 PETALUMA, CA 94953 PHONE: (707) 484-3949 LICENSE #: 878332	<b>NORTHWOOD BACKFLOW</b> 911 LAKEVILLE ST., #369 PETALUMA, CA 94952 PHONE: (800) 750-4547 LICENSE #: 749187	<b>ONGARO AND SONS PLUMBING</b> 2995 DUTTON AVE. SANTA ROSA, CA 95407 PHONE: (707) 579-3511 LICENSE #: 215233
<b>PUMPMAN NORCAL</b> 4000 S. MOORLAND AVE. SANTA ROSA, CA 95407 PHONE: (707) 584-9191 LICENSE: 200068	<b>RH &amp; SONS WATER SERVICES</b> 225 GOLDEN RIDGE AVE. SEBASTOPOL, CA 95472 PHONE: (800) 675-3569 LICENSE #: 698774	<b>ROBERTS MECHANICAL &amp; ELECTRICAL, INC.</b> 4649 DOWDELL AVE. SANTA ROSA, CA 95407 PHONE: (707) 584-5880 LICENSE #: 556014
<b>ROBERTSON'S BACKFLOW</b> 6229 SPECKLED RD. POLLOCK PINES, CA 95726 PHONE: (530) 306-1056 FAX: (530) 303-1497 LICENSE #: 972547	<b>SCOTT CRAMER PLUMBING</b> P.O. BOX 750084 PETALUMA, CA 94975 PHONE: (707) 778-8789 FAX: (707) 658-1043 LICENSE #: 889152	<b>STEAD BACKFLOW PREVENTION</b> 2715 W. KETTLEMAN LN., #203-321 LODI, CA 95242 PHONE: (209) 327-3900 LICENSE #: 848490

**NOTE:** These contractors have a C-16 or C-36 State Contractor's License or an A-General Engineering License. They are licensed and certified to test, repair, and install any type of backflow device. They are also licensed to work on fire protection backflow devices or fire protection systems. When installing a backflow device, a City Plumbing Permit is required, and if working in the City right-of-way, an Encroachment Permit is needed. All testers are required to have a City Business License.

*\*Spanish speaking*

(Updated List Only: 10/2/2020)

## **A - FEES AND PERMITS**

The Contractor shall obtain all necessary and required permits for the project. All permits issued by the City Building Department will be issued at no cost to the Contractor; these fees will be paid by an appropriate City department. All other required permits shall be obtained at the Contractor's expense.

All electrical service charges or fees that may be required by Pacific Gas and Electric Company shall be paid for by an appropriate City department.

The City has obtained a permit from the City of Santa Rosa Water Department for a one-time groundwater discharge permit into the City sewer system. Payment of the permit fee and any other fees for discharge into the sewer system shall be paid for by the City. A copy of the Authorization to Discharge is included herein. Any required water sampling will be the responsibility of the City. The phone number for the Environmental Compliance Section is (707) 543-3369.

Full compensation for securing, complying and the cost of all permits shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.

**Issued To:**

Sara Mathews  
City of Santa Rosa Public Works  
69 Stony Circle  
Santa Rosa, CA 95401

**Located At:**

Slater Street: Dexter to Lewis and Lewrosa Way  
Santa Rosa, CA 95404

**EFFECTIVE DATE: 01/18/2021****EXPIRATION DATE: Notice of Completion Date**

**CIP Project Name:** Slater St. Water/Sewer Replacement  
**Wastewater Discharge Permit #:** SR-1X09369

The contractor to be awarded the City of Santa Rosa Capital Improvement Project (CIP) project referenced above is authorized to discharge any generated non-contaminated groundwater and/or trench water to the City of Santa Rosa's sewer collection system. This discharge will be in accordance with the City of Santa Rosa's Most Current Sewer Code and/or Ordinance, any applicable provisions of federal or state law or regulation, and in accordance with discharge point(s), effluent limitations, monitoring requirements, and other conditions set forth herein.

**PERMITTEE SHALL COMPLY WITH ALL ITEMS BELOW:**

1. Due to the potential for groundwater contamination, wastewater generated from this project that is within 500 ft. of a contaminated location, shall be collected, stored, and tested for EPA 8260 prior to any discharge to the sanitary sewer. Approval to discharge will be required by Environmental Compliance Personnel.
2. Sediment must be removed prior to any discharge to the sanitary sewer.
3. The required analysis shall be performed by a California State Certified Laboratory and all test procedures must comply with EPA Solid Waste 846 and Title 40 Code of Federal Regulations, Part 136 testing protocol.
4. The laboratory analysis can be submitted by e-mail to this office at [envcompliance@srcity.org](mailto:envcompliance@srcity.org) and upon review by Environmental Compliance Personnel the stored wastewater may be discharged direct to the sanitary sewer if it meets the local limits and the sediment is removed.
5. Any wastewater not meeting local limits shall either be disposed through a licensed hazardous waste treatment, storage, and disposal or recycling facility or alternatively be treated on-site to meet the local limits prior to being discharged to the sanitary sewer.

6. The test results shall be submitted to this office within 5 days of the sampling event in order to confirm ground water quality. Any test result exceeding the local limit for the required parameter shall immediately cease the discharge of groundwater from this project to the sanitary sewer.
7. The permittee shall be responsible for all liability imposed by law for personal injury or property damage caused by work done by permittee under this permit, including work beyond the scope of this permit. If any claim of such liability is made against the City, its officers or employees, permittee shall defend, indemnify and hold them, and each of them, harmless from such claim and liability insofar as permitted by law.
8. Discharge Limitation Parameters: EPA 8260 - 2.13mg/L
9. The discharge rate to the sanitary sewer shall be at a discharge rate that will not result in any spillage or surcharging of the sewer system.
10. Perchloroethylene/tetrachloroethylene is prohibited from being discharged to the sanitary sewer.

Deputy Director Environmental Services: \_\_\_\_\_

Date: \_\_\_\_\_

**SUBREGIONAL WATER RECLAMATION SYSTEM**

**Environmental Compliance Section, 4300 Llano Road, Santa Rosa, CA 95407**  
**PH (707) 543-3369    FX (707) 543-3398    email: envcompliance@srcity.org**



Claims submitted by Contractor shall be accompanied by a notarized certificate containing the following language:

Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code sections 12650 *et seq.*, the undersigned,

\_\_\_\_\_,  
(Name)

\_\_\_\_\_ of  
(Title)

\_\_\_\_\_  
(Contractor)

hereby certifies that the claim for additional compensation made herein is supported by a true statement of the actual costs incurred and time expended on this project and is fully documented by records maintained by Contractor.

Dated \_\_\_\_\_

/s/ \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of

\_\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead expenses, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the City at its discretion.

Any costs or expenses incurred by the City in reviewing or auditing any claims that are not supported by Contractor's cost accounting or other records shall be deemed to be damages incurred by the City within the meaning of the California False Claims Act.

BID FORMS

**CITY OF SANTA ROSA**

**STATE OF CALIFORNIA**

SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT

The work to be performed and referred to herein is in the City of Santa Rosa, California and consists of improvements to be constructed in accordance with the provisions of the Invitation for Bids, containing the Notice to Bidders, the Special Provisions, the Project Plan(s), the Bid Forms and the Contract, all of which are by reference incorporated herein, and each Addendum, if any is issued, to any of the above which is also incorporated by reference herein.

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that Contractor has carefully examined the Project Plans, Invitation for Bids and conditions therefor, and is familiar with all bid requirements, that Contractor has examined this Contract and the provisions incorporated by reference herein, and Contractor hereby proposes, and agrees that if its bid is accepted by the City, Contractor will provide all necessary machinery, tools, apparatuses, and other means of construction, and to do all the work and furnish all the materials and services required to complete the construction in accordance with the Contract, the Special Provisions, the Project Plan(s), and Addenda to any of the above as incorporated by reference, in the time stated herein, for the unit prices and/or lump sum prices as follows:

NAME OF BIDDER: \_\_\_\_\_

Contract #: **C00189**

Project Title: **SLATER STREET & LEWROSA WAY SEWER & WTER MAIN REPLACEMENT PROJECT**

Line #	Description	Units	Quantity	Unit Price	Total Price
1	TRAFFIC CONTROL	LS	1	\$ _____	\$ _____
2	WATER POLLUTION CONTROL	LS	1	\$ _____	\$ _____
3	FURNISH STORAGE TANKS	MONTH	3	\$ _____	\$ _____
4	STORAGE, TREATMENT AND DISPOSAL OF GROUNDWATER	LS	1	\$ _____	\$ _____
5	SOIL SAMPLING AND TESTING	LS	1	\$ _____	\$ _____
6	CONTAMINATED SOIL DISPOSAL	CY	480	\$ _____	\$ _____
7	ADJUST MANHOLE TO GRADE	EA	1	\$ _____	\$ _____
8	ADJUST MONITORING WELL TO GRADE	EA	2	\$ _____	\$ _____
9	UTILITY CLEARANCES	LS	1	\$ _____	\$ _____
10	REMOVE & REPLACE WOOD FENCE	LF	70	\$ _____	\$ _____
11	IRRIGATION MODIFICATIONS	LS	1	\$ _____	\$ _____
12	SUBGRADE STABILIZATION/DIGOUTS	SY	98	\$ _____	\$ _____
13	ROADWAY EXCAVATION (F)	CY	1644	\$ _____	\$ _____
14	SOIL STABILIZATION FABRIC	SY	5956	\$ _____	\$ _____
15	ASPHALT CONCRETE	TON	2211	\$ _____	\$ _____
16	ASPHALT CONCRETE CONFORM	TON	6	\$ _____	\$ _____
17	PERMANENT TRENCH PAVING	TON	23	\$ _____	\$ _____
18	CATCH BASIN, TYPE I	EA	2	\$ _____	\$ _____
19	CATCH BASIN, TYPE II	EA	2	\$ _____	\$ _____
20	48" STORM DRAIN MANHOLE WITH REDUCER SLAB	EA	1	\$ _____	\$ _____
21	4' X 7' STORM DRAIN JUNCTION BOX	EA	2	\$ _____	\$ _____
22	15" CLASS III REINFORCED CONCRETE PIPE	LF	60	\$ _____	\$ _____
23	18" CLASS V REINFORCED CONCRETE PIPE	LF	33	\$ _____	\$ _____
24	TRENCH BRACING AND SHORING - REINFORCED CONCRETE PIPE	LS	1	\$ _____	\$ _____
25	COBBLE NON-WALKABLE SURFACE	SF	342	\$ _____	\$ _____
26	CURB AND GUTTER	LF	626	\$ _____	\$ _____
27	CURB RAMP	SF	862	\$ _____	\$ _____
28	SIDEWALK	SF	1418	\$ _____	\$ _____
29	DRIVEWAY	SF	175	\$ _____	\$ _____
30	VALLEY GUTTER	SF	255	\$ _____	\$ _____
31	REMOVE AND REPLACE ROADSIDE SIGN	EA	8	\$ _____	\$ _____
32	THERMOPLASTIC STRIPES AND PAVEMENT MARKINGS	SF	248	\$ _____	\$ _____

Line #	Description	Units	Quantity	Unit Price	Total Price
33	BLUE, RETROREFLECTIVE PAVEMENT MARKERS	EA	5	\$ _____	\$ _____
34	8" SEWER MAIN	LF	1704	\$ _____	\$ _____
35	8" SEWER MAIN, PIPE BURSTING	LF	324	\$ _____	\$ _____
36	ABANDON OR REMOVE EXISTING SEWER SYSTEM COMPONENTS	LS	1	\$ _____	\$ _____
37	4" SANITARY SEWER LATERAL	EA	63	\$ _____	\$ _____
38	48" SEWER MANHOLE	EA	7	\$ _____	\$ _____
39	48" SEWER MANHOLE WITH CHANNEL INVERT SLIDE	EA	1	\$ _____	\$ _____
40	60" SEWER MANHOLE WITH ECCENTRIC CONE	EA	1	\$ _____	\$ _____
41	8" MAINLINE SEWER CLEANOUT	EA	5	\$ _____	\$ _____
42	TRENCH BRACING AND SHORING-SEWER	LS	1	\$ _____	\$ _____
43	8" PVC (PC235/DR18) WATER MAIN	LF	1452	\$ _____	\$ _____
44	8" PVC (PC305/DR14) WATER MAIN	LF	142	\$ _____	\$ _____
45	8" PVC (PC305/DR14) WATER MAIN WITH CDF BACKFILL	LF	82	\$ _____	\$ _____
46	8" DIP WATER MAIN	LF	211	\$ _____	\$ _____
47	WATER MAIN LOWERING	EA	2	\$ _____	\$ _____
48	HALF WATER MAIN LOWERING	EA	1	\$ _____	\$ _____
49	1" SINGLE WATER SERVICE	EA	48	\$ _____	\$ _____
50	1-1/2" DUAL WATER SERVICE	EA	1	\$ _____	\$ _____
51	2" SINGLE WATER SERVICE	EA	1	\$ _____	\$ _____
52	BACKFLOW DEVICE RE-CERTIFICATION	EA	2	\$ _____	\$ _____
53	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	EA	3	\$ _____	\$ _____
54	FIRE HYDRANT AND LATERAL ASSEMBLY	EA	3	\$ _____	\$ _____
55	COMMERCIAL FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1	\$ _____	\$ _____
56	8" GATE VALVE	EA	12	\$ _____	\$ _____
57	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	LS	1	\$ _____	\$ _____
58	TEMPORARY BLOW-OFF	EA	4	\$ _____	\$ _____
59	PERMANENT BLOW-OFF	EA	1	\$ _____	\$ _____
60	WATER MAIN TIE-IN	EA	6	\$ _____	\$ _____
61	TRENCH BRACING AND SHORING-WATER	LS	1	\$ _____	\$ _____
62	BORE AND JACK STEEL CASING	LF	20	\$ _____	\$ _____
					Total: \$ _____



In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the "Total" column. In case of discrepancy between the sum of the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column shall prevail. The bid comparison will be based on the sum of the "Total" column for each bidder.

If this Contract Bid is accepted by the City and the undersigned fails to execute the Contract and to give all the bonds required under the Contract, with a surety satisfactory to the Award Authority of the City of Santa Rosa, within ten calendar days after bidder has received the Notice of Award from the Engineer, then the Award Authority may, at its option, determine that the bidder has abandoned the Contract, and thereupon this bid and the acceptance thereof shall be null and void, and the forfeiture of the security accompanying this bid shall be in accordance with California Public Contract Code section 20172.

The undersigned understands and agrees that the City is not responsible for any error or omissions on the part of the undersigned in making this bid.

The bidder to whom the Contract is awarded agrees to execute the Contract in favor of the City, in the form attached, and to deliver any and all required bond(s) and insurance certificates within ten calendar days from the date of Contractor's receipt of the Notice of Award. Following the award of the Contract, Contractor shall commence work within ten calendar days from the day authorized in the Notice to Proceed and diligently prosecute the same to completion in accordance with Section 8-1.04.

## LIST OF SUBCONTRACTORS

**NAME OF BIDDER:** \_\_\_\_\_

The following is a list of each subcontractor who will perform work or labor or render services to the undersigned for the construction of the project in an amount in excess of ½ of 1% of the total amount of this bid.

The undersigned agrees that any portion of the work in excess of ½ of 1% of the total amount of this bid and for which no subcontractor is designated herein will be performed by the undersigned.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK (ITEM NO.)

### LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER:

[illegible]

NONCOLLUSION DECLARATION  
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_ [date], at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

NOTE:           The above Noncollusion Declaration is part of the Contract Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Declaration.

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

Accompanying this bid is a guaranty in the form of (Notice: Insert the words "cash \$," "Cashier's Check," "Certified Check," or "Bidder's Bond" as the case may be):

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in an amount equal to at least ten percent of the total of this bid.

The undersigned further agrees that if Contractor does not execute the Contract and deliver the necessary bonds to the City within the period of time specified in this Invitation for Bids, the proceeds of the security accompanying this bid shall become the property of the City of Santa Rosa, California, and this bid and the acceptance thereof may, at the option of the City, be considered null and void.

The undersigned is licensed in accordance with an act providing for the registration of Contractors, License No. \_\_\_\_\_, Class \_\_\_\_\_, expiration date \_\_\_\_\_.

The undersigned is registered with the Department of Industrial Relations, Registration No. \_\_\_\_\_.

**IMPORTANT NOTICE:** If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager of the corporation; if a partnership, state true name of partnership, also the names of all partners in the partnership; if the bidder is a sole proprietor, state the business name and the proprietor's name in full.

Secretary of State Business Entity Number: \_\_\_\_\_.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Business Address

\_\_\_\_\_

Telephone Number

I declare under penalty of perjury that the foregoing is true and correct.

BIDDER'S SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CITY OF SANTA ROSA**  
**SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT**  
**ELIGIBILITY INFORMATION FORM – PIPE BURSTING WITH HDPE/HDPE PIPE FUSION**

Name of Contractor:	_____		
Contractor's License #:	_____	Classification: _____	Expiration: _____
Name of Subcontractor for pipe bursting installation (if applicable):	_____		
Subcontractor's License #:	_____	Classification: _____	Expiration: _____

**Similar Pipe Bursting with HDPE Sanitary Sewer Projects Completed in the last 5 years**

Please list at least 3 projects similar in size and nature [325 linear feet or more of 6-inch to 8-inch HDPE sanitary sewer piping installed via pipe-bursting in California] that your company or the subcontractor's company that you propose to use for pipe installation for this project has completed within the 5 years preceding the bid opening date. If necessary, please make copies of these sheets to provide a complete listing.

BIDDERS ARE DIRECTED TO THE BIDDER'S REPRESENTATIONS SECTION OF THE INSTRUCTIONS TO BIDDERS IN THE BID DOCUMENTS. BIDS SUBMITTED BY BIDDERS THAT DO NOT MEET THE ELIGIBILITY CRITERIA WILL BE CONSIDERED NON-RESPONSIVE AND WILL NOT BE CONSIDERED AND/OR THE BIDDER WILL BE DEEMED NOT RESPONSIBLE FOR PURPOSES OF THIS PROJECT.

**List of Related Contractor Experience for the Last 5 Years (attach additional sheets as needed)**

Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of pipe bursting with HDPE pipe and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of pipe bursting with HDPE pipe and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of pipe bursting with HDPE pipe and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of pipe bursting with HDPE pipe and associated work):	_____ _____		

**Employee HDPE Certifications and Experience (attach certifications and additional sheets as needed)<sup>1,2</sup>**

Employee Name: _____ Pipe Bursting with HDPE Pipe Installation: Certification #: _____ Certification Date: _____ HDPE Pipe Fusion: Certification #: _____ Certification Date: _____
Employee Name: _____ Pipe Bursting with HDPE Pipe Installation: Certification #: _____ Certification Date: _____ HDPE Pipe Fusion: Certification #: _____ Certification Date: _____
Employee Name: _____ Pipe Bursting with HDPE Pipe Installation: Certification #: _____ Certification Date: _____ HDPE Pipe Fusion: Certification #: _____ Certification Date: _____
Employee Name: _____ Pipe Bursting with HDPE Pipe Installation: Certification #: _____ Certification Date: _____ HDPE Pipe Fusion: Certification #: _____ Certification Date: _____

<sup>1</sup> The employee(s) indicated above must be the individual(s) used for the work associated with this project. No substitutions for this person(s) will be allowed without submitting all required information for an equivalently experienced individual to the City and obtaining prior written consent from the City.

<sup>2</sup> Please attach copies of all certifications held for Pipe Bursting with HDPE installation and/or fusion for each employee.

**CITY OF SANTA ROSA**  
**SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT**  
**ELIGIBILITY INFORMATION FORM – BORE AND JACK**

Name of Contractor:	_____		
Contractor's License #:	_____	Classification: _____	Expiration: _____
Name of Subcontractor for bore and jack installation (if applicable):	_____		
Subcontractor's License #:	_____	Classification: _____	Expiration: _____

**Similar Bore and Jack Projects Completed in the last 5 years**

Please list at least 3 projects similar in size and nature [20 linear feet or more of 18-inch steel casing installed via bore and jack in California] that your company or the subcontractor's company that you propose to use for pipe installation for this project has completed within the 5 years preceding the bid opening date. If necessary, please make copies of these sheets to provide a complete listing.

BIDDERS ARE DIRECTED TO THE BIDDER'S REPRESENTATIONS SECTION OF THE INSTRUCTIONS TO BIDDERS IN THE BID DOCUMENTS. BIDS SUBMITTED BY BIDDERS THAT DO NOT MEET THE ELIGIBILITY CRITERIA WILL BE CONSIDERED NON-RESPONSIVE AND WILL NOT BE CONSIDERED AND/OR THE BIDDER WILL BE DEEMED NOT RESPONSIBLE FOR PURPOSES OF THIS PROJECT.

**List of Related Contractor Experience for the Last 5 Years (attach additional sheets as needed)**

Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of bore and jack and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of bore and jack and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of bore and jack and associated work):	_____ _____		
Project Name:	_____		
Owner Name:	_____		
Owner Reference Name and Phone No.:	_____		
Brief Project Description (linear feet of bore and jack and associated work):	_____ _____		



# **CONTRACT**

## **CITY OF SANTA ROSA**

### **CALIFORNIA**

**CONTRACT NO. C00189**

## **SLATER STREET & LEWROSA WAY SEWER & WATER MAIN REPLACEMENT PROJECT**

This Contract is made and entered into as of date to be added upon award at Santa Rosa, California, between the City of Santa Rosa ("City") and \_\_\_\_\_ of \_\_\_\_\_ ("Contractor").

ARTICLE I - For and in consideration of the payment and agreement hereinafter mentioned, to be made and performed by City, and under the conditions expressed in the required bonds hereunto annexed, Contractor agrees that for the benefit of City, at its own cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the Special Provisions to be furnished by City, necessary to construct and complete the work herein described in a good, workmanlike, and substantial manner. The work embraced herein shall be done in accordance with the Standard Specifications of the State of California Department of Transportation, dated 2010, insofar as the same may apply (Standard Specifications); in accordance with the City of Santa Rosa Construction Specifications for Public Improvements (City Specifications); in accordance with the City of Santa Rosa Design and Construction Standards, (City Standards); in accordance with the State of California Department of Transportation Standard Plans, dated 2010 (Standard Plans), (collectively, "Contract Documents") and in accordance with the Special Provisions hereinabove set forth, all of which are hereby incorporated into and made part of this Contract.

The work to be performed is further shown upon a plan consisting of 25 sheets entitled, Slater Street & Lewrosa Way Sewer & Water Main Replacement Project, File Number 2021-0011, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

ARTICLE II - Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all the work contemplated and embraced in this Contract; also for all loss or damages arising out of the nature of the work aforesaid, or from the acts of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by City and for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work, and the whole thereof in the manner and according to the Project Plans and Invitation for Bids therefor, and the requirements of the Engineer under them to wit:

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			\$ _____	\$ _____
TOTAL BASE BID (SUM OF "TOTAL" COLUMN)			\$ _____	

**BID ITEMS IN THIS SECTION WILL BE INSERTED  
UPON AWARD OF THE CONTRACT AND SHALL BE  
THE SAME AS THOSE BID UPON.**

ARTICLE III - City and Contractor hereby promise and agree that Contractor shall provide the materials and do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and City hereby agrees to pay for the same at the time, in the manner, and upon the conditions set forth; and the parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein stated.

ARTICLE IV - By execution of this Contract, Contractor hereby represents and certifies that Contractor is aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor hereby agrees to comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE V - It is further expressly agreed by and between the parties hereto that the Invitation for Bids, containing the Notice to Bidders including any required Bonds, the Contract Documents, and any Addenda are all essential parts of this Contract and are specially referred to and by such reference made a part hereof. In the event of any conflict in the provisions thereof, the terms of said documents shall control each over the other, in the following order:

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

**City:**

City of Santa Rosa,  
a Municipal corporation

By: \_\_\_\_\_

Title: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_

Office of City Attorney

**Contractor:**

Name of Contractor,  
Type of entity

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_