

INVITATION FOR BIDS



FOR CONSTRUCTING

LA PALOMA AVE / EAST HAVEN DR / ROGERS WY SEWER AND WATER MAIN REPLACEMENT

CONTRACT NUMBER
C00308

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

2020

ATTENTION
Prebid Conference
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

LA PALOMA AVE / EAST HAVEN DR / ROGERS WY
SEWER AND WATER MAIN REPLACEMENT

Contract No. C00308

LA PALOMA AVE / EAST HAVEN DR / ROGERS WY SEWER AND WATER MAIN REPLACEMENT

TABLE OF CONTENTS

NOTICE TO BIDDERS

NOTICE TO BIDDERS	1
-------------------------	---

SPECIAL PROVISIONS

GENERAL SPECIFICATIONS

1 General	5
2 Bidding	6
3 Contract Award and Execution	8
4 Scope of Work	12
5 Control of Work	13
6 Control of Materials	16
7 Legal Relations and Responsibility to the Public	19
8 Prosecution and Progress	23
9 Measurement and Payment	24

TECHNICAL SPECIFICATIONS	27
--------------------------------	----

Section 12	Temporary Traffic Control	28
Section 13	Water Pollution Control	32
Section 14	Environmental Stewardship	35
Section 15	Existing Facilities	37
Section 19	Earthwork	42
Section 20	Landscape	46
Section 26	Aggregate Base	49
Section 39	Hot Mix Asphalt	50
Section 39A	Hot Mix Asphalt Concrete Trench Paving	57
Section 51	Concrete Structures	59
Section 56	Signs	60
Section 65	Reinforced Concrete Pipe	61
Section 73	Concrete Curbs and Sidewalks	63
Section 84	Traffic Stripes and Pavement Markings	66
Section 85	Pavement Markers	68
Section 86	Electrical Systems	69
Section 90	Concrete	72
Section 112	Tree Protection	73
Section 121	Notification	74
Section 124	Material Recycling	75
Section 130	Sanitary Sewer System	76
Section 132	Water Distribution System	78
Section A	Fees and Permits	85

BID FORMS

Contract Bid	86
Unit Price Schedule	87

List of Subcontractors.....90
List of Previous Similar Jobs.....91
Noncollusion Declaration.....92
Bid Bond Affidavit and Bidder's Signature.....93

CONTRACT

Contract94

NOTICE TO BIDDERS

➤	For technical questions regarding this project, contact Grant Bailey at (707) 543-4508.
➤	For direct access to plans, specifications and planholders' lists, go to www.srcity.org/bids and click on <u>Bid/Proposal Opportunities</u> or call (707) 543-3800.
➤	For direct access to bid results, go to www.srcity.org/bids . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> or call (707) 543-3835.

- IMPORTANT -

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., April 14, 2020, for La Paloma Ave/East Haven Dr/ Rogers Wy Sewer and Water Main Replacement, Contract No. C00308. (Engineer's Range: \$2,500,000.00 - \$2,900,000.00.)

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.

Pre-Bid Meeting

Prospective bidders, subcontractors, and material suppliers are invited to attend a pre-bid meeting scheduled to be held at 10:00 a.m., April 7, 2020, in the Transportation and Public Works Department located at 69 Stony Circle, Santa Rosa, California.

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.

**CITY OF SANTA ROSA
C00308 - LA PALOMA AVE / EAST HAVEN DR / ROGERS WY
SEWER AND WATER MAIN REPLACEMENT
ESTIMATED QUANTITIES**

Item No.	Description	Quantity	Units
1	TRAFFIC CONTROL	1	LS
2	WATER POLLUTION CONTROL	1	LS
3	ADJUST EXISTING VALVE BOXES TO GRADE	3	EA
4	ADJUST EXISTING MANHOLES TO GRADE	2	EA
5	RELOCATE EXISTING TRAFFIC SIGNAL BOXES	2	EA
6	RESET EXISTING TRAFFIC HANDHOLES AND GAS VALVE BOXES TO GRADE	2	EA
7	REMOVE AND REPLACE SIDEWALK DRAIN	1	EA
8	UTILITY CONFLICT RESOLUTION	1	FA
9	UTILITY CLEARANCES	1	LS
10	REMOVE TREE (UP TO 24" DBH) AND GRIND STUMP	3	EA
11	REMOVE TREE (GREATER THAN 24" DBH) AND GRIND STUMP	1	EA
12	SUBGRADE STABILIZATION/DIGOUTS	381	SY
13	ROADWAY EXCAVATION (F)	1,879	CY
14	SOIL STABILIZATION FABRIC	7,608	SY
15	STREET TREE	3	EA
16	ASPHALT CONCRETE SURFACE	1,055	TON
17	ASPHALT CONCRETE BASE	1,798	TON
18	PERMANENT TRENCH PAVING	95	TON
19	CATCH BASIN, TYPE I	4	EA
20	CATCH BASIN, TYPE II	3	EA
21	REMOVE AND REPLACE ROADSIDE SIGN	13	EA
22	15" CLASS V REINFORCED CONCRETE STORM DRAIN PIPE	61	LF
23	18" CLASS V REINFORCED CONCRETE STORM DRAIN PIPE	104	LF
24	CURB AND GUTTER	1,216	LF
25	CURB RAMP	1,859	SF
26	SIDEWALK	3,444	SF
27	DRIVEWAY	873	SF
28	VALLEY GUTTER	887	SF
29	CONCRETE APRON	330	SF
30	COBBLE NON-WALKABLE SURFACE	266	SF
31	12" THERMOPLASTIC CROSSWALK STRIPE, WHITE	438	LF
32	TRAFFIC STRIPE, DETAIL 4	1,308	LF
33	TRAFFIC STRIPE, DETAIL 23	320	LF
34	THERMOPLASTIC TRAFFIC MARKINGS, WHITE	284	SF
35	BLUE, RETROREFLECTIVE PAVEMENT MARKER	5	EA
36	PUSH BUTTON ASSEMBLY	2	EA
37	8" SEWER MAIN	878	LF
38	10" SEWER MAIN	1,114	LF
39	ABANDON OR REMOVE EXISTING SANITARY SEWER SYSTEM COMPONENTS	1	LS
40	4" SANITARY SEWER LATERAL	37	EA
41	48" SANITARY SEWER MANHOLE	8	EA
42	TRENCH BRACING AND SHORING-SEWER	1	LS
43	REMOVE EXISTING SEWER LATERAL CLEANOUTS	10	EA
44	4" PVC (PC235/DR18) WATER MAIN	42	LF
45	8" PVC (PC235/DR18) WATER MAIN	1,293	LF
46	12" PVC (PC235/DR18) WATER MAIN	430	LF
47	8" PVC (PC305/DR14) WATER MAIN	205	LF
48	12" PVC (PC305/DR14) WATER MAIN	20	LF

CITY OF SANTA ROSA
C00308 - LA PALOMA AVE / EAST HAVEN DR / ROGERS WY
SEWER AND WATER MAIN REPLACEMENT
ESTIMATED QUANTITIES

Item No.	Description	Quantity	Units
49	WATER MAIN LOWERING	1	EA
50	HALF WATER MAIN LOWERING	1	EA
51	1" SINGLE WATER SERVICE	29	EA
52	1" SINGLE WATER SERVICE, TRAFFIC RATED BOX AND LID	3	EA
53	BACKFLOW DEVICE RE-CERTIFICATION	3	EA
54	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	4	EA
55	FIRE HYDRANT AND LATERAL ASSEMBLY	4	EA
56	REMOVE AND RELOCATE FIRE HYDRANT AND LATERAL ASSEMBLY	1	EA
57	8" GATE VALVE	10	EA
58	12" GATE VALVE	4	EA
59	12" CUT-IN GATE VALVE	1	EA
60	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	1	LS
61	LEADED JOINT REMOVAL	7	EA
62	TEMPORARY BLOW-OFF	8	EA
63	WATER MAIN TIE-IN	8	EA
64	TRENCH BRACING AND SHORING-WATER	1	LS

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.

Project plans, bid and contract forms for C00308 La Paloma Ave/East Haven Dr/Rogers Wy Sewer and Water Main Replacement may be obtained through PlanetBids at 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, 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.



J. ERICH RAUBER, P.E., G.E.
Supervising Engineer

3/4/20
Date

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

LA PALOMA AVE / EAST HAVEN DR / ROGERS WY SEWER AND WATER MAIN REPLACEMENT

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 La Paloma Ave/East Haven Dr/Rogers Wy Sewer and Water Main Replacement, 2019-0050
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

2-1.06 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. 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)

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, 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: 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.

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.	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.

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 La Paloma Ave/East Haven Dr/Rogers Wy Sewer and Water Main Replacement, 2019-0050
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 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. 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:

145 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 15th day after receipt of the written request from the Engineer. If the 15th 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.

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.



**Technical Specifications
(Special Provisions)**

for

**La Paloma Ave, East Haven Dr, & Rogers Way Sewer
and Water System Improvements**

Contract No. C00308

February 2020

Steven R. Van Saun, RCE 86180



2/11/2020

Date



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

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: The first paragraph of Section 12-1.03, "Flagging Costs" 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 proposes 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 and changeable message boards 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 his 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", to 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. At no time shall the Contractor stage equipment or materials within 50 feet of the intersections of East Haven Drive and 4th Street and Rogers Way and 4th Street. 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.

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 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.

12-7 Temporary Pedestrian Walkways

12-7.01 Pedestrian Traffic Control: 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 work day 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.

[Version: 08/16/18 CDA STD2010]

13 WATER POLLUTION CONTROL

13-1 General

13-1.01A: 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.
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.

13-2 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 you to prepare **Water Pollution Control** Program as the **lump sum** price for **Water Pollution Control** and as follows:

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/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 Contractor hereunder.

In the event there are insufficient amounts owed to 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 Contractor for violations of City Code Chapter 17-12, "Storm Water".

13-4.03C(2): Material Storage/CASQA Material Delivery and Storage (BMP WM-1)

13-4.03C(3): Material Use/CASQA Material Use (BMP WM-2)

13-4.03C(4): Stockpile Management/CASQA Stockpile Management (BMP WM-3): Do not block storm water flows.

13-4.03D(1): 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/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/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.

13-4.03E(1): Water Control and Conservation/CASQA Water Conservation Practices (BMP NS-1 and NS-2)

13-4.03E(3): Vehicle and Equipment Cleaning/CASQA Vehicle and Equipment Cleaning (BMP NS-8)

13-4.03E(4): Vehicle and Equipment Fueling and Maintenance/CASQA Vehicle and Equipment Fueling (BMP NS-9), and CASQA Vehicle and Equipment Maintenance (BMP NS-10)

13-4.03E(7): Paving, Sealing, Sawcutting, 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, digouts 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/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/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. The contractor pays all maintenance costs.

13-7 Temporary Tracking Control

13-7.01A: Temporary Tracking Control/Stabilized Construction Entrance and Exit (BMP TC-1), Entrance Outlet Tire Wash (BMP TC-3)

13-7.03 Construction/CASQA Stabilized Construction Site Entrance / Exit (BMP TC-1)

13-7.04 Payment: Temporary Tracking Control shall be paid for at the lump sum price for Water Pollution Control. The contractor pays all maintenance costs.

[Revised: 12/15/16 CDA STD2010]

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 work day 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. 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.

14-10.02A(1) Submittals: 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.

14-10.02D Payment: Full compensation for material recycling as specified herein shall be considered as included in the contract prices paid for various items of work, and no additional compensation will be allowed therefor.

14-11 Hazardous Waste and Contamination

14-11.02F(3) Hazardous Waste Transport and Disposal: The Contractor shall be responsible for separating asphalt, concrete, base rock, asbestos cement pipe, and other non-contaminated debris from 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 14-10.01 of these Technical Specifications. Dispose of asbestos cement pipe as specified in Section 15-2.02N of these Technical Specifications. Excess project soil may be disposed of at City Pond 2 in accordance with Section 19-2.03B of these Technical Specifications.

14-11.06: Department Generated Contaminated Soil: No known contamination exists within the project area.

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.

[Revised: 01/08/18-CDA STD2010]

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.

Attention is directed to the Contractor that pea gravel, river run, or sloughing material may be encountered in existing utility trenches throughout the project. Contractor shall be responsible for mitigating issues arising from unstable trench material as they are encountered. 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 Sections 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 85 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 is advised that asbestos cement pipe (ACP) will 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.

15-2.04G Reconstruct Sidewalk Drain: Reconstruct sidewalk drain shall be done in conformance with requirements of Section 73 of the City Specifications, City STD-406 and as directed by the Engineer.

The Contractor shall remove portions of existing curb, gutter, and sidewalk, and the existing sidewalk drain and install new sidewalk drain, curb, gutter and sidewalk at the location designated and as directed by the Engineer.

15-2.08A 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 Manholes and Valve Boxes: Existing manhole frames and covers, and valve boxes that must be adjusted to finish grade shall be adjusted to grade after paving is completed. 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 to be adjusted to grade and shall furnish the Engineer a copy of said record prior to starting construction. For valve boxes not maintained by the City, the Contractor shall coordinate the adjustment to grade of valve boxes with the respective owner of the valve box.

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 and valve boxes whether new or existing, with white paint by the end of that working day.

All new and existing manholes and valve boxes 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 and valve boxes 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.

Prior to removal of an existing manhole frame, a platform shall be constructed in the manhole above the top of the sewer utility to prevent any dirt or debris from falling into the sewer manhole. 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 expense of the Contractor.

Manhole frames shall be reinstalled to align directly over the grade rings. Any frames misaligned by more than ½ inch shall be removed and reinstalled.

15-2.13 Payment: **Adjust Existing Valve Boxes 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 adjust valve boxes (new and existing) to grade, including but not limited to, required excavation and backfill, replacing to current City Standards coordination with the appropriate owner, and removing silt and debris, as specified herein, and no additional allowance will be made therefor.

Adjust Existing Manholes 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.

Relocate Existing Traffic Signal Boxes 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 removing, replacing and resetting existing City facility boxes and lids to grade, as specified herein, and no additional allowance will be made therefor.

Reset Existing Traffic Handholes and Gas Valve Boxes 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 removing, replacing and resetting existing City facility boxes and lids to grade, including coordination with appropriate owner, as specified herein, and no additional allowance will be made therefor.

Remove and Replace Sidewalk Drain 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 installation of sidewalk drain complete in place, including 3-inch drain pipe, wire mesh, breaking out and replacing curb and gutter, 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.

Reinforcing steel may be encountered in portions of concrete to be removed 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 the 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.

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.

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 Utility Conflict Resolution: In accordance with Section 5-1.36D Non-Highway Facilities, and Section 19-1.03D Buried Man-Made Objects of the Standard Specifications: Remove, relocate or mitigate utility conflicts, man-made buried objects or other unforeseen items as ordered by the Engineer.

15-7.01 Payment: **Utility Conflict Resolution** shall be paid for on a **Force Account** basis up to the contract allowance price and shall include full compensation for furnishing all labor, materials, permits, tools and equipment, and for doing all the work involved as required to complete the work, and as directed by the Engineer, and no additional allowance shall be made therefor.

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, 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 Tree and Grind Stump: The workmanship shall be performed to the best general standards in the industry. All precautions shall be taken to ensure the protection of existing adjacent public or private property.

The successful bidder or the successful bidder's subcontractor must be able to demonstrate knowledge and abilities to perform the required work by possessing a valid California D49 Tree Service Contractor's License and possess the tools and equipment necessary to perform the required work.

Tree diameters shall be measured using the standard Diameter at Breast Height (dbh) method. DBH measurements shall be taken at 4.5-feet above the ground.

Roots in the sidewalk area shall be removed to clear a full 6-inch depth below top of sidewalk. Stumps and roots in the planter area shall be removed to a full 16-inch depth below the top of curb or finish grade, whichever is applicable.

In areas of curb and gutter removal, tree roots shall be removed to a full 12-inch depth below the lip of gutter.

The stump and root holes shall be backfilled and compacted with approved fill material.

15-9.01 Payment: Remove Tree (Up to 24" dbh) and Grind Stump shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and for doing all the work involved in removing trees including felling the trees, removing the roots to a depth of 16 inches below top of curb or finish grade, grinding the stump down to the specified depth, backfilling the stump hole and root holes with approved compacted material, repair of any damage to existing adjacent public or private property caused by the tree removal and stump grinding operation, and disposal of tree removal debris, as specified herein, and no additional allowance will be made therefor.

Remove Tree (Greater than 24" dbh) and Grind Stump shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and for doing all the work involved in removing trees including felling the trees, removing the roots to a depth of 16 inches below top of curb or finish grade, grinding the stump down to the specified depth, backfilling the stump hole and root holes with approved compacted material, repair of any damage to existing adjacent public or private property caused by the tree removal and stump grinding operation, and disposal of tree removal debris, as specified herein, and no additional allowance will be made therefor.

[Revised: 01/08/18-CDA STD2010]

19 EARTHWORK

19-1 General

19-1.01 General:

Non-contaminated site: See section 19-2.03B, Surplus Material, of these Technical Specifications.

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 9-1.06 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 jack-hammering 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: Noncontaminated Surplus soil from this project has been approved for disposal at the City's Pond 2 Decommissioning and Grading Project at 35 Stony Point Road Santa Rosa, CA.

The following Pond 2 surplus soil transport and placement conditions shall be adhered to:

1. Prior to any dumping taking place, the Contractor's project foreman shall request a Pond 2 site meeting with the City's Engineer, or their designated representative, and will bring with them a company marked barricade(s) to mark their designated dumping area. More than one barricade and additional markings may be needed to delineate driver's route to their proper dump area. It is the Contractor's responsibility to periodically check on their barricades for proper location and legibility.
2. Directions and Pond 2 requirements must be communicated to every driver prior to dumping. Drivers that are unsure as to their proper dumping area shall get confirmation from their project foreman before dumping their load. After dumping, the driver shall get out of the truck and visually inspect the material and remove items from the site that are listed herein, along with any others that are not considered "surplus soil".
3. Material must be free of asphalt concrete; asphalt and soil grindings associated with roadway excavation and reconstruction; concrete; metal; rocks greater than 6" in size; pipe or tubing; vegetation; wires; and other deleterious materials.
4. Soil beneath asphalt that was previously oiled for paving is not allowed;
5. Sewer, water or storm drain pipe of any kind or type are not allowed;
6. Concrete; metal; rock greater than 6" in size; vegetation; and other deleterious materials are not allowed;

7. The quantity of trucks and the volume of soil deposited in Pond 2 from this project will be tracked. Truck drivers are required to sign a log and be subject to periodic inspections to ensure that only soil from this project is deposited in Pond 2.
8. The Contractor shall spread and compact all project soils deposited into Pond 2 to 85% relative compaction and testing will be provided and performed by the City's materials Engineering Laboratory. The cost of compaction testing will be borne by the City.
9. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.
10. Soil disposal shall be limited to Monday through Friday between the hours of 7:00 am and 4:30 pm. Advanced, 48-hour notice is required to the City inspector and Water prior to starting.
11. Pond 2 site access is directly affected by weather conditions. You should anticipate no access during and for some time after rain events, unless wet weather site conditions are met at your expense.
12. The haul route shall be through the City Municipal Service Yard. A 15 MPH speed limit shall be observed at all times with stopping at all crosswalks and stop signs. No trucks shall access the site via any other route.
13. Tracking of material from the disposal location onto any and all paved surfaces near the pond is not allowed. Should tracking become evident sweeping will be required at your cost no later than the end of day. Dust control shall be provided at all times in accordance with Section 10.
14. The Idling limits on In-Use Off-Road Diesel Vehicles in section 2449 (d) (3) in Title 13, article 4.8, chapter 9, California Code of Regulations (CCR) shall be effective and enforceable.

The City shall reserve the right to unconditionally suspend or revoke disposal at any time at no cost to the City. Contractors that are notified of unallowed material in a dumped load or that a load was dumped in an area not designated for their project shall correct the issue by the end of the following work day.

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**. Grinding of existing bituminous pavement in East Haven Drive from Stations 11+90 to 12+55 shall be include in payment for **Roadway Excavation**.

19-8 Subgrade Enhancement Geotextile

19-8.02 Materials: 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 ⁻¹

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

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.

[Version: 05/18/15 DCM STD2010]

20 LANDSCAPE

20-1.03C Watering: The contractor shall obtain water according to section 6-4.01A, construction water of these Special Provisions.

20-7.02 Materials:

A. Plants

1. Conditions: Plant shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant disease, insect pests or their eggs, excessive abrasions, or other objectionable disfigurements, and shall have healthy, normal root systems, well filling their containers, but not to the point of being root bound. Tree trunks shall be sturdy and well hardened off. Plants shall not be pruned prior to delivery. Plants shall be grown in nurseries which have been inspected by the State Department of Agriculture and have complied with its regulations.
2. Minimum Tree Sizes: In addition to the preceding specifications, all trees shall have a minimum size of 7', including root ball, a good height to trunk caliper ratio, with a minimum caliper of 1" at 12" above the top of the root ball, and a minimum container size of fifteen (15) gallons. Contractor shall inform the City of the source of all plant material allowing adequate time so that inspections of plant material may be made at the source prior to delivery to site.
3. Identification: Trees shall be *Lagerstroemia fauriei* 'varieties' (Crape Myrtle) in accordance with the City's Recreation and Parks Department approved Street Tree List, and shall conform to the requirements herein. Trees shall be tagged with plant name in accord with recommendations of the American Association of Nurserymen.
4. Substitutions: Substitutions for the indicated plant materials will be permitted, provided the substitute materials are approved in advance by the City, and the substitutions are made at no additional cost to the City. Except for the variations so authorized, all substitute plant materials shall conform to the requirements of these specifications. If accepted substitute materials are of less value than those indicated or specified, the contract price will be adjusted in accordance with the provisions of the contract.
5. Plant Inspection and Rejection: Root condition of plants will be determined by the City through the removal of earth from the roots of at least one (1) tree.

B. Root Barrier

1. Root barrier shall be in accordance with City Standards.

20-7.03B Construction:

A. Scheduling

Planting shall not commence until completion of all construction work, grading, soil preparation, and sprinkler installation. All container stock shall be spotted on-site by the Contractor per plans prior to planting. Set out only quantity that can be reasonably planted in one workday. Plant pits shall not be excavated until the approval of plant locations by the City.

B. Tree Planting Operations

1. Tree planting operations shall be in accordance with the City's Standards and Specifications for Planting Parkway Trees.

C. Plant Pits

Plant pits shall be dug with level bottoms two times the diameter and two times the depth of root ball. Sides of excavated plant pits shall be scarified by pry bar or shovel.

D. Root Barrier

Root barrier shall be installed in accordance with City Standard 101 and as directed by the Engineer.

E. Removal from Containers

All canned stock 5-gallon size and under shall be vertically cut on two opposite sides with approved instrument for the purpose. Fifteen (15) gallon size containers shall be cut on four opposite sides. Cutting with an axe or spade shall NOT be permitted.

F. Handling

No canned plant material shall be planted if the ball is broken or cracked either before or during the process of planting.

G. Setting

Plant shall be same relation to soil level when planted as it was when in container. Each plant shall be placed in center of plant pit.

H. Pit Backfill

Backfill material around plants shall be free from rocks or foreign material and shall consist of the following ratio:

50%, 1% Nitrogen-Stabilized Organic Amendment

50%, On-Site Topsoil

10 Lbs. Agricultural Gypsum per Cubic Yard of Mix

2 Lbs. Iron Sulfate per Cubic Yard of Mix

I. Backfilling Procedure

1. Backfill pit with backfill mix halfway to finish grade and water thoroughly.
2. Commercial fertilizer in the form of 20-10-5 Agriform 21-gram tablets shall be added to the plant pits at the following rates:

1 Gallon Plant	1 Tablet
5 Gallon Plant	2 Tablets
15 Gallon Plant	5 Tablets
Larger Than 15 Gallons	1 Tablet per ½" Trunk Diameter

3. Backfill finish to grade. Backfill finish shall be tamped firm and a shallow basin formed at the perimeter of plant pit to hold enough water to saturate the root ball and backfill mix.
4. Water immediately to saturate entire root ball and backfill.
5. Remove watering basins prior to hydroseeding.

J. Tree Staking

Stake all trees as shown in City Standard Drawing 101. Drive stakes into firm soil next to root ball on windward side of tree and backfill with prepared soil mix. Tree and stakes shall be vertical in all cases.

20-4.06 Quantities: In all cases, quantities of plant material shall be furnished as needed to complete work as indicated on plans, including reseeding, redressing, and maintenance (replacements) during the contract period.

20-4.07 Protection: The Contractor shall carefully and continuously protect all areas included in the contract, including lawn areas, plant materials, supports, etc., until final acceptance of the work by the City.

20-4.08 Cleanup: After all planting operations are completed Contractor shall remove all trash, excess soil, empty plant containers, or other accumulated debris from the site at no extra cost to City. Contractor shall repair all scars, ruts, or mars in area caused by work operations. Areas shall be left in a neat and orderly condition.

20-4.09 Inspections:

- A. Contractor shall give forty-eight (48) hour notice and set appointment for all inspections by the City.
- B. Inspections and/or field supervision by the City shall be scheduled for the following operations:
 - 1. Approval of all plant material.
 - 2. Tree replacement PRIOR to digging holes and placement planting.
 - 3. Final inspection.
- C. Inspection shall be called for at the end of all planting operations for the purpose of determining compliance with plans and specifications, intent, workmanship, and cleanup. Contractor shall secure written verification of inspection data, any corrections required to work, and limits of inspected area before beginning the described maintenance work.
- D. A final inspection shall be made at the end of the maintenance period for full approval of the work area.
- E. In the event the Contractor requests inspection of work, and said work is substantially incomplete, the Contractor shall be responsible for inspection costs.

20-4.10 Guarantee:

- A. All trees shall be guaranteed for a period of one (1) year after final acceptance by the City.
- B. Plants which die or lose more than 30 percent of their original leaves shall be replaced under this section.
- C. The Contractor, within fourteen (14) days of written notification by the City, shall remove and replace all guaranteed plant materials which for any reason fail to meet the requirements of the guarantee. All plant material replaced shall be guaranteed for the original period, starting from the date of replacement.

20-4.11 Payment: **Street Tree** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, tree, materials, tools and equipment and doing all work involved in planting of **Street Tree**, including plant pit excavation, backfill, root barrier, staking, and guarantee, as specified herein, and no additional allowance will be made therefor.

(STD2010)

26 AGGREGATE BASE

26-1.01 Aggregate Base: 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 Quality Requirements: The minimum sand equivalent shall be 31 for any individual test.

26-1.03D 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.

[Version: 05/03/14 STD2010]

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.

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. 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 night time 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 work day 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.

39-1.02 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.....3/4-inch HMA Type A, or 1/2-inch Coarse HMA Type A, or 1/2-inch Medium HMA Type A
- Base Course.....3/4-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**

3/4-inch HMA Type A

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
3/4"	95–100	TV ± 5
3/8"	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	--

1/2-inch Coarse HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	—
1/2"	94–100	--
3/8"	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	--

1/2-inch Medium HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	--
1/2"	95-100	--
3/8"	80-95	--
No. 4	59-66	TV ± 5
No. 8	43-49	TV ± 5
No. 30	22-27	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	California Test 205	90
Two fractured faces		75
Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face		70
Los Angeles Rattler (% max.) Loss at 100 rev.	California Test 211	10
Loss at 500 rev.		45
Sand Equivalent (min.) ^a	California Test 217	50 ^b
Fine aggregate angularity (% min.)	California Test 234	45
Flat and elongated particles (% max. by weight @ 5:1)	California Test 235	10

^a Reported value must be the average of 3 tests from a single sample.

^b 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.

39-1.14 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) ¹	Tensile Strength Ratio, TSR (ASTM D7870) ²
≤16.0%	Not Required
16.1-18.0%	70 (minimum)
18.1-21.0%	80 (minimum)

¹ 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%.

² 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 Surface 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 surface and overlay, including tack coat and overlay conforms, and no additional allowance will be made therefor.

Asphalt Concrete Base 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 base, including tack coat and temporary tapers, and no additional allowance will be made therefor.

[Lab STD2010]

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.

Cutback shall not be 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 A.C. thickness of 0.25 feet for Residential/Local Street Types and one foot for 4th Street.

The use of 12 inches of class 2 aggregate base per note 1 of STD 215 is not allowed.

The Contractor shall provide compaction of backfill and base material as the job progresses. 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 (H2O) 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**, 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 Description: 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 pipe headwalls, end walls, drainage inlets, and manholes.

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

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

Placing of concrete under water will not be permitted.

51-7.01D Payment: Catch Basin, Type I 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 bicycle grates, storm drain labels, and connection to the existing storm drain system.

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.

[Version: 10/03/14 DCM STD2010]

56 SIGNS

56-2.01 Description: This work shall consist of the installation, removal, relocation and reinstallation of roadside signs as shown on the plans, where directed by the Engineer, and shall conform to the City Specifications.

Traffic regulatory signs and hardware including poles shall be provided and installed by the Contractor at the locations shown on the plans per City Standards. The existing traffic regulatory sign shall be removed and salvaged. Salvaged signs shall be returned to the City of Santa Rosa Sign Shop at 55 Stony Point Road. All sign poles shall be new.

Existing traffic regulatory signs including poles shall be relocated as shown on the plans by 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.

56-2.06 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.

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 applicable provisions of Section 65 of the City 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 V Reinforced Concrete Storm Drain 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 Storm Drain 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.

Full compensation for **Abandon or Remove Existing Storm Drain System Components** except as noted above, including furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to abandon or remove existing storm drain system components, included but not limited to: 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 storm drain 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, sidewalk, driveways and partial driveways *as needed*; bypass pumping *if needed*; as specified

herein shall be included in the prices paid for **various contract items** of work, and no additional allowance 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)(1) 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.

Full compensation for **Trench Bracing and Shoring** for storm drain pipe installation including furnishing all labor, materials, tools, and equipment and doing all work involved in trench bracing and shoring as specified herein shall be included in the prices paid for **various contract items** of work, and no additional allowance will be made therefor.

[Version:3/30/15 KKR STD2010]

73 CONCRETE CURBS AND SIDEWALKS

73-1.01A Summary: This work shall consist of curbs, gutters, sidewalks, driveways, curb ramps, and aprons 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 scoremark.

73-1.01E 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 construction shall be in conformance to the details and at the locations shown on the plans and in accordance with City Specifications.

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

Where curb and sidewalk are contiguous and both are to be replaced, they shall not be constructed monolithically except for pedestrian curb ramps. Curb and gutter shall be constructed prior to sidewalk and/or concrete planter strip unless otherwise approved by the Engineer.

Curb openings, for driveways, shall be constructed at existing driveways, and at locations indicated on the plans or directed by the Engineer.

All concrete which is to be removed from driveway areas shall be removed to the nearest construction joint or as directed by the Engineer.

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 shall be installed in accordance with City Standards and 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, driveway, and aprons 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 as directed by the Engineer.

Curb ramps 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 and the gutter, curb, ramp and sidewalk shall be a monolithic pour. 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.

Vertical curbs shall be constructed in accordance with the details and at the locations shown on the plans. Class 2 aggregate base shall be in accordance with Section 26 of these Technical Specifications.

Aprons shall be constructed with the details and at the locations shown on the plans. Class 2 aggregate base shall be in accordance with Section 26 of these Technical Specifications. Reinforcement shall be in accordance with Section 52 of the Standard 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. Contractor to provide samples of cobbles to the Engineer for review and approval prior to placement.

Subgrade for curb ramps (and associated sidewalk), driveways and valley gutters shall be scarified to 6" below grade, properly moisture conditioned and recompacted prior to pouring new concrete. Where field conditions do not allow for scarification as specified, Contractor shall seek direction from the Engineer.

73-3.04 Payment: 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, 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.

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

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 work involved in constructing cobble non-walkable surface complete in place as specified, including furnishing a cobble sample, furnishing and placing expansion joint filler, aggregate base, cobbles, construction weakened plane joints, excavating and backfill.

84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1 General

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. Pavement markers shall conform to Section 85 of these Technical Specifications.

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.

84-1.04 Payment: 12” Thermoplastic Crosswalk Stripe, White shall be paid for at the contract price per **linear foot**, which price shall include furnishing all thermoplastic pavement marking material whether white or yellow, tape, and furnishing all equipment, tools, and labor, and doing the work involved as herein specified, including but not limited to, eradication of existing crosswalk stripes, surface preparation, replacement of damaged stripes, temporary crosswalk stripes, all temporary traffic measures, and any other work required to install crosswalk stripes not specifically enumerated in the City Standards, these Technical Specifications, or on the Project Plans, and no additional allowance will be made therefor.

Traffic Stripe, Detail 4 shall be paid for at the contract price per **linear foot**, which price shall include furnishing all markers whether retroreflective or non-reflective, tape, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including but not limited to, eradication of existing stripes and markers, surface preparation, replacement of damages stripes and markers, temporary traffic stripes, all temporary traffic measures, and any other work required to install traffic stripes not specifically enumerated in the City Standards, these

Technical Specifications or on the Project Plans, and no additional allowance will be made therefor.

Traffic Stripe, Detail 23 shall be paid for at the contract price per **linear foot**, which price shall include furnishing all markers whether retroreflective or non-reflective, tape, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including but not limited to, eradication of existing stripes and markers, surface preparation, replacement of damaged stripes and markers, temporary traffic stripes, all temporary traffic measures, and any other work required to install traffic stripes not specifically enumerated in the City Standards, these Technical Specifications or on the Project Plans, and no additional allowance will be made therefor.

Thermoplastic Traffic Markings, White shall be paid for at the contract **square foot** price, which price shall include furnishing all paint and glass beads, thermoplastic pavement marking material, tape, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including but not limited to, eradication of existing traffic stripes and pavement markings, surface preparation, replacement of damaged stripes, temporary traffic stripes and pavement markings, all temporary traffic measures, and any other work required to install traffic stripes and pavement markings not specifically enumerated in the City Standards, these Technical Specifications or on the Project Plans, and no additional allowance will be made therefor.

[Version: 04/29/15 DCM STD2010]

85 PAVEMENT MARKERS

85-1.01 General: Raised pavement markers shall be placed at the locations shown on the Plans and in accordance with the applicable provisions of Section 85 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 (RPMs) 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.

86 ELECTRICAL SYSTEMS

86-1 General

86-1.01 Description: The Contractor shall modify traffic signal system(s) at the location(s) shown on the plans in conformance with the applicable provisions of Section 86, "Electrical Systems", of the Standard Specifications, Standard Plans, the City Traffic Standards, these special provisions, and as directed by the Engineer.

86-1.07 Scheduling of Work: Scheduling of work shall conform to Section 86-1.07 of the Standard Specifications except that no traffic signal system turn-on shall be scheduled for Monday, Friday, or the day before or after a legal State holiday.

86-2 Materials and Installation

86-2.01 Excavating and Backfill: All trench spoils shall be removed from the work area as they are generated.

Native material shall not be used as trench backfill.

Where conduit containing conductors of 100 volts or less is installed parallel and adjacent to the existing gutter lip, the trench shall be approximately two inches wider than the outside diameter of the conduit and shall not exceed six inches in width. Trench depth shall not exceed conduit trade-diameter plus ten inches, except that at pull boxes the trench may be hand dug to required depth. The conduit shall be placed in the bottom of the trench with the top of the conduit a minimum of nine inches below finish grade.

When conduit containing conductors of 100 volts or less is not installed adjacent to the lip of gutter it shall be installed with a minimum of 18 inches of cover.

All conduit containing conductors of more than 100 volts shall be installed with a minimum of 24 inches of cover.

Where existing facilities prevent installing conduit with 24 inches of cover, the Contractor shall depress the new conduit under the existing facilities without exception.

Trench backfill and surfacing for trenches shall conform to City STD.-215 or as shown on the plans.

86-2.02 Removing and Replacing Improvements: Concrete removal shall conform to the applicable provisions of Section 15-3 of the Standard Specifications and these Special Provisions.

All concrete to be removed shall be disposed of by the Contractor away from the site of the work. Burying of broken concrete within the limits of the project will not be allowed.

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

Reinforcing steel may be encountered in portions of concrete to be removed and no additional allowance will be made for the removal of such steel.

All sidewalk and curb and gutter which are removed shall be reconstructed in accordance with Section 73 of the City of Santa Rosa Construction Specifications.

86-2.03 Foundations: The Contractor shall construct foundations for traffic signal standards per Caltrans Standard Specifications.

The Contractor shall construct foundations for pedestrian push button assemblies at the locations shown on the plans per Caltrans Standard ES-7A, Detail B and the applicable provisions of Section 86-2.03, "Foundations", of the Standard Specifications and these Technical Specifications.

Minor portland cement concrete shall be produced from commercial quality aggregates and cement and shall contain not less than six sacks of cement per cubic yard and with a minimum 28-day compressive strength of 3000 psi.

86-2.04 STANDARDS, POLES, STEEL PEDESTALS, AND POSTS

86-2.04A General: Pedestrian push button assemblies and related appurtenances shall be installed per Part IV of the City Traffic Standards.

86-2.05 Conduit: Conduit shall conform to Standard Specifications and Part IV-F of the City Traffic Standards.

Trenching depth shall be per Section 86-2.01 of these Technical Specifications.

86-2.06 Pull Boxes: Pull boxes shall conform to STD 730 of the City Traffic Standards, these Special Provisions and Section 86-2.06 of the Caltrans Standard Specifications.

All existing pull boxes to receive new conductors and/or conduits shall be cleaned out, all existing grout removed, and the bottoms re-grouted with a drain hole or the boxes replaced to meet current City Standards.

86-2.08 Conductors and Cables

86-2.08A General: All conductors for traffic signal or street lighting systems shall conform to Section 86 of the Standard Specifications, Part IV-G of the City Traffic Standards, as shown on the plans, or as specified herein.

Interconnect cable shall consist of 25-pair twisted, shielded #19 A.W.G. solid copper wire and in accordance with ISMA 40-2 specifications. 12-pair twisted cable may be used on end runs as determine by the Engineer. Each pair shall be shielded with corrugated copper tape, have polyethylene insulation, and be color coded or numbered by pairs. The color coding or numbering by pairs shall match and be consistent with terminal point numbering throughout the project. The interconnect cable jacket shall be black polyethylene. Cables shall be installed with no splices. Cables shall be pulled by hand and the use of winches or other power actuated pulling equipment will not be permitted. Six feet of slack shall be left in each pullbox.

86-2.09 Wiring: Wiring shall conform to the Standard Specifications and PART IV-G of the City Traffic Standards.

86-2.10 Bonding and Grounding: Grounding jumper shall be attached by a 3/16-inch or larger brass bolt in the standard and shall be run to the ground. Grounding jumper shall be visible after cap has been poured on foundation.

86-2.14C Functional Testing: The functional test for each traffic signal system and lighting system shall consist of not less than 48 hours of continuous, satisfactory operation. If

unsatisfactory performance of the system develops, the conditions shall be corrected and the test shall be repeated until the 48 hours of continuous, satisfactory operation is obtained.

86-2.16 Painting: All exposed metal signal housings, doors, visors, back plates, and framework parts shall be powder coated by a City approved process.

86-5 Detectors

86-5.02 Pedestrian Push Button Assemblies:

The remote-control push button station shall be Type "B" Pedestrian Push Button as shown in Caltrans Standard ES-7A, with a 4" pole and shall conform to Section 86-5.02 of the Standard Specifications or approved equal.

The push button signs shall be white porcelain enameled and blank.

The crosswalk at the northwest corner of 4th St. and Rogers Way shall have two push button assemblies on one pole, mounted at the same height. The final orientation of the push button station of the pole shall be as directed by the Engineer in the field.

86-8.10 Payment: **Push Button Assembly** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment to construct the push button assembly in place, including but not limited to all excavation and backfill, foundations, standards, steel pedestals and posts, conduit, conductors, wiring, electrical components, pedestrian push buttons, and testing, as shown on the plans, as specified, and no additional allowance will be made therefor.

Compensation for removing and replacing existing improvements including curb and gutter and sidewalk in areas not shown as being replaced on the project plans shall be considered as included in the contract prices paid for the appropriate contract item, and no additional allowance will be made therefor.

Compensation for removal of existing traffic signal equipment, including delivery to the Municipal Services Center at 55 Stony Point Road and including abandoning existing foundations shall be considered as included in the contract price paid for traffic signal installation and no additional allowance will be made therefor.

[Version: 9/18/14CDA STD2010]

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.

[Version: 11/6/14CDA STD2010]

121 NOTIFICATION

121-1.01: The Contractor shall notify the Engineer of any work to be performed on any given work day 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 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 Santa Rosa City Bus at (707) 543-3922, the local Postal Service at (707) 526-0113 and Santa Rosa Recycling and Collection at (707) 586-8234 at least 5 calendar days prior to any lane closures or restrictions in turning movements.

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.

[Version: 10/13/14-CDA STD2010]

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 contract prices paid for various items of work, and no additional compensation will be allowed therefor.

[Version: 11/6/14CDA STD2010]

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.

Attention is directed to the Contractor that pea gravel, river run, or sloughing material may be encountered in existing utility trenches throughout the project. Existing utility trenches and/or structures that are in close proximity to proposed trenches shall be safeguarded in an appropriate manner from damage. A Trench Bracing and Shoring Plan shall be submitted to the Engineer in accordance with the City of Santa Rosa Sanitary Sewer System Construction Standard Specifications Section 130-1.03. The plan shall also include measures to temporarily support existing utilities in close proximity to excavations. At all times existing utilities shall remain in service unless approved by the Engineer.

130-1.06 Sewer Laterals: 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.

130-1.12 Payment: 8" Sewer Main and 10" Sewer Main shall be paid for at the contract price per **linear foot** for the specified sizes, 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; 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.

Abandon or Remove Existing Sanitary 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, including existing sewer mainline cleanouts either shown on the plans or as specified in the City's Sewer Construction Specifications; 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.

48" Sanitary Sewer Manholes 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 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; 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.

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.

Remove Existing Sewer Lateral Cleanouts beyond the typical connection point 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 to remove existing sewer lateral cleanouts beyond the typical connection point, included but not limited to: excavation and disposal of excavated material; hand digging *if needed*; root pruning; pipe and couplings; connection to existing private property lateral, placing and compacting all required bedding and backfill; restoring irrigation, landscaping and all paved and concrete surfaces including artificial turf; testing; video inspection; notification; as specified herein, 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 9-1.06 of the Standard Specifications shall not apply.

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.

Version Date: 11/28/17

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 and 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."

Where shown on the plans and as required by the City of Santa Rosa Blanket Waiver 6, water distribution pipe shall be Ductile Iron Pipe (DIP) in accordance with City of Santa Rosa Water Distribution System Construction Standard Specifications.

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.

Attention is directed to the Contractor that pea gravel, river run, or sloughing material may be encountered in existing utility trenches throughout the project. Existing utility trenches and/or structures that are in close proximity to proposed trenches shall be safeguarded in an appropriate manner from damage. A Trench Bracing and Shoring Plan shall be submitted to the Engineer in accordance with the City of Santa Rosa Water Distribution System Construction Standard Specifications Section 132-1.11. The plan shall also include measures to temporarily support existing utilities in close proximity to excavations. At all times existing utilities shall remain in service unless approved by the Engineer.

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.

Where shown on the plans, meter boxes and lids shall be traffic rated and shall have at a minimum an AASHTO H20 rating.

132-1.30 Payment: **4" PVC (PC235/DR18) 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 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 (PC235/DR18) 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 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.

12" PVC (PC235/DR18) 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 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 (PC305/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 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.

12" PVC (PC305/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 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.

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 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; removal and replacement of valley gutter, median curb and island *as needed*; 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; removal and replacement of valley gutter, median curb and island *as needed*; as specified herein, and no additional allowance will be made therefor.

1" 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*; 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 median curb and island, 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.

1" Single Water Service, Traffic Rated Box and Lid 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*; 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 median curb and island, 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 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; 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 median curb and island, 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.

If connection to existing main is to be made with a Cut-in Tee, said tee shall be paid for the under Cut-in Tee pay item.

Remove and Relocate 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 remove and relocate fire hydrant and lateral assemblies, 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; tapping saddle or tee; valve; relocate fire hydrant and lateral assembly; 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; removal, salvage and abandonment of old hydrant and lateral assembly (including as required on live main; full circle clamp, removal of old valve and tee, installation of pipe and couplers); 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 median curb and island, 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.

If connection to existing main is to be made with a Cut-in Tee, said tee shall be paid for the under Cut-in Tee pay item.

8" Gate Valve and 12" 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.

12" Cut-in Gate Valve on an existing main 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 cut-in gate valve 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; removing section of existing main; pipe; valve; fittings *as required*; 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.

Leaded Joint Removal 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 the removal and proper disposal of lead joints and installing new pipe and couplers, as specified herein, 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 9-1.06 of the Standard Specifications shall not apply.

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.

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 *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.

Version Date: 11/28/17

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

<p>ACCO ENGINEERED SYSTEMS 1111 ALADDIN AVE. SAN LEANDRO, CA 94577 PHONE: (510) 346-4300 LICENSE #: 120696</p>	<p>ALL OUT PLUMBERS/C. CROSS P.O. BOX 599 CLOVERDALE, CA 95425 PHONE: (707) 894-8434 LICENSE #: 812540</p>	<p>ALL PRO BACKFLOW/J.LOTITO P.O. BOX 2193 FOLSOM, CA 95763 PHONE: (916) 276-7162 FAX: (916) 435-4167 LICENSE #: 934557</p>
<p>APB BACKFLOW, INC. 1599 FELTA RIDGE ROAD HEALDSBURG, CA 95448 PHONE: (888) 356-7761 LICENSE: 1032328</p>	<p>A.S.T.I SERVICES/M.DESCHLER 102 COUCH ST. VALLEJO, CA 94590 PHONE: (707) 645-1782 FAX: (707) 645-1807 LICENSE #: 742693</p>	<p>BANNER ENTERPRISES P.O. BOX 1457 SANTA ROSA, CA 95402 PHONE: (707) 523-1244 LICENSE #: 376828</p>
<p>C.V. PLUMBING/C. VINE P.O. BOX 219 CLOVERDALE, CA 95425 PHONE: (707) 894-8580 FAX: (707) 894-9642 LICENSE #: 843366</p>	<p>CAGWIN & DORWAN P.O. BOX 1600 NOVATO, CA 94948-1600 PHONE: (800) 891-7710 FAX: (415) 897-7864 LICENSE #: 202399</p>	<p>CARRIER CORPORATION 600 MCCORMICK ST., SUITE B SAN LEANDRO, CA 94577 PHONE: (510) 347-2000 FAX: (510) 347-2099 LICENSE #: 499642</p>
<p>CHECKRITE BACKFLOW SERV. 3618 CHANATE RD. SANTA ROSA, CA 95404 PHONE: (707) 575-5296 FAX: (707) 578-6595 LICENSE #: 836022</p>	<p>DEVOTO PLUMBING* 1345 TRIPLE OAK WAY FULTON, CA 95439 PHONE: (707) 545-0734 LICENSE #: 824608</p>	<p>ECONOMY PLUMBING P.M.B. #287, 1275 4TH ST. SANTA ROSA, CA 95404 PHONE: (707) 545-4455 FAX: (707) 543-8111 LICENSE #: 748220</p>
<p>GROUND HOG CONSTRUCTION 5353 HESSEL RD. SEBASTOPOL, CA 95472 PHONE: (707) 529-2085 FAX: (707) 823-9389 LICENSE #: 723766</p>	<p>JV PLUMBING & BACKFLOW* 2911 MONTECITO AVE. SANTA ROSA, CA 95404 PHONE: (707) 799-2692 LICENSE #: 955698</p>	<p>LEDUC & DEXTER PLUMBING 2833 DOWD DR., SUITE A SANTA ROSA, CA 95407 PHONE: (707) 575-1500 FAX: (707) 527-0281 LICENSE #: 651401</p>
<p>NORTHBAY BACKFLOW P.O. BOX 2765 PETALUMA, CA 94953 PHONE: (707) 484-3949 LICENSE #: 878332</p>	<p>NORTHWOOD BACKFLOW 911 LAKEVILLE ST., #369 PETALUMA, CA 94952 PHONE: (800) 750-4547 LICENSE #: 749187</p>	<p>ONGARO AND SONS PLUMBING 2995 DUTTON AVE. SANTA ROSA, CA 95407 PHONE: (707) 579-3511 LICENSE #: 215233</p>
<p>PACIFIC PLUMBING & FIRE PROTECTION 2360 MENDOCINO AVENUE SANTA ROSA, CA 95403 PHONE: (707) 486-4054 LICENSE: 1018110</p>	<p>RH & SONS WATER SERVICES 225 GOLDEN RIDGE AVE. SEBASTOPOL, CA 95472 PHONE: (800) 675-3569 LICENSE #: 698774</p>	<p>ROBERTS MECHANICAL & ELECTRICAL, INC. 4649 DOWDELL AVE. SANTA ROSA, CA 95407 PHONE: (707) 584-5880 LICENSE #: 556014</p>
<p>ROBERTSON'S BACKFLOW 6229 SPECKLED RD. POLLOCK PINES, CA 95726 PHONE: (530) 306-1056 FAX: (530) 303-1497 LICENSE #: 972547</p>	<p>SCOTT CRAMER PLUMBING P.O. BOX 750084 PETALUMA, CA 94975 PHONE: (707) 778-8789 FAX: (707) 658-1043 LICENSE #: 889152</p>	<p>STEAD BACKFLOW PREVENTION 2715 W. KETTLEMAN LN., #203-321 LODI, CA 95242 PHONE: (209) 327-3900 LICENSE #: 848490</p>

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: 7/24/2019)

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.

[Version: 2/2/15CDA STD2010]

BID FORMS

CITY OF SANTA ROSA

STATE OF CALIFORNIA

LA PALOMA AVE / EAST HAVEN DR / ROGERS WY
SEWER AND WATER MAIN REPLACEMENT

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:

CITY OF SANTA ROSA
C00308 - LA PALOMA AVE / EAST HAVEN DR / ROGERS WY SEWER AND WATER MAIN REPLACEMENT
UNIT PRICE SCHEDULE

Bidder Name: _____

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	TRAFFIC CONTROL	1	LS	\$ _____	\$ _____
2	WATER POLLUTION CONTROL	1	LS	\$ _____	\$ _____
3	ADJUST EXISTING VALVE BOXES TO GRADE	3	EA	\$ _____	\$ _____
4	ADJUST EXISTING MANHOLES TO GRADE	2	EA	\$ _____	\$ _____
5	RELOCATE EXISTING TRAFFIC SIGNAL BOXES	2	EA	\$ _____	\$ _____
6	RESET EXISTING TRAFFIC HANDHOLES AND GAS VALVE BOXES TO GRADE	2	EA	\$ _____	\$ _____
7	REMOVE AND REPLACE SIDEWALK DRAIN	1	EA	\$ _____	\$ _____
8	UTILITY CONFLICT RESOLUTION	1	FA	\$ <u>10,000.00</u>	\$ <u>10,000.00</u>
9	UTILITY CLEARANCES	1	LS	\$ _____	\$ _____
10	REMOVE TREE (UP TO 24" DBH) AND GRIND STUMP	3	EA	\$ _____	\$ _____
11	REMOVE TREE (GREATER THAN 24" DBH) AND GRIND STUMP	1	EA	\$ _____	\$ _____
12	SUBGRADE STABILIZATION/DIGOUTS	381	SY	\$ _____	\$ _____
13	ROADWAY EXCAVATION (F)	1,879	CY	\$ _____	\$ _____
14	SOIL STABILIZATION FABRIC	7,608	SY	\$ _____	\$ _____
15	STREET TREE	3	EA	\$ _____	\$ _____
16	ASPHALT CONCRETE SURFACE	1,055	TON	\$ _____	\$ _____
17	ASPHALT CONCRETE BASE	1,798	TON	\$ _____	\$ _____
18	PERMANENT TRENCH PAVING	95	TON	\$ _____	\$ _____
19	CATCH BASIN, TYPE I	4	EA	\$ _____	\$ _____
20	CATCH BASIN, TYPE II	3	EA	\$ _____	\$ _____
21	REMOVE AND REPLACE ROADSIDE SIGN	13	EA	\$ _____	\$ _____
22	15" CLASS V REINFORCED CONCRETE STORM DRAIN PIPE	61	LF	\$ _____	\$ _____
23	18" CLASS V REINFORCED CONCRETE STORM DRAIN PIPE	104	LF	\$ _____	\$ _____
24	CURB AND GUTTER	1,216	LF	\$ _____	\$ _____
25	CURB RAMP	1,859	SF	\$ _____	\$ _____
26	SIDEWALK	3,444	SF	\$ _____	\$ _____
27	DRIVEWAY	873	SF	\$ _____	\$ _____
28	VALLEY GUTTER	887	SF	\$ _____	\$ _____
29	CONCRETE APRON	330	SF	\$ _____	\$ _____
30	COBBLE NON-WALKABLE SURFACE	266	SF	\$ _____	\$ _____
31	12" THERMOPLASTIC CROSSWALK STRIPE, WHITE	438	LF	\$ _____	\$ _____
32	TRAFFIC STRIPE, DETAIL 4	1,308	LF	\$ _____	\$ _____
33	TRAFFIC STRIPE, DETAIL 23	320	LF	\$ _____	\$ _____
34	THERMOPLASTIC TRAFFIC MARKINGS, WHITE	284	SF	\$ _____	\$ _____

35	BLUE, RETROREFLECTIVE PAVEMENT MARKER	5	EA	\$ _____	\$ _____
36	PUSH BUTTON ASSEMBLY	2	EA	\$ _____	\$ _____
37	8" SEWER MAIN	878	LF	\$ _____	\$ _____
38	10" SEWER MAIN	1,114	LF	\$ _____	\$ _____
39	ABANDON OR REMOVE EXISTING SANITARY SEWER SYSTEM COMPONENTS	1	LS	\$ _____	\$ _____
40	4" SANITARY SEWER LATERAL	37	EA	\$ _____	\$ _____
41	48" SANITARY SEWER MANHOLE	8	EA	\$ _____	\$ _____
42	TRENCH BRACING AND SHORING-SEWER	1	LS	\$ _____	\$ _____
43	REMOVE EXISTING SEWER LATERAL CLEANOUTS	10	EA	\$ _____	\$ _____
44	4" PVC (PC235/DR18) WATER MAIN	42	LF	\$ _____	\$ _____
45	8" PVC (PC235/DR18) WATER MAIN	1,293	LF	\$ _____	\$ _____
46	12" PVC (PC235/DR18) WATER MAIN	430	LF	\$ _____	\$ _____
47	8" PVC (PC305/DR14) WATER MAIN	205	LF	\$ _____	\$ _____
48	12" PVC (PC305/DR14) WATER MAIN	20	LF	\$ _____	\$ _____
49	WATER MAIN LOWERING	1	EA	\$ _____	\$ _____
50	HALF WATER MAIN LOWERING	1	EA	\$ _____	\$ _____
51	1" SINGLE WATER SERVICE	29	EA	\$ _____	\$ _____
52	1" SINGLE WATER SERVICE, TRAFFIC RATED BOX AND LID	3	EA	\$ _____	\$ _____
53	BACKFLOW DEVICE RE-CERTIFICATION	3	EA	\$ _____	\$ _____
54	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	4	EA	\$ _____	\$ _____
55	FIRE HYDRANT AND LATERAL ASSEMBLY	4	EA	\$ _____	\$ _____
56	REMOVE AND RELOCATE FIRE HYDRANT AND LATERAL ASSEMBLY	1	EA	\$ _____	\$ _____
57	8" GATE VALVE	10	EA	\$ _____	\$ _____
58	12" GATE VALVE	4	EA	\$ _____	\$ _____
59	12" CUT-IN GATE VALVE	1	EA	\$ _____	\$ _____
60	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	1	LS	\$ _____	\$ _____
61	LEADED JOINT REMOVAL	7	EA	\$ _____	\$ _____
62	TEMPORARY BLOW-OFF	8	EA	\$ _____	\$ _____
63	WATER MAIN TIE-IN	8	EA	\$ _____	\$ _____
64	TRENCH BRACING AND SHORING-WATER	1	LS	\$ _____	\$ _____
GRAND TOTAL BID					\$ _____

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.)

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):

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 in 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: _____

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

CONTRACT NO. C00308
LA PALOMA AVE / EAST HAVEN DR / ROGERS WY
SEWER AND WATER MAIN REPLACEMENT

This Contract is made and entered into as of _____, 20__ 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, La Paloma Ave/East Haven Dr/Rogers Wy Sewer and Water Main Replacement, File Number 2019-0050, 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: _____