

INVITATION FOR BIDS



FOR CONSTRUCTING

SIX FIRE DAMAGED PARKS RECOVERY

**CITY CONTRACT NUMBER
C02248**

**DISASTER NO.: DR-4344
Federal Project No. 36360, 36380, 64204**

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

2021

ATTENTION
Prebid Conference
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

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SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

SIX FIRE DAMAGED PARKS RECOVERY

City Contract No. C02248

DISASTER NO.: DR-4344

Federal Project No. 36360, 36380, 64204

SIX FIRE DAMAGED PARKS RECOVERY

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CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➤	For technical questions regarding this project, contact Danny Chen at (707) 543-3911.
➤	For direct access to plans, specifications and plan holders' lists, go to www.srcity.org/bids and click on <u>Bid/Proposal Opportunities</u> .
➤	For direct access to bid results, go to www.srcity.org/bids . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> .

- IMPORTANT -

REVISED BIDDING PROCEDURES

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

Bid Acceptance Deadline

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 2:00 p.m., January 11, 2022, for Six Fire Damaged Parks Recovery, Contract No. C02248. (Engineer's Range: \$1,439,185.00 – \$1,759,004.00).

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.

Bid Opening Teleconference Call

Prospective bidders, subcontractors, and materials suppliers are invited to attend the Bid opening teleconference call scheduled to be held at 2:00 p.m., January 11, 2022. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 963-3842#.

Pre-Bid Meeting Teleconference Call

Prospective bidders, subcontractors, and materials suppliers are invited to attend an optional pre-bid meeting teleconference call scheduled to be held at 10:00 a.m., December 22, 2021. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 152-9286#.

Federal Requirements

The work to be performed under this Contract will be funded by the Federal Emergency Management Agency (FEMA). Contractor will be required to comply with all Federal Requirements set forth in the Special Provisions. Notwithstanding Section 5-1.02 of the Special Provisions, in the event of a conflict between any Federal Requirement and any other provision in the Contract Documents (as defined below), the more stringent provision shall control and prevail.

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.

Contract Award

This Contract will be awarded to the lowest responsible and responsive contractor possessing the ability to successfully perform under the terms and conditions of the proposed contract, considering such matters as contractor integrity, compliance with public policy, record of past performance and financial and technical resources.

Firms or individuals that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals or quotes may not compete in this procurement.

Project Description/Scope of Work

This project is a fire recovery project involving 6 city parks that were partially destroyed during the Tubbs Fire in 2017. The affected parks are:

- Fir Ridge Park 3672 Fir Ridge Drive
- Francis Nielsen Park 3565 Lake Park Drive
- Nagasawa Community Park 1313 Fountaingrove Parkway
- Rincon Ridge Park 3960 Park Gardens Drive
- Rincon Ridge Open Space 0 Park Gardens Drive
- Parker Hill Open Space 3881 Parker Hill Road

The intended purpose of this project is to restore all parks to their pre fire condition with the exception of code-related upgrades. Additionally, as a result of community feedback, a new playground facility will be installed at Fir Ridge Park.

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 C02248 Six Fire Damaged Parks Recovery 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 bond.



GRANT BAILEY, PE
Supervising Engineer

12/7/21
Date

**CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C02248 SIX FIRE DAMAGED PARKS RECOVERY**

Item No.	Description	Quantity	Units
1	TRAFFIC CONTROL	1	LS
2	WATER POLLUTION CONTROL	1	LS
3	CLEAN CONCRETE	1	LS
4	REPAIR PAVERS	1	LS
5	REFINISH METAL FURNISHINGS	125	LF
6	REFINISH EXISTING BOLLARD	9	EA
7	RELOCATE EXISTING BENCH	2	EA
8	REMOVE AND REPLACE EXISTING WHEEL STOPS	4	EA
9	CLEARING AND GRUBBING	1	LS
10	EARTHWORK EXCAVATION & FINE GRADING (F)	45	CY
11	EXCAVATION IN TREE DRIPLINE	1	LS
12	TURF	43,720.00	SF
13	SUPPLY AND PLANT 5 GALLON SHRUB AND GROUND COVER	362	EA
14	90-DAY LANDSCAPE MAINTENANCE & ESTABLISHMENT	1	LS
15	MULCH PATHWAY	215	CY
16	IRRIGATION SYSTEM	1	LS
17	PARK RULES SIGNS	11	EA
18	MONUMENT SIGN - CONCRETE AND METAL	1	EA
19	MONUMENT SIGN - METAL	1	EA
20	ALUMINUM SIGN	8	EA
21	12" STORM DRAIN	12	LF
22	4" STORM DRAIN	76	LF
23	4" SUBDRAIN	251	LF
24	12" STORM DRAIN INLETS	4	EA
25	BUBBLE UP DRAIN	3	EA
26	TRENCH BRACING AND SHORING	1	LS
27	CONCRETE PAVEMENT	925	SF
28	CONCRETE PAVEMENT - INTEGRAL COLOR	1,937.00	SF
29	PLAYGROUND RAMP	2	EA
30	CURB	12	LF
31	CONCRETE STAIRWAY	1	LS
32	STAIRWAY HANDRAILS	99	LF
33	METAL FENCE	61	LF
34	36" SPLIT RAIL WOOD FENCE	1,903.00	LF
35	42" SPLIT RAIL WOOD FENCE	650	LF
36	ELECTRICAL SYSTEM INSTALLATION OR MODIFICATION	1	LS
37	INSTALLATION OF PULL BOXES	2	EA
38	LIGHTING SYSTEM	1	LS
39	POROUS PAVE	920	SF
40	COLLAPSIBLE BOLLARD TYPE 1	6	EA
41	COLLAPSIBLE BOLLARD TYPE 2	2	EA
42	FIXED BOLLARD	4	EA

**CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C02248 SIX FIRE DAMAGED PARKS RECOVERY**

Item No.	Description	Quantity	Units
43	REMOVABLE BOLLARD	1	EA
44	BENCH TYPE 1	5	EA
45	BENCH TYPE 2	1	EA
46	PICNIC TABLE TYPE 1	2	EA
47	PICNIC TABLE TYPE 2	3	EA
48	PICNIC TABLE TYPE 3	1	EA
49	PICNIC TABLE TYPE 4	2	EA
50	COMMUNITY BOARD	1	EA
51	BARBEQUE	1	EA
52	TRASH RECEPTACLES	6	EA
53	RECYCLING RECEPTACLES	6	EA
54	COMPOST RECEPTACLE	6	EA
55	DRINKING FOUNTAINS	4	EA
56	DRINKING FOUNTAIN SUMP	2	EA
57	BASKETBALL HOOP	1	EA
58	SUPPLY & PLACE LANDSCAPE BOULDERS	4	EA
59	PLACE EXISTING LANDSCAPE BOULDERS	2	EA
60	AGES 2-5 PLAYGROUND	1	LS
61	AGES 5-12 PLAYGROUND	1	LS
62	PLAYGROUND SURFACING	78	CY
63	DRAIN ROCK AT PLAYGROUND	19	CY
64	CONCRETE REMOVAL	1	LS
65	1" IRRIGATION WATER SERVICE WITH BACKFLOW	1	EA
66	3/4" WATER SERVICE WITH BACKFLOW	1	EA
67	1-1/4" PVC WATER PIPE	891	LF
68	BACKFLOW DEVICE TESTING	2	EA

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

SIX FIRE DAMAGED PARKS RECOVERY

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 34 sheets entitled Six Fire Damaged Parks Recovery, 2020-0032
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 2015 and Revised Standard Specifications 2015 (collectively, Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2015 and Revised Standard Plans 2015 (collectively, 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 claims and disputes arising under this Contract.

2 BIDDING

2-1.03 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.

2-1.06 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 Examination of Project Plans, Specifications, City Standards, Invitation for Bids and Work Site: Prior to submitting a bid, the bidder shall carefully examine the 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 48 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. Notification of addenda will be made through PlanetBids. The listed primary contact will receive an e-mail generated by PlanetBids informing them of a recently uploaded addendum. The City will not be bound by any other explanations or interpretations of the Contract Documents.

2-1.08 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.

2-1.10 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.

2-1.33 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 Bond Affidavit and Bidder's Signature Page
6. Bid Guaranty (Bid Bond or alternate security)
7. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
8. Certification Regarding Lobbying

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.

2-1.33E 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 Bidders' Security: 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 Department's Decision on Bid: 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 and responsive bidder within thirty 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 100% 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 50% 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.

3-1.06 Contractor License: Contractor must be properly licensed as a contractor from Contract award through Contract acceptance (Pub Cont. Code § 10164).

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.

3-1.19 Bidders' Securities: 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.

3-1.20 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.

3-1.22 Subcontractors: The successful bidder shall furnish a list of all subcontractors as required under Sections 2-1.10. 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 not conform to the provisions of Section 9-1.06 of the Standard Specifications, except as modified herein.

4-1.07 Value Engineering

4-1.07B Value Engineering Change Proposal (VECP):

Contractor may submit a VECP to reduce any of the following:

1. Total cost of construction
2. Construction activity duration
3. Traffic congestion

Before preparing a VECP, meet with the Engineer to discuss:

1. Proposal concept
2. Permit issues
3. Impact on other projects
4. Project impacts, including traffic, schedule, and later stages
5. Peer reviews
6. Overall proposal merits
7. Review times required by the Department and other agencies

The VECP must not impair the project's essential functions or characteristics, including:

1. Service life
2. Operation economy
3. Maintenance ease
4. Desired appearance
5. Design and safety

The VECP must include:

1. Description of the Contract specifications and drawing details for performing the work and the proposed changes
2. Itemization of Contract specifications and plan details that would be changed
3. Detailed cost estimate for performing the work under the existing Contract and under the proposed change; Determine the estimates under section 9-1.04 of the Standard Specifications
4. Deadline for the Engineer to decide on the changes
5. Bid items affected and resulting quantity changes

The Department is not required to consider a VECP. If a VECP is similar to a change in the Project Plans or City Specifications being considered by the Department at the time the proposal is submitted or if the proposal is based on or similar to plans or City Specifications adopted by the

Department before Contract award, the Department does not accept the VECP and may make these changes without VECP payments.

If the Department does not approve a Change Order before the deadline stated in the VECP or other date Contractor subsequently stated in writing, the VECP is rejected. The Department does not adjust time or payment for a rejected VECP.

The Department decides whether to accept a VECP and the estimated net construction-cost savings from adopting the VECP or parts of it.

The Department may require Contractor to accept a share of the investigation cost as a condition of reviewing a VECP. After written acceptance, the Department considers the VECP and deducts the agreed cost.

If the Department accepts the VECP or parts of it, the Department issues a Change Order that:

1. Incorporates changes in the Contract necessary to implement the VECP or the parts adopted
2. Includes the Department's acceptance conditions
3. States the estimated net construction-cost savings resulting from the VECP
4. Obligates the Department to pay Contractor 50 percent of the estimated net savings.

In determining the estimated net construction-cost savings, the Department excludes Contractor's VECP preparation cost and the Department's VECP investigation cost, including parts paid by Contractor. If a VECP providing for a reduction in working days is accepted by the Department, 50 percent of the reduction is deducted from the Contract time.

If a VECP providing for a reduction in traffic congestion or avoiding traffic congestion is accepted by the Department, the Department pays 60 percent of the estimated net savings in construction costs attributable to the VECP. Submit detailed traffic handling comparisons between the existing Contract and the proposed change, including estimates of the traffic volumes and congestion.

The Department may apply an accepted VECP for general use on other contracts.

If an accepted VECP is adopted for general use, the Department pays only the contractor who first submitted the VECP and only for the contracts awarded to that contractor before the submission of the accepted VECP.

If the Department does not adopt a general-use VECP, an identical or similar submitted proposal is eligible for acceptance.

5 CONTROL OF WORK

5-1.02 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 34 sheets entitled Six Fire Damaged Parks Recovery, 2020-0032
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans;

provided, that in the event of a conflict between any Federal Requirement in Section 10 of these Special Provisions and any other provision in the Contract Documents, the more stringent provision shall control and prevail.

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.

Upon delivery of playground equipment, work at Fir Ridge Park shall take precedence over locations where work has not begun and work shall be sequenced as such in the CPM schedule.

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

“If a worker appears to the Engineer to be incompetent or acts disorderly or improperly, discharge the worker immediately upon request. Do not employ that worker again 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 coordinate and 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.

Each contractor or other entity performing work at or near the job or material site is responsible to the other for damage to work, persons, or property and for costs due to unnecessary delays.

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:

1. Stockpiling of equipment and/or materials;
2. Staging of construction;
3. Placement of work trailers or mobile offices;
4. Storage of trench spoils; or
5. Other construction related activities not specifically enumerated above.

5-1.26 Construction Surveys: 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.

5-1.27A 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.

5-1.36D(a) 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, storm drains and any other facilities 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 Contractor disputes the City's written response, or if the City fails to respond to a Claim within the time prescribed, 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 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 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

6-2.01G 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.

6-2.01H 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.

6-2.01I 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.

6-2.03D 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:

1. 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;
2. Contractor destroys markouts;
3. Contractor fails to perform hand digging or probing for utilities near markouts; or
4. 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: 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.

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.

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:

1. Promptly notify City in writing of the following conditions before any such conditions are disturbed:
 - a. Material that 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;
 - b. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
 - c. 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.
2. 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.
3. 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 (3) 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:

120 WORKING DAYS

8-1.05 Time of Completion: 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 6:00 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.

8-1.13 Contractor's Control Termination: Attention is directed to Section 8-1.13 of the Standard Specifications. City may terminate Contractor's control of the work for failure to include the Federal Requirements in Contractor's subcontracts.

8-1.14. Contract Termination: Attention is directed to Section 8-1.14 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.*, and the United States False Claims Act, title 31, United States Code sections 3729 *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 and the United States False Claims Act.

10 FEDERAL REQUIREMENTS

A. Definitions

1. Government means the United States of America and any executive department or agency thereof.
2. FEMA means the Federal Emergency Management Agency.
3. Third Party Subcontract means a subcontract at any tier entered into by Contractor or subcontractor, financed in whole or in part with Federal assistance originally derived from the Federal Emergency Management Agency.

B. Federal Changes

1. Contractor shall at all times comply with all applicable regulations, policies, procedures, and FEMA Directives as they may be amended or promulgated from time to time during the term of this Contract, included but not limited to the requirements of 2 C.F.R. §§ 200.317 through 200.326 and more fully set forth in Appendix II to Part 200 – Contract Provisions for Non-Federal Entity Contracts Under Federal Awards, which is included herein by this reference. Contractor's failure to so comply shall constitute a material breach of this Contract.
2. Contractor agrees to include the above clause in each third-party subcontract financed in whole or in part with Federal assistance provided by FEMA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

C. Compliance with the Contract Work Hours and Safety Standards Act.

Pursuant to section 3701 of title 40 of the United States Code, this Section C shall apply to Contractor in the event the amount payable under this Contract exceeds \$100,000 and may involve the employment of mechanics or laborers.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
3. Withholding for unpaid wages and liquidated damages. City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause

to be withheld, from any moneys payable on account of work performed by Contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

4. Subcontracts. Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

D. Clean Air Act and Federal Water Pollution Control Act

This Section D shall apply in the event the amount payable under this Contract exceeds \$150,000.

Clean Air Act

1. Contractor agrees to comply with all applicable standards, orders and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 *et seq.*
2. Contractor agrees to report each violation to City and understands and agrees that City will, in turn, report each violation as required to assure notification to the State of California, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

1. Contractor agrees to comply with all applicable standards, orders and regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 *et seq.*
2. Contractor agrees to report each violation to City and understands and agrees that City will, in turn, report each violation as required to assure notification to the State of California, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

E. Suspension and Debarment

1. This Contract is a covered transaction for purposes of title 2 Code of Federal Regulations parts 180 and 3000. As such, Contractor is required to verify that none of Contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
2. Contractor represents and warrants that it is not debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order

12549 "Debarment and Suspension." Contractor agrees that neither Contractor nor any of its third-party subcontractors shall enter into any third-party subcontracts for any of the work under this Contract with a third-party subcontractor that is debarred, suspended, or otherwise excluded for or ineligible for participation in Federal assistance programs under executive Order 12549.

3. Contractor must comply with title 2 Code of Federal Regulations, part 180, subpart C and title 2 Code of Federal Regulations, part 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
4. This certification is a material representation of fact relied upon by City. If it is later determined that Contractor did not comply with title 2 Code of Federal Regulations, part 180, subpart C or title 2 Code of Federal Regulations, part 3000, subpart C, in addition to remedies available to the State of California and the City of Santa Rosa, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

F. Procurement of Recovered Materials

1. In the performance of this Contract, Contractor shall make maximum use of products containing recovered materials that are EPA- designated items unless the product cannot be acquired—
 - a. Competitively within a timeframe providing for compliance with the Contract performance schedule;
 - b. Meeting Contract performance requirements; or
 - c. At a reasonable price.
2. Information about this requirement, along with the list of EPA- designate items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

G. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by section 1352 of title 31 of the United States Code. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

H. MBE/WBE Requirements

1. Contractor shall take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible through the "Good Faith Effort" process in 2 C.F.R. § 200.321. Contractor shall document and report its Good Faith Effort processes. Contractor shall also ensure that all of its subcontractors take the affirmative steps required under 2 C.F.R. § 200.321. Affirmative steps shall include:
 - a. Placing qualified small and minority businesses and women's business enterprises

- on solicitation lists;
- b. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- e. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
- f. Requiring all subcontractors to take the affirmative steps listed in paragraphs (a) through (e) above.

I. Miscellaneous Provisions

1. DHS Seal. Contractor shall not use the Department of Homeland Security ("DHS") seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre- approval.
2. FEMA Assistance. Contractor acknowledges that FEMA financial assistance will be used to fund this Contract only. Contractor shall comply will all applicable federal laws, regulations, executive orders, FEMA policies, procedures, and directives.
3. Federal Government Not Party. The Federal Government is not a party to this Contract and is not subject to any obligations or liabilities to City, Contractor, or any other party pertaining to any matter resulting from this Contract.
4. False Claims. Contractor acknowledges that Title 31 United States Code Chapter 38 (Administrative Remedies for False Claims and Statements) applies to Contractor's actions pertaining to this Contract.

J. Equal Employment Opportunity

During the performance of this Contract, Contractor agrees as follows:

1. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
3. Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's

commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided bylaw.
7. Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

K. Records.

1. Contractor shall retain any and all records necessary to document the charges under this Contract and make such records available for inspection for a period of not less than four (4) years.
2. Contractor shall keep and maintain full and complete documentation and accounting records concerning all extra or special services performed by it that are compensable by other than an hourly or flat rate.
3. Contractor shall maintain the records and any and all other records pertinent to this Contract for a period of four (4) years after completion of all services hereunder.
4. Contractor agrees to provide City, the State of California, the Federal Emergency Management Agency ("FEMA") Administrator, the Comptroller General of the United States, and any or all of their authorized representatives, access to any books, documents, papers, and records of Contractor which are pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions.
5. Contractor agrees to permit all or any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
6. Contractor agrees to provide the FEMA Administrator or his authorized representatives access to work sites pertaining to the services being performed under this Contract.



TECHNICAL SPECIFICATIONS

FOR

SIX FIRE DAMAGED PARKS- RECOVERY

CONTRACT NO. C0228



2021

SECTION 11

MOBILIZATION

11-1.01 Description: Mobilization shall conform to the provisions in Section 11, "Mobilization," of the Standard Specifications and these Special Provisions.

The first order of work shall be to procure playground equipment upon the approval of the submittal. You shall identify the playground equipment procurement as part of the CPM Schedule. Contract working days shall be counted during material procurement. Except for Fir Ridge Park which can be fenced off completely, no other locations shall be completely closed to public access. Temporary construction fencing shall be limited to only the area(s) of impact to reduce public inconvenience.

Mobilization shall include the obtaining of all permits, moving onto the site of all equipment, temporary buildings, if needed, and other construction facilities as required for the proper performance and completion of the work.

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

1. Signed Contract by the City and the Contractor.
2. Completion of all tasks and submittal of all documents (bonds, insurance, schedule, etc.) required as conditions of issuing the Notice to Proceed.
3. Moving onto the site of all Contractor's equipment required for operations.
4. Installing temporary construction water supply, power, wiring and lighting facilities, as required.
5. Providing field office trailers if needed by the Contractor.
6. Providing all on-site communication facilities, including telephones and radio pagers.
7. Obtaining all required permits.
8. Having all OSHA required notices and establishment of safety programs.
9. Establishment and enforcement of COVID-19 health and safety protocols as required by the County of Sonoma governing Public Health Orders.
10. Attendance at Pre-Construction Conference of Contractor's principal construction personnel.
11. Beginning work on the project or at the subject site as applicable.

11-1.02 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.

SECTION 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 Special Provisions, 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 City Traffic 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 will be allowed to commence prior to approval of the Work Zone Traffic Control Plans. Work zone shall be in compliance with the requirements of ADA during and after work hours, weekends, and holidays.

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. All trucks and equipment shall minimize idle times and staging during construction and on weekends.

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 Special Provisions.

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

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

The Contractor shall not park construction vehicles, contractor employee vehicles, stage materials or stockpiles in front of any business or residential driveway access and the Contractor shall

maintain access to private parking lots within the block where work is in progress. Construction vehicles shall not be left running for any length of time if parked in front of a business or residential unit.

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

The Contractor shall notify Sonoma County Transit at (707) 585-7516, Superintendent of Golden Gate Transit at (415) 257-4442, Santa Rosa City Bus at (707) 543-3922, Sonoma County Airport Express at (707) 837-8700, the local Postal Service at (707) 526-0113 and Santa Rosa Recycling and Collection at (707) 586-8234 5 calendar days prior to any lane closures or restrictions in turning movements.

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

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

Notification shall be as follows:

1. A notice placed on the front door of each home or business where curb side parking will be suspended and attempt made to notify each business or resident verbally that work will be underway within the block and that curb side parking will be suspended during stated working hours and request that vehicles be parked out of the roadway by 8:00 a.m. Service of notice shall not bar use of cars within the block, as individual plans change and emergencies arise.
2. Type 1 barricades every 50 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 traffic control as necessary and as directed by the Engineer for "cat-tracking" operations by 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 Special Provisions.

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 **lumpsum** 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.

SECTION 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:

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.

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 is 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 should 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): 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, creeks, ponds, 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.

13-10 Temporary Linear Sediment Barrier

13-10 Temporary/CASQA Silt Fence and Sand Bag Barrier (BMP SE-1 and SE-8)

13-10.04 Payment: Temporary Linear Sediment Barriers shall be paid for at the **lump sum** price for **Water Pollution Control**. The contractor pays all maintenance costs.

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SECTION 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 and concrete park areas 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.

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.

SECTION 15

EXISTING FACILITIES

15-1.03A General: Existing facilities disturbed by construction shall conform to the applicable provisions of Section 5-1.36. All existing active utilities found to reside in excavated areas or adjacent park 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 or adjacent park areas shall be supported, removed, or replaced at the Contractor's option and at no additional cost to the City. The Contractor shall be responsible for maintaining the existing line and grade of the storm drains. If the Contractor elects to remove and replace, it shall be done per applicable City Standards and Specifications.

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

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

15-2.10B Adjust Frames, Covers, Grates, and Manholes: Existing manhole frames and covers, valve boxes, mainline cleanouts and monuments adjusted to grade shall conform to City Standards.

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

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

15-3.03 Construction: All removed 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 at a recycler for this material. 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 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.

15-3.04 Payment: Payment for saw cutting, removal and disposal of concrete sidewalk, curb and gutter, driveway areas, and existing City monuments shall be included in the contract 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 or in the field shall be for reference use only and shall not be considered as accurate information for any other areas within the project limits.

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

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

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

15-7.01 Payment: Utility Clearances: Full compensation for conforming to the provisions of this section shall be considered as included in the prices paid for the various contract items, including but not limited to 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 compensation will be allowed 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 Clean Concrete: A trash can melted onto a panel of integral color concrete sidewalk at Rincon Ridge Park during the 2017 Tubbs Fire. The Contractor shall clean the concrete of all melted debris, stains, or other marks as shown on the plans. The Contractor shall notify the Engineer if the concrete cannot be cleaned as described. Runoff from cleaning shall not enter storm drain system. Special handling may be required.

15-9.01 Payment: Clean Concrete shall be paid for at the contract **lump sum** price for cleaning concrete, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in cleaning concrete as shown on the plans and specified herein, and no additional allowance will be made therefor.

15-10 Repair Pavers: Existing sand-set pavers at Rincon Ridge Park have settled, broken, or heaved and created an accessibility issue. The Contractor shall repair or replace the pavers in the areas shown to bring them into accessibility compliance as shown on the plans.

15-10.01 Payment: **Repair Pavers** shall be paid for at the contract **lump sum** price for repairing pavers, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in repairing pavers as shown on the plans and specified herein, and no additional allowance will be made therefor.

15-11 Refinish Metal Furnishings: An existing metal fence and handrails at Fir Ridge Park and three metal gates at Nagasawa Community Park were aesthetically damaged in the 2017 Tubbs Fire. The Contractor shall clean these furnishings of chipped, flaking, or damaged paint and rust then prepare and repaint, as show on the plans.

15-11.01 Payment: **Refinish Metal Furnishings** shall be paid for at the contract **lineal feet** price for refinishing metal furnishings, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in refinishing metal furnishings as shown on the plans and specified herein, and no additional allowance will be made therefor.

15-12 Refinish Existing Bollard: Existing bollards at Rincon Ridge Park, Nagasawa Community Park, and Parkerhill Trail were aesthetically damaged in the 2017 Tubbs Fire. The Contractor shall clean these bollards of chipped, flaking, or damaged paint and rust then prepare and repaint, as show on the plans.

15-12.01 Payment: **Refinish Existing Bollard** shall be paid for at the contract unit price **each** for refinishing metal bollards, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in refinishing existing bollards as shown on the plans and specified herein, and no additional allowance will be made therefor.

15-13 Relocate Existing Bench: An existing bench at Rincon Ridge Park requires a new concrete pad to meet companion seating accessibility requirements. The Contractor shall remove the existing bench, securely store, and then re-install in a new location as shown on the plans.

15-13.01 Payment: **Relocate Existing Bench** shall be paid for at the contract unit price **each** for relocating existing bench, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in removing, securely storing, and relocating existing bench as shown on the plans and specified herein, and no additional allowance will be made therefor.

15-14 Remove and Replace Existing Wheel Stops: Existing wheel stops at parking stalls located in Nagasawa Park require Contractor to remove existing damaged wheel stops, dispose of them, and re-install new wheel stops. Wheel Stop shall be 6' long x 6" wide x 4" high molded from 100% recycled rubber, black, with white reflective stripes. Wheel stop shall be "6' Recycled Rubber Parking Block with Hardware" Black/White Reflective with 12" Galvanized Steel Spikes for Asphalt available from Traffic Safety Store (www.trafficsafetystore.com), or approved equal.

15-14.01 Payment: **Remove and replace existing wheel stops** shall be paid for at the contract unit price **each** for removal and re-installation, which price shall include full compensation for furnishing all labor, materials, tools and equipment, off-haul and doing all the work involved in removing existing damaged wheel stops and re-installing new wheel stops as specified herein, and no additional allowance will be made therefor.

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SECTION 16

CLEARING AND GRUBBING

16-1.01 General: Clearing and grubbing and any fine grading shall be confined to the limits shown on the plans and shall not exceed the minimum necessary to complete operations.

The Contractor shall not remove any trees, brush, shrubs, or other natural objects outside the limits of construction as shown on the plans, unless directed by the Engineer.

Any trees, brush, shrubs, or other natural objects not ordered removed by the Engineer which have been removed, altered, or damaged shall be replaced in kind by the Contractor before completion of the project.

All unsuitable material shall be disposed of away from the site by the Contractor. The Contractor shall make all necessary arrangements for disposal of material.

16-1.03 Construction: The area to be cleared and grubbed shall be the area within the park as shown on the plans, unless otherwise specified in the Special Provisions.

All stumps, large roots and other objectionable material shall be removed including root balls in the area of construction. The resulting spaces shall be backfilled with material suitable for the planned use.

16-1.06 Payment:

Clearing and Grubbing and any fine grading shall be paid for at the contract **lump sum** price for clearing and grubbing, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in clearing and grubbing as specified herein, and no additional allowance will be made therefor.

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SECTION 19 EARTHWORKS

19-1 General

19-1.01 General:

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

19-1.01A Summary:

1. Excavating for trenching

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

- A. Unsuitable material may be processed in place, may be excavated and placed on the grade or other locations suitable for further processing, or may be partially excavated and partially processed in place.
- B. Processing may consist of drying to provide a stable replacement material, or mixing with lime per Section 24.
- C. Stabilized material shall be placed and compacted in layers as hereinafter specified for constructing embankments.

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.

19-2 Earthwork Excavation

19-2.03A General: The Engineer shall provide reference points and cut sheets for the excavation. The Contractor shall furnish a qualified grade setter to insure conformance to the lines and grades established by the Engineer. Finish fine grading may be required at the request of the Engineer.

The Contractor shall note that there are trees near areas intended for excavation. The Contractor's operation, including the size of the grinding equipment, shall be such, so as to insure that existing trees are not damaged. Where limited clearance under the 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 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: The Contractor is responsible for the disposal of any surplus material for this project.

19-2.04 Payment: Earthwork Excavation and Finish Fine Grading shall be paid for at the contract **cubic yard** price, which price shall include full compensation for all work as specified herein including excavation, placing and compacting fill, and fine grading; and no additional allowance will be made therefor.

19-5 Compaction

19-5.03B Relative Compaction (95 percent): Relative compaction of not less than 95 percent shall be obtained for a minimum depth of 0.5-foot below the grading plane for the full width of the planned pavement structural section, whether in excavation or embankment.

Relative compaction of not less than 85 percent shall be obtained for non-paved areas.

19-8.05 Payment: **Excavation in Tree Dripline** shall be paid for at the contract **lump sum** price, which price shall include full compensation for hiring arborist, furnishing all work involved in air spade excavation, including root pruning labor, materials, tools and equipment, and no additional allowance will be made therefor.

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SECTION 20-3

LANDSCAPE PLANTING AND ESTABLISHMENT

20-1.03C Watering: The contractor shall obtain water according to section 6-4.01A, construction water of these Special Provisions, and irrigate all materials as needed to maintain health and vigor to the satisfaction of the Engineer.

20-7.02 Materials:

A. Plants

1. **Nomenclature:** Plant names used in the drawings and specifications conform to Standardized Plant Names, by the Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally to names accepted in the nursery trade.
2. **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 except as authorized by the Engineer. In no case shall trees be topped or pruned before delivery. Plants shall be grown in nurseries which have been inspected by the California State Department of Agriculture and have complied with its regulations.
3. **Minimum Plant Sizes:** The size of plants will conform to the standards of ANSI Z-60 (American Standards for Nursery Stock). The minimum acceptable size of plants, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the drawings in the list of plants to be furnished.
4. **Identification:** Plants shall be of the variety shown on the plans and conform to the standards of ANSI Z-60 (American Standards for Nursery Stock) and to the requirements herein. One of each bundle or lot shall be tagged with plant name in accord with recommendations of the American Association of Nurserymen.
5. **Substitutions:** Substitutions for the indicated plant materials will be permitted, provided the substitute materials are approved in advance by the Engineer and/or 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.
6. **Plant Inspection and Rejection:** Root condition of plants will be determined by the Engineer and/or City through the removal of earth from the roots of at least two (2) plants but not more than 2 percent of the total number of species from each source.

B. Sod

Turfgrass sod shall be "95-5 Fescue-Blue" as supplied by:
Park Avenue Turf
3075 Old Gravenstein Hwy, Sebastopol, CA 95472
(707) 823-8899
or approved equal

20-7.02D(1) Soil Amendments: All areas to be planted and irrigated shall receive soil amendments as shown on the drawings or listed under other subsections of these specifications.

1. Submittals shall be required verifying the source of the material is as listed, and including laboratory analysis for horticultural suitability and amendment recommendations (equivalent to LTP.4 from Sunland Analytical). Contractor shall provide, mix, and place amended soils as recommended by the lab analysis.
2. A copy of delivery slips on all materials used on the project shall be delivered to the City.
3. Substitutions will not be permitted except when proof is submitted that any material specified is not obtainable. All substitutions are subject to the approval of the Engineer.

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 work day. Plant pits shall not be excavated until the approval of plant locations by the Landscape Architect.

B. Soil Preparation

Soil preparation and finish fine grading shall be as shown on the drawings.

C. Spacing

Tree and plant spacing on this project shall be as shown on the drawings.

D. Excavation and sequencing

Contractor to coordinate excavation and sequencing for all related installations, including Playground installation by others, Subdrainage, Irrigation, Lighting, and pavements.

E. Plant Pits

Plant pits shall be as shown on the drawings. Plant pits at box trees 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.

F. 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. Where trees are to be installed in Porous Pave, the crown of the rootball shall be set 1"-2" above adjacent surface elevation, with top of rootball sloping away so that Porous Pave is placed over the rootball in decreasing thickness toward the trunk.

G. Pit Backfill

Backfill material around plants shall be free from rocks or foreign material and shall be as shown on the drawings.

H. Backfilling Procedure

Backfill procedure shall be as shown on the drawings.

I. Mulch

Mulch shall be as shown on the drawings.

J. Sodding

Grade sod areas to drain and to a smooth and uniform surface. Fine grade and roll sod areas before placing sod. Areas adjacent to sidewalks, edging, and other paved borders and surfaced areas must be 1 inch below the finished surface elevation of the facilities, after fine grading, rolling, and settlement of the soil.

Install initial row of sod in a straight line, beginning along the straightest edge of lawn area to be sodded. Place subsequent rows parallel to and tight against previously installed row. Lay sod to form a solid mass with tightly fitted joints. Place the edge and end of sod firmly against adjacent sod and against sidewalks, edging, and other paved borders and

surfaced areas. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips a minimum of 2 feet to offset joints in adjacent courses. Remove excess sod to avoid smothering of adjacent grass. The soil/root pad shall be flush with adjacent curbs, sidewalks, drains and seeded areas.

Lightly roll the entire sodded area to eliminate air pockets and ensure close contact with the soil after placement of the sod. Water the sodded areas such that the soil is moist to a minimum depth of 4 inches after rolling. Do not allow the sod to dry out. If irregular or uneven areas appear in the sodded areas, restore to a smooth and even appearance.

Trim sod to a uniform edge at sidewalks, edging, and other paved borders and surfaced areas. Trimming must be repeated whenever the edge of sod extends 1 inch or more beyond the edge of the edging, sidewalks, and other paved borders and surfaced areas. Remove trimmed sod.

Mow sod no sooner than 2 weeks after installation or when it has reached a height of 4 inches, whichever is latest, in conformance with Section 20-4.10(B6) herein.

20-4.06 Quantities: In all cases, quantities of plant material shall be furnished as needed to complete work as indicated on plans, including re-sodding, 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) hours notice and set appointment for all inspections by the Engineer and/or City.
- B. Inspections and/or field supervision by Engineer and/or City shall be scheduled for the following operations:
 1. Approval of all plant material.
 2. Tree and shrub replacement PRIOR to digging holes and placement planting.
 3. Approval of ground cover PRIOR to planting.
 4. 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.
- 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 Landscape Maintenance, Establishment, and Guarantee:

- A. Beginning of 90-day establishment period
 - 1. The following conditions shall be met prior to commencement of the 90-day establishment period.
 - a. All elements of construction shall be complete and approved.
 - b. All plant materials included in contract shall be planted.
 - c. No low spots or areas of uneven grade shall be present in turf areas.
 - d. No weeds shall be present in turf or planted areas.
 - e. No rodents shall be present in turf or planted areas.
 - f. Turf shall be established and shall have been mowed a minimum of two times.
 - g. Turf shall exhibit thick, even cover, with no bare spots.
 - 2. Observation
 - a. The Contractor shall request that the Engineer visit the site for the purpose of determining if all conditions have been satisfied and the 90-day establishment period might begin.
 - b. Contractor shall give the Engineer 48 hours notice before the time for the requested observation.
 - c. The Engineer shall observe the planting installation, and if necessary make note of any discrepancies. The Contractor shall make the appropriate corrections and call for another observation by the Engineer.
 - d. When the installation and turf planting is deemed by the Engineer to be complete, a written notice will be given to the Contractor confirming completion of turf planting and stating the effective date for the beginning of the 90-day establishment period.
- B. 90 calendar day landscape establishment
 - 1. Contractor shall furnish all labor, material, equipment, and services required to maintain the landscape in a healthy and attractive condition for a period of 90 days.
 - 2. Maintenance of grass areas shall consist of fertilizing, watering, spraying, weeding, mowing, repair of all erosion, rodent control, and re-sodding as necessary to establish a weed free uniform stand of grass. Areas and parts of areas, which fail to show a uniform stand of grass for any reason shall be re-sodded until all areas are covered with a satisfactory stand of grass. The Engineer shall be the sole judge in this respect.
 - 3. Mulch shall be maintained at the minimum thickness as shown on the drawings.
 - 4. The project will not be segmented into maintenance phases, unless specifically authorized in writing by the Engineer.
 - 5. Watering:
 - a. The trees, ground cover, and lawn shall be watered as often as it is necessary to keep them in optimum, vigorous growth. The lawn shall at no time show a lack of fresh green color or a loss of resilience due to lack of water. Watering of lawn areas shall preferably be done during the early morning hours.
 - b. Water shall be controlled so that there will be no run-off, ponding, overspray, or over watering.
 - 6. Fertilizing
 - a. Turf areas to receive 4 lbs/1,000 s.f. application of 16-6-8, two weeks after planting followed by 5 lbs of 21-0-0 at 45 day intervals (include 3)
 - b. All other mulched tree planting areas shall receive 5 lbs of 21-0-0 30 days after planting, then at 45 day intervals (include 3).
 - 7. Mowing:
 - a. All mowing shall be done in a neat and orderly manner. Equipment shall be moved onto and off the area to be mowed in such a manner that it will not leave tracks or marks that detract from the finish turf, or leave marks or material on adjacent surfaces.
 - b. Mowing equipment shall be reel type mowers, sharp, and in optimum operating

- condition. The equipment shall be washed before initial use on the project so that there will be no chance of introducing foreign seeds or diseases onto the project.
- c. Frequency of mowing shall be determined by the rate of growth of the grass. During seasons of peak growth mowing may have to be done every three days to four days; under normal conditions once a week should be adequate.
 - d. The average mowing height shall be 2". The grass blades must be cut sharply and cleanly. The turf must be cut evenly so that no ridges remain in the finish cut. The direction of mowing shall be alternated each time.
8. Weed Control:
- a. All turf and planting areas shall be kept weed free, either by hand methods or by the application of organic OMRI-approved herbicides designed for use on any type of weeds invading the planting areas.
 - b. All equipment used for herbicides shall be properly cleaned before it is used on this project. Herbicides shall be applied at temperatures recommended by the manufacturers. Herbicides shall not be used during windy or gusty days. All possible precautions shall be taken to protect vegetation which is susceptible to damage from the particular herbicides to be used.
9. Pest Management Operations:
- a. The Contractor shall utilize Integrated Pest Management practices for the control of all landscape pests including, but not limited to, weeds, insects and other invertebrates, plant pathogens, rodents, etc.
 - b. Gophers shall be controlled by means in accordance with all applicable federal, state and local laws, rules and regulations.
 - c. The Contractor shall have all required permits and licenses for the possession and use of pesticides. The Contractors employees shall have the required pesticide training before applying pesticides.
 - d. The use of pesticides shall conform to all applicable federal, state and county laws, rules and regulations.
 - e. All pesticide application equipment shall be suited for the use intended. All such equipment shall arrive at the site clean, in proper working order and without leaks. On-site cleaning of pesticide equipment is forbidden.
 - f. All pesticides shall be labeled for the use intended and shall arrive at the site in original containers or in properly labeled secondary containers.
 - g. The use of any insecticide or fungicide for any reason shall be done only with the approval of the City of Santa Rosa Parks Division at 543-3770.
 - h. Pesticides shall be applied only under favorable weather conditions that eliminate or significantly reduce spray/dust drift or other offsite movement of the pesticide.
 - i. Use of Category I pesticides is forbidden.
 - j. The City of Santa Rosa Parks Division shall be given 48-hour prior notice of any pesticide application. The City reserves the right to have a representative on site during any pesticide application. Contact the Parks Division at 543-3770.
 - k. All areas to be treated with a pesticide in which access by the public is allowed shall be posted with 11" x 14" warning signs a minimum of 48 hours in advance of the planned application. Signs shall remain in place for a minimum period of 48 hours after the application.
 - l. The City shall provide pesticide application notice signs.
 - m. Signs shall be placed at such locations and intervals to provide adequate warning to persons entering the treated area(s). Spacing of signs shall not exceed 100 feet.
 - n. In those areas and/or times in which access by the public is allowed, a blue indicator dye shall be added to all liquid formulated herbicides which are essentially clear in color.
 - o. The Contractor shall submit to the Parks Division by the 10th of each month a summary report of each pesticide and quantity used the previous month.
 - p. The provisions of this section shall be valid during all construction phases, any

- plant establishment period and all maintenance periods and extensions thereof.
10. **Restricted Use:**
 - a. At no time shall any pesticide, including herbicide, be used in or near the playground area, dog park, and community garden area. These areas must use mechanical means only for removal of weeds and pest control.
 - b. The use of herbicides is restricted to organic OMRI-approved herbicides only.
 11. **Litter:** The Contractor shall promptly remove all debris generated by his performance of the work after weeding or other work required under the contract. Immediately after working in the areas of public walks, driveways or paved areas, they shall be vacuumed clean with suitable equipment. All areas covered by this contract shall be kept free of the following items: bottles, cans, paper cardboard or metallic items. Common debris and litter shall be disposed of in an appropriate manner.
- C. **Guarantee and Replacement**
1. Guarantee period shall be for a period of one year from the date of written acceptance.
 2. All trees, ground cover, and turf areas shall be guaranteed to be alive and healthy as determined by the Engineer at the end of the guarantee period.
 3. The Contractor shall replace, in accordance with the drawings and specifications throughout the guarantee period, any plants or turf areas that die, or in opinion of the Engineer, are in an unhealthy or unsightly condition, due to improper maintenance, or any other causes due to the Contractor's negligence. The Contractor shall not be held responsible for acts of vandalism occurring after the beginning of the guarantee period.

20-4.11 Payment: Payment for the work of this Section shall be paid for at the contract unit price per each as included in the bid schedule and as delineated below:

- A. **Turf** shall be paid for at the contract price per **square foot** which price shall include full compensation for all work including supply of sod turf, soil amendments, and laying of sod turf, complete as specified herein and shown on the plans.
- B. **Supply & Plant 5 Gallon Shrub and Groundcover** shall be paid for at the contract price **per each** which price shall include full compensation for all work to obtain and plant the shrubs and ground cover as specified herein and as shown on the plans.
- C. **90-Day Landscape Maintenance & Establishment** shall be paid for at the contract **lump sum** price which price shall include full compensation for all work to provide landscape maintenance, establishment, and guarantee as specified herein and as shown on the plans.
- D. **Soil Preparation, Finish Fine Grading, Top Dressing, and Mulch:** full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in soil testing, soil amendment, placing top dressing, and placing mulch, as specified herein, shall be considered as included in the prices paid for the various contract items and no additional compensation will be allowed therefor.
- E. **Mulch Pathway** shall be paid for at the contract price per **cubic yard** which price shall include full compensation for all work including subgrade preparation, supply of mulch, laying of mulch, removal of weeds in pathway, complete as specified herein and shown on the plans.

SECTION 20-5

IRRIGATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The general extent of irrigation system and water supply work is shown on the Drawings and includes, but is not limited to, the following:
 - 1. Coordination of meter setting;
 - 2. Installation and testing of backflow preventer, installation of concrete pad;
 - 3. Installation of backflow preventer freeze protection jacket and enclosure;
 - 4. Trenching and other excavation;
 - 5. Irrigation lines, valve control circuits and appurtenances;
 - 6. Drinking fountain main line and appurtenances;
 - 7. Irrigation controller, remote control valves and control wiring;
 - 8. Electrical service coordination and installation;
 - 9. Pipe sleeves and conduit;
 - 10. Testing and inspection coordination;
 - 11. Backfill and compaction of backfill;
 - 12. Provision of as-built drawings, controller charts, certificates and warranties
 - 13. Dust alleviation and control;
 - 14. Cleanup and disposal;
 - 15. Supply all labor, materials, equipment, and apparatus not specifically mentioned herein, but which are incidental and necessary to complete the work specified; and
 - 16. Certifications and audits as required by the City.

1.02 RELATED SECTIONS

- A. Section 19 – Earthwork
- B. Section 20-4 Landscape
- C. Section 99 – Water System
- D. Section 104 – Site Furnishings
- E. Section 112 – Tree Protection

1.03 INSPECTION OF CONDITION

- A. Examine related work and surfaces before starting work of this Section. Contractor shall be completely familiar with these conditions, the work involved, and shall perform to the satisfaction of the engineer.
- B. Report to the Engineer conditions which will prevent the proper installation of this work. Beginning the work of this Section without reporting unsuitable conditions to the Engineer constitutes acceptance of conditions by the Contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions shall be done at no additional cost. Inspect work shown that is either shown as existing on the contract plans, or shown on previous construction plans.

1.04 CODES, RULES AND SAFETY ORDERS

- A. All work and material shall be in full accordance with the latest rules and regulations of safety orders of Division of Industrial Safety, the Uniform Plumbing Code published by the Western Plumbing Officials' Association, City of Santa Rosa Standards, and other applicable laws or regulations. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes. Should the Construction Documents, or instructions, be at variance with the aforementioned rules and regulations, notify the Engineer and get instructions before proceeding with the work affected.
- B. The Contractor shall furnish any additional material and labor required to comply with these rules and regulations, though the work is not mentioned in these specifications or shown in the Drawings.

1.05 REFERENCES

- A. City of Santa Rosa Construction Standards
- B. City of Santa Rosa Water Efficient Landscape Ordinance
- C. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the general designation only.
 - 1. American Society for Testing and Materials (ASTM)
 - 2. Publications: D - 1785 Pipe, Polyvinyl chloride (PVC) Plastic Schedules 40, 80 and 120.

1.06 SUBMITTALS

- A. Submit information on each equipment item specified to substantiate compliance with this specification.

1.07 SUBSTITUTIONS

- A. Specific reference to manufacturer's names and products specified in this Section are used as standards, but this implies no right to substitute other material or methods without written approval of the Engineer. See General Conditions.

1.08 PROTECTION OF EXISTING CONDITIONS

- A. Contractor shall take necessary precautions to protect site conditions, including existing storm drain facilities to remain and work of other contractors onsite. Should damage be incurred, this Contractor shall repair damage to its original condition or furnish and install equal replacement at his expense. Replacement parts or equipment shall be as described in the plans.

1.09 COORDINATION

- A. Coordinate and cooperate with other Contractors to enable the work to proceed as rapidly and efficiently as possible.

1.10 PRODUCT HANDLING

- A. Protect work and materials under this Section from damage during construction and storage. Protect polyvinyl chloride (PVC) pipe and fittings from direct sunlight.

Beds on which pipe is stored must be full length of pipe. Do not use any pipe or fitting that has been damaged or dented.

1.11 SUPERVISION AND WORKMANSHIP

- A. During the progress of this work, the Contractor's Superintendent shall be on-site at all times and be known to the Engineer. The Superintendent shall be able to communicate with the Engineer in English and supervise the work constantly. Do not change the Superintendent without seven (7) days prior notification to the Engineer.

1.12 LAYOUT OF WORK

- A. Stake out the irrigation as shown on the drawings. The layout of irrigation and drinking fountain mainlines and turf sprinklers shall be checked by the Engineer before construction is started. Any changes, deletions or additions to the system shall be determined at this check.

1.13 RECORD DRAWINGS

- A. Maintain one complete set of full size, scalable black line prints of all irrigation contract drawings in the field office. The prints shall be in order and available for review at all times.
- B. Record accurately on one set of prints of the irrigation drawings, all changes in the work constituting departures from the original contract drawings. The changes and dimensions shall be recorded in a legible and professional manner to the satisfaction of the Engineer. When the drawings are approved, transfer all information to a set of reproducible mylar drawings supplied by the Engineer.
- C. Dimension items from two permanent points of reference (sidewalks, curbs, pavement, etc.). Locations shown on as-built drawings shall be kept day to day as the project is being installed.
- D. Show locations and depths of the following items:
 - 1. Routing of mainline and locations of gate valves, ball valves, and quick coupler valves.
 - 2. Routing of electrical conduit.
 - 3. Locations of lateral lines serving tree bubblers.
 - 4. Locations of sleeves under paving.
 - 5. Rotor sprinkler nozzle selections.
- E. Submit as-built drawings to Engineer for review and approval. When the drawings are approved, provide reproducible mylar copies.
- F. As-built drawings must be completed and approved before commencement of the maintenance period.

1.14 RECORD PHOTOS

- A. The Contractor shall record with digital photographs the exact layout of the pipe manifolds at each valve grouping. Label each photo with the valve numbers shown on plan. Deliver to the Engineer in digital format on CD, DVD or flash drive labeled

with project name and date.

1.15 CONTROLLER CHART

- A. Contractor shall prepare a copy of the irrigation plans reduced to 11"x17" to fit within the controller enclosure door and shall be laminated between two sheets of clear plastic. The plan shall be legible and shall clearly describe control station numbers and associated lateral piping and distribution devices. Contractor may add color coding or notes. This reduced plan shall be provided for each enclosure, and shall be in place prior to the commencement of the maintenance period.

1.16 INSPECTIONS

- A. Inspections will be required for:
 - 1. Verification of adequate supply and pressure as described on the drawings.
 - 2. Pressure test of irrigation main lines. Test at 150 P.S.I. for 6 hours. Contractor shall provide all required test pumps and gauges. The engineer shall observe this test.
 - 3. Pipe depth.
 - 4. Coverage test and irrigation audit as required by city ordinance 4051.
 - 5. Santa Rosa Utilities department water conservation inspection, to be performed by SR utilities 543-4200, in the presence of the contractor.
 - 6. Final inspection/start of maintenance. Final inspection shall be performed by the Engineer.
 - 7. Final acceptance and compliance with city standards, to be performed by city forces, with the engineer.
- B. Inspection requests:
- C. Inspection requests:
 - 1. Contractor shall notify the Engineer in advance for requesting all inspections as follows:
 - a. Coverage Tests - 72 hours (3 working days)
 - b. Final Inspection - 72 hours (3 working days)
 - c. Final Acceptance - 72 hours (3 working days)
 - 2. Do not allow or cause the above items to be buried prior to inspection and approval by the Engineer. When inspections have been conducted by other than the Engineer, the Contractor shall show evidence of when and by whom these inspections were made.
 - 3. No inspection will commence without record prints. In the event the Contractor calls for an inspection without up-to-date record prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection will be canceled, and the Contractor back charged for the direct costs of all personnel time and consultant time lost.
- D. Closing In Uninspected Work:
 - 1. Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested, and approved by the Engineer.
 - 2. Day and night barricades shall be provided as needed for all open trenches.

- E. Coverage Test:
 - 1. When the turf sprinkler system is completed, Contractor shall perform a coverage test in the presence of the Engineer to determine if coverage for turf areas is complete and adequate.
 - 2. This test shall be accomplished before any planting.
 - 3. Contractor shall provide testing equipment to establish working pressure at a sampling of the large rotor heads to establish the required pressure setting of the valves.

1.17 IRRIGATION ACCESSORIES

- A. Contractor shall supply the following parts and accessories to the Engineer prior to the close of construction:
 - 1. Two (2) each quick coupler valve keys and hose swivel ells.
 - 2. Two (2) sets of various special wrenches or tools that may be required for adjustment of sprinkler heads or equipment.
 - 3. Four (4) of each sprinkler head specified and installed and two of each nozzle type specified and installed.
 - 4. Two (2) keys for each controller enclosure and controller (as applicable).
 - 5. Two (2) copies of the instruction manual for each irrigation controller.

1.18 GUARANTEES

- A. The Contractor shall be responsible for any damage or defects in the irrigation system and drinking fountain main line being installed and shall repair any and all components of the system at his own expense, in a manner satisfactory to the Engineer, before final acceptance of the work.
- B. Any existing material, equipment, paving, planting, etc., damaged by the Contractor during the course of his work shall be replaced or repaired by the Contractor in a manner satisfactory to the Engineer at the Contractor's own expense before the final approval of project.
- C. Damage by Leaks: The Contractor shall be responsible for damages to any property or work caused by leaks in the piping systems being installed, and shall repair, at his own expense and in a manner satisfactory to the Engineer, all damage caused.
- D. The entire irrigation and water supply system shall be guaranteed in writing against defects and faults of material and workmanship for one (1) year from the date of acceptance by the City. All materials used shall carry a manufacturer's guarantee for the length of time specified by the manufacturer, but in no case less than one (1) year.
- E. Any damage due to any irrigation failures which may occur during a one (1) year period after final acceptance shall be repaired by the Contractor to the Engineer's satisfaction without expense to the City. Such repair shall include, but not be limited to the complete restoration of all damaged planting, paving, and other improvements of any kind.

PART 2 PRODUCTS

2.01 PIPE AND FITTINGS

- A. Pressure supply lines from the meter and backflow preventer equipment shall be per the plans.

- B. Pressure supply piping and fittings in valve manifolds shall be Schedule 80 PVC.
- C. Pressure supply main lines for irrigation shall be Class 315 solvent weld PVC.
- D. Pressure supply main line for drinking fountains shall be Schedule 40 solvent weld PVC.
- E. Rigid lateral lines (downstream from remote control valves) shall be PVC Schedule 40 designed for solvent weld connections. No rigid pipe smaller than $\frac{3}{4}$ " to be used.
- F. Flexible PVC lateral lines shall be $\frac{1}{2}$ " Sch. 40 IPS flexible PVC.
- G. All plastic pipe shall bear the following markings:
 - 1. Manufacturer's name.
 - 2. Nominal pipe size.
 - 3. Schedule or class.
 - 4. Type of material.
 - 5. Pressure rating in PSI.
 - 6. NSF seal of approval.
 - 7. Date of extrusion.
- H. All plastic pipe shall be extruded of an improved PVC virgin pipe compound with a Cell Class of 12454-B as identified in ASTM D-1784.
- I. PVC Sch 40 pipe shall be Iron Pipe Size (IPS) conforming to ASTM D-1785.
- J. All 4" or smaller fittings on pressure pipe shall be standard weight Schedule 40 and shall be injection molded of an improved PVC fitting compound, except as listed below.
- K. Fittings in valve manifolds to be standard weight Schedule 80 and shall be injection molded of an improved PVC fitting compound.
- L. Threaded plastic fittings shall be injection molded.
- M. All threaded nipples shall be standard weight Schedule 80 with molded threads.
- N. No male adapters shall be used in any assemblies. This configuration shall be built-up from Schedule 80 couplers and nipples (cut to size).
- O. All threaded fittings shall be assembled using a non-hardening Teflon pipe sealant.
- P. Primers used for solvent cementing of PVC pipe shall conform to ASTM F-656 and be purple in color. Solvent cement used for the joining of PVC pipe shall conform to ASTM D-2564. Make solvent cement joints for plastic pipe and fittings as prescribed by the manufacturer and ASTM D-2855.
- Q. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per the manufacturer's recommendations. Cement shall be of a fluid consistency, not gel-like.
- R. Use Weld-On 795 flexible pipe cement when joining flexible PVC to fittings.
- S. Brass pipe shall be 85% red brass, American National Standard Institute (ANSI), Schedule 40 screwed pipe. Brass fittings shall be medium brass, screwed, 125-pound class.
- T. Sleeves under paving shall be Schedule 40 PVC, size as required. Where fittings are required beneath pavements, they shall be assembled, encased in sleeve piping, placed with sleeves, and capped as needed to allow for future connection and prevention of contamination.
- U. Electrical conduit shall be Schedule 80 PVC, gray in color, size as noted on plans. Elbows shall be long sweep.

2.02 IRRIGATION CONTROLS

- A. Smart irrigation controller with 2-wire system, decoders, and rain shut-off switch and existing conventional controllers as described on the drawings.
- B. Remote control valves shall be Griswold valves with latching solenoid as shown on plans.

2.03 VALVES

- A. 3-inch and smaller ball valves shall be full port, Watts FBV, line size, or an approved equivalent ball valve.
- B. Gate valves shall be line size and as specified on the plans.

2.04 QUICK COUPLING VALVE AND KEY

- A. Quick coupling valve (QVC) to be of bronze construction with female IPT pipe connections. The valve body shall be of two-piece construction with a locking cover of brass and thermoplastic rubber. Valve shall have double-lug locking mechanism on valve outlet. Quick coupler valve shall be Rain Bird 44 LRC or approved equivalent.
- B. Quick coupling valve key to be of the same manufacturer as the QCV, shall be designed for use with the double-lug quick coupler, and shall be fitted with hose swivel and handle.

2.05 VALVE BOXES

- A. Plastic valve boxes shall be used only in soil planter areas. They shall be made from a structural foam with polyester resins and ultraviolet inhibitors as manufactured by Carson products or equal. Lids shall be factory marked with "irrigation" and labeled per City Standard Irrigation Detail #107
- B. Quick coupling valve boxes: 11-7/8 inch x 17-inch x 12 inch deep green box. Lid shall be green, marked "IRRIGATION" and have a lock bolt
- C. Ball valves and remote control valve boxes: 15 1/4" x 25 1/4" x 18" deep valve box marked "Irrigation"
- D. Ball valve box for drinking fountain: 11-7/8 inch x 17-inch x 12 inch deep green box marked "W" or "WS"
- E. Junction Boxes: Christy N9 with D-16 lid or approved equivalent.
- F. Label all valve boxes with 0.08" aluminum plate with 1-1/2" high stamped letters as shown in valve box installation in irrigation details (City Std. 107).

2.06 SPRINKLERS AND BUBBLERS

- A. Sprinklers and bubblers shall be as noted on the irrigation legend.

2.07 SWING JOINTS

- A. Shall be as manufactured by as listed in the city standard details. Size shall be appropriate for the particular sprinkler as detailed on plan.

2.08 WIRE

- A. See irrigation legend on Drawings for irrigation wiring specifications.
- B. Connections between the controller and remote control valves shall be made with valve manufacturer's wire chart and specifications.
- C. Wiring shall occupy the same trench and shall be installed along with the same route as the pressure supply lines wherever possible.
- D. Where more than one wire is placed in a trench, the wiring shall be taped together at intervals of 10 feet.
- E. All splices shall be made using 3M DBR/Y-6 wire connectors, or approved equal.
- F. An expansion loop of 18" shall be provided at each wire connection and directional turn.
- G. Sizing of wire shall be according to manufacturer recommendations, in no case less than AWG #14 size.
- H. Use a continuous wire between controller and remote control valves.

- I. Under no circumstances shall splices exist without prior approval.
- J. Any splices allowed shall be installed in an approved box.
- K. Spare wire path shall be of the same type as the active wire path, with different colored jacketing.
- L. Tracer wire to be installed with all PVC main line pipe shall be of No. 6 gauge copper with no insulation.
- M. Grounding rods and wire shall be as listed in the city standard detail shown on the drawings.

2.09 MISCELLANEOUS INSTALLATION MATERIALS

- A. Pull rope shall be solid braided 1/4" nylon rope, yellow in color.
- B. Solvent cement and primer for solvent and joints shall be the make and type approved by manufacturer(s) of pipe and fittings. Use flexible cement for flexible PVC connections. Cement shall be maintained at proper consistency throughout use. All primer and solvent cans shall have labels intact and stamped with the date of manufacture. No cans dated over one (1) year old will be permitted. Do not thin solvent or primer in any manner.
- C. Pipe joint compound shall be non-hardening, non-toxic materials designed specifically for use on threaded connections in water carrying pipe. Rectorseal pipe thread sealant or equal for metal piping. Use Teflon tape for threaded PVC connections.

PART 3 EXECUTION

3.01 PREPARATION

- A. Schedule and coordinate procurement of materials and equipment to effect efficient progress and completion of irrigation system work in conformance with the construction schedule.

3.02 HANDLING AND STORAGE

- A. Protect work and materials from damage during construction and storage.
- B. Handle plastic pipe carefully; especially protect it from prolonged exposure to sunlight.

3.03 LAYOUT

- A. Layout work as accurately as possible in accordance with diagrammatic drawings. Where dimensions between sprinklers are shown, the dimension is a maximum spacing.
- B. Layout of turf rotors per plan is critical to the efficiency of the system. Staking of head locations by surveyor is encouraged.
- C. Where site conditions do not permit the installation of piping, valves or heads where shown on the plan, notify the Engineer immediately and determine relocation in joint conference.
- D. Run pipelines and automatic control wiring in common trenches wherever practical. Insure minimum clearances between various pipes and wires as shown on detail on irrigation plans.
- E. Layout of bubblers shall be closely coordinated with the planting plan.
- F. Any deviations from plan in pipe routing or equipment locations shall be recorded on the as-builts.

3.04 EXCAVATION AND TRENCHING FOR IRRIGATION AND DRINKING FOUNTAIN MAIN LINES AND LATERALS

- A. Excavation shall be in all cases ample in size to permit the pipes to be laid at the elevations intended and to permit ample space for other pipes or wire.
- B. Make trenches for pipelines deep enough to provide minimum cover from finish grade as described on the drawings.
- C. Excavate trenches for mains and laterals straight and true with bottoms level. Make trenches wide enough to allow a minimum of 4 inches between parallel pipelines. Do not install parallel lines directly over one another. Maintain 2 inches minimum vertical clearance between irrigation lines.
- D. Restore surfaces, existing underground installations, or other improvements which are damaged or cut as a result of excavation. Restore to original conditions as approved by Engineer.
- E. Where storm drains or other utilities interfere with irrigation trenching and pipe work, adjust the trench depth or alignment as instructed by Engineer.

3.05 PIPE ASSEMBLY

- A. Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer. Plastic pipe shall be cut with a pipe cutter or hack saw with the assistance of a squared-in sawing vice, or in a manner so as to insure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained. PVC pipe primer shall be used on all solvent weld PVC pipe before PVC solvent is applied.
- B. Assembly of Solvent Joint Pipelines
 - 1. Prepare joint by first making sure the pipe end is square, then reaming and deburring the pipe end. Clean pipe fitting of all dirt, dust, and moisture.
 - 2. When assembling pipe three inches (3") in diameter and larger, first apply primer per manufacturer's instructions.
 - 3. Pipe shall be assembled in a neat and workmanlike manner per manufacturer's instructions. Pipe shall be aligned to avoid strains on joints. Allow cemented joints to cure a minimum of five minutes before handling, and a minimum of four hours before pressurizing with water.
 - 4. PVC pipe shall be made up on the surface and then laid in the trench. Pipe shall have a firm, uniform bearing on minimum 4" layer of sand for the entire length to prevent uneven settlement.
 - 5. Cap or plug openings as pipelines are assembled to prevent entrance of dirt or obstruction. Remove caps or plugs only when necessary to continue assembly.
 - 6. Pipe shall be installed no closer than 4 inches to walkways and curbs.
- C. Tracer Wire
 - 1. A 6 gauge solid copper wire shall be installed in the trench with all PVC water main pipe. The wire shall be bare and shall be laid along the top of the pipe. The wire shall be installed so that there is not direct contact between the copper and other metal in the trench. The wire shall be firmly attached at least once on each length of pipe by means of tape, adhesive, or by other approved methods. The wire shall be continuous along each section of pipeline between mainline valves. At each valve, a loop or end of the wire shall be run-up into the valve box.
- D. Threaded Joints

1. Field threading of PVC pipe is not permitted. Factory formed threads only will be allowed.
 2. All threaded metal pipe joints shall be made up with specified pipe joint compound. Apply compound to male threads only.
 3. Where assembling threaded plastic fittings, use only Teflon tape and take up joint no more than one full turn beyond hand tight.
 4. Where assembling soft metal (brass or copper) or plastic pipe, use strap type friction wrench only; do not use metal-jawed wrench.
- E. Cap open pipe ends as pipe line is assembled to prevent entrance of dirt or obstruction. Remove caps or plugs only when necessary to continue assembly.
- F. Where pipes or control wires pass through sleeves, provide removable non-decaying plug at ends of sleeve to prevent entrance of earth.

3.06 THRUST BLOCKING AND/OR RESTRAINED JOINTS

- A. Harness block installations, anchor blocks, thrust blocks and/or restrained joints shall be provided for all tee, elbow, cross, dead end, and blow off assembly installations as required for water pipe construction per applicable City Standard Plans.

3.07 REMOTE CONTROL VALVES

- A. Prior to installing any remote control valves in the irrigation system, the Contractor shall assemble a mock-up of a typical remote control valve assembly. The mock-up shall include: mainline fitting, riser, reducing fittings, 1½" valve, nipples, reducing fittings as required to connect to a 1½" lateral. Mock-up shall be approved by the Engineer before any valves are installed in system.
- B. Install remote control valves where and as shown and on drawings and group together on a manifold with ball valve. Maximum three remote control valves per manifold. Limit one remote control valve per box, except where noted otherwise on plans.
- C. Provide 12 inches between valve boxes where valves are grouped together.
- D. Thoroughly flush mainline before installing valves.
- E. Remote control valves to be supplied with latching solenoids; see plans and notes.

3.08 WIRE SPLICE ASSEMBLY

- A. The wire splice assembly shall splice and effectively moisture seal two or more conductors. The device shall be installed per manufacturer's instructions and all applicable electrical codes.
- B. Control wires shall be installed between controller and remote control valves without splices. Make all wire splices in a splice box with locking top.
- C. Wires to be as listed above and described on the plans.

3.09 CONTROL WIRING

- A. Control wires shall have same minimum cover as main line.
- B. Run valve control wires along mains wherever practical. Tie wires in bundles with electrical tape at 10-foot intervals and allow slack for contraction.
- C. Where control wires do not follow the main line, they shall be installed within a 2" Sch. 40 PVC conduit with 24 inches minimum cover or as otherwise specified on the plans.
- D. Wire runs and installation to conform to notes on irrigation drawings meeting specifications for two-wire system.
- E. Control wires shall be continuous between the valve and the controller. If required, locate all splices within a separate box. Do not direct bury any wire splices.
- F. Where control wires pass under paving, they shall be contained in a separate 2" Schedule 40 PVC electrical conduit. Include pull rope in conduit.

3.10 BALL VALVES

- A. Install in valve box as detailed on drawings or in specifications. Install line size ball valves with concrete thrust block as detailed on plans.

3.11 VALVE BOXES

- A. Remote Control Valve Boxes:
 - 1. Install four common bricks (one at each corner of box) under base of box for support.
 - 2. Install 3/4 inch clean rounded drain rock 6 inches deep under valve and inside box for drainage.
 - 3. No soil will be permitted inside box. Use box extensions as necessary.
 - 4. Install aluminum label plate on valve box lid as shown on the drawings.
 - 5. Provide coil of slack wire as described on the drawings.
- B. Ball Valve and Quick Coupling Valve Boxes:
 - 1. Install four common bricks (one at each corner of box) under base of box for support.
 - 2. Install 3/4 inch clean rounded drain rock 6 inches deep under valve and inside box for drainage as detailed.
 - 3. No soil permitted inside box.
- C. Splice Boxes:
 - 1. Install two common bricks (one on each side) under base of box for support.
 - 2. Install 3/4 inch diameter clean rounded drain rock 6 inches deep inside box.
 - 3. No soil permitted inside box.
 - 4. Spliced wire shall be coiled (1 inch dia.) with 2 feet of extra wire and each wire end weatherproofed with a splice seal assembly.
 - 5. All splice box locations shall be indicated on as-built drawings and the origin of the wires shall be noted.

3.12 SPRINKLERS AND BUBBLERS

- A. All pop-up irrigation sprinklers shall be installed with double swing joints and shall be set perpendicular to the finish grade.
- B. Thoroughly flush lateral lines before installing sprinklers.

- C. Locate and install sprinklers as shown and dimensioned on the drawings and details.
- D. Adjust sprinkler heads for proper distribution and arc of coverage. Adjust the top of sprinklers to be flush, or slightly below, finish grade.
- E. Where sprinklers are adjacent to curbs or walks, locate the heads within 6 inches of curbs and walks.
- F. Bubblers shall be installed on flex risers or deep watering tubes as described on the drawings.
- G. Layout of turf rotors per plan is critical to the efficiency of the system. Staking of head locations by surveyor is encouraged.

3.13 CONNECTION TO IRRIGATION CONTROLLER

- A. Connect control wires to the controller per manufacturer's specifications for two-wire system.
- B. The hydrometer, and rain switch shall be connected to appropriate terminals. Full functionality of each shall be tested and verified. Confirm controller is programmed for "normally open" master valve.

3.14 BACKFILLING

- A. Do not allow nor cause any work to be covered or enclosed until it has been inspected, tested and approved by the Engineer. Should any work be enclosed or covered before inspection and test, the work shall be uncovered at the Contractor's expense, and after it has been inspected, tested and approved, the work shall be recovered.
- B. All mainline piping and lateral lines shall be bedded and backfilled with sand as shown in detail on the plans.
- C. Place clean soil backfill material in 8-inch layers and compact by jetting or tamping to a minimum compaction of 90 percent of original soil density.
- D. Dress off areas to finish grades and remove excess soil, rocks or debris remaining after backfill is completed.
- E. If settlement occurs along trenches, and adjustments in pipes, valves, sprinkler heads, turf or paving are necessary to bring the item to the proper level or permanent grade, the contractor, as part of the work under this Contract, shall make all adjustments without extra cost to the City.

3.15 PRESSURE TESTS

- A. Contractor shall notify the Engineer at least 72 hours in advance of testing.
- B. Perform testing at Contractor's own expense.
- C. Center load piping with small amount of backfill to prevent arching or slipping under pressure. No fitting shall be covered.
- D. Leakage Tests – PVC Main Line
- E. Pressure test main line piping at 150 psi for 24 hours and visually inspect for leaks. Retest after correcting defects.
- F. Apply the following test after solvent weld plastic pipe joints have cured at least 24 hours.
 - 1. Test lateral lines with water at 100 psi for 2 hours and visually inspect for leaks. Retest after correcting defects.

3.16 OPERATIONAL TESTS

- A. Adjust valves and align and adjust the arc and radius of each head for proper coverage.
- B. In the presence of the Engineer, the Contractor shall activate each valve by the automatic controller. All sprinkler and bubbler systems must be confirmed as operating correctly prior to beginning planting operations.

3.17 CLEAN-UP

- A. When work of this section has been completed and at such other times as may be directed, remove all trash, debris, surplus materials and equipment from site.

3.18 GUARANTEES

- A. The Contractor shall guarantee all work defects and malfunctions due to faulty workmanship or defective material for a period of one year from the date of final acceptance by the Engineer. Upon being informed by the Engineer of any defects or malfunctions, the Contractor shall provide necessary repairs and/or replacements according to specifications in a reasonably expedient manner at no additional cost to the City.
- B. Emergency repairs, when necessary, may be made by the City without relieving the Contractor of his guarantee obligation. The Contractor is also obligated to restore any and all damaged plantings, paving, or other improvements where damage was a result of the improper operation of the system.

PART 4 - MEASUREMENT AND PAYMENT

Irrigation System, complete, in place, and fully operational, shall be made at the contract **lump sum** price, which shall be considered full compensation for furnishing all labor, materials, equipment, tools, transportation, and incidentals necessary for installation of the irrigation system, complete, in place and fully operational. This shall include, but not be limited to, all excavation, connections, backfill, compaction, system testing, protection of system, protection of any and all utilities, coordination with other trades, removal and disposal of extraneous and surplus materials, restoration of areas disturbed by the work, and clean-up related to the completion of this work, as shown on the drawings and described in these specifications and Special Provisions, to the satisfaction of the Engineer.

SECTION 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 City Specifications, with the following modifications and additional requirements and City Materials Engineering approval.

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, subject to City Materials Engineering approval.

26-1.04 Payment: **Class 2 Aggregate Base** is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor 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.

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SECTION 26A

PERMEABLE BASE

26A-1.01 Permeable Base: Permeable base shall be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the City 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.

26A-1.02B Class 2 Permeable material: The percentage composition by weight of Class 2 permeable material in place must comply with the grading requirements shown in the following table:

Class 2 Permeable Material Grading Requirements	
Sieve sizes	Percentage Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

26A-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.

26A-1.04 Payment: **Class 2 Permeable Base** is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor 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.

SECTION 56

SIGNS

56-1 Description: Sign manufacturer and construction shall be in accordance with the details as shown on the plans, these Special Provisions, and as directed by the Engineer.

56-2 Submittals: Shop Drawings: Submit shop drawings for approval prior to construction showing complete details of signs, including sizes and shapes of members, dimensions, spacing of components, connections, accessories, fittings, hardware including anchorages and footings.

56-3 Payment

Park Rules 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 constructing the park rules signs in place as shown on the plans and as specified herein.

Monument Sign – Concrete and Metal 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 constructing the monument sign – concrete and metal as shown on the plans and as specified herein.

Monument Sign - Metal 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 constructing the monument sign - metal as shown on the plans and as specified herein.

Aluminum 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 constructing the park signs as shown on the plans and as specified herein.

SECTION 64

PLASTIC STORM DRAIN PIPE

64-1.01 Description: All plastic storm drain pipes and associated appurtenances shall be constructed in accordance with the City Standards.

64-1.02 Materials: Plastic pipe for use in public storm drain systems shall be 8 inches in diameter, Type S, smooth interior wall, corrugated exterior wall, high density polyethylene pipe (HDPE) as specified in AASHTO designation M294. Curb drains shall be 3" Sch 40 PVC.

64-1.02E Joints: Joints shall be in accordance with Section 64-1.05 Couplings and Fittings of the City Standards. Pipe and fittings shall be joined with a bell-and-spigot joint meeting AASHTO M252, AASHTO M294, or MP7. The joint shall be silt tight with o-ring gaskets made of polyisoprene meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on gasket and bell during assembly. The spigot shall be pushed into the bell to the "home line" on the pipe.

64-1.03 Excavation and Backfill: Excavation and backfill shall be in accordance with Section 64-1.05 of the City Standards. All trench excavation material from trenches, including any removed portions of the existing storm drain pipe, shall be the property of the Contractor. Excavated material shall not be disposed of on the work site. Prior to disposal of any material, the Contractor shall submit to the Engineer written authorization for such disposal of material and entry permission signed by the owners of the disposal site, and shall comply with any other requirements of disposal, such as City and County permits, as may be required.

Excavation and backfill shall be as shown on Standard 215 Standard Trench Detail of the City of Santa Rosa Standard Plans and the following provisions.

Minimum trench width shall be as follows:

<u>Pipe Size, Inside Diameter</u>	<u>Trench Width (inches)*</u>
4	12
8	18
15	30
18	36
24	48

* If this is not sufficiently wide for the materials and methods proposed, a wider trench allowing for proper installation should be constructed.

Pipe bedding will be placed in 6-inch (maximum) lifts to six inches above the top of pipe with each lift hand or mechanically tamped. The final lift can be compacted with a plate type vibrating compactor.

64-1.03C Laying Pipe: Laying Pipe shall be in accordance with Section 64-1.07 of the City Standards. Plastic storm drain pipe shall be installed in accordance with the Standard Specifications, generally accepted practice and on the alignment and grade as shown on the plans. When long radius curves are permitted, adjustments in horizontal alignment will be achieved through adjustments at each coupling, within manufacture's specification, and not by bending of the pipe.

Unless otherwise specifically permitted by the Engineer, all pipe shall be laid upgrade.

Where ground water or surface drainage occurs, pumping shall continue until backfilling has progressed to a sufficient height to prevent floatation of the pipe.

64-1.04 Payment: Full compensation for removing and disposing of existing storm drain pipes encountered during trenching shall be considered as included in the price paid for Storm Drain Pipe.

12" Storm Drain shall be paid for at the contract price per **linear foot** (as determined by measuring the total horizontal length of pipe installed) which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in 12" storm drain piping installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; storm drain piping and fittings as required; placing and compacting all required bedding and backfill; as specified herein, and no additional allowance will be made therefor.

4" Storm Drain shall be paid for at the contract price per **linear foot** (as determined by measuring the total horizontal length of pipe installed) which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in 4" storm drain piping installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; storm drain piping and fittings as required; connection to drain inlets; placing and compacting all required bedding and backfill; as specified herein, and no additional allowance will be made therefor.

4" Subdrain shall be paid for at the contract price per **linear foot** (as determined by measuring the total horizontal length of pipe installed) which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in installing 4" subdrain, including but not limited to: excavation and disposal of excavated materials; 4" pipe and fittings; connecting to storm drain pipe and/or drain inlets; placing and compacting all required drain rock, filter fabric and backfill; as specified herein, and no additional allowance will be made therefor.

64-1.05 Trench Shoring and Bracing - Storm Drain: All bracing and shoring shall conform to Section 65-2 of these Special Provisions.

64-2 Trench Shoring and Bracing

64-2.01 Description: All bracing and shoring shall conform to Section 65-2 of these Special Provisions.

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SECTION 65

STORM DRAIN STRUCTURES

65-1 Description: Storm drain structures shall be constructed in accordance with applicable sections of City Standards, the details shown on the plans, and these Special Provisions. Storm drain structures are storm drain manholes, catch basins, and private drain inlets.

65-1.02 Drainage Structures: Excavation and backfill associated with the installation of manholes under this contract shall be in accordance with these Special Provisions, Plans, City Standards and Specifications, Standard Plans and Specifications, and as directed by the Engineer.

Concrete for storm drain structures shall be Class "A" portland cement concrete conforming to the requirements of Section 90 of these special provisions of the Standard Specifications, July 2010 edition.

The top of rim shall be set accurately to the final finished grade in paved streets and to the elevation shown in unimproved areas.

All excavation material shall be the property of the Contractor. Excavated material shall be removed as it is generated, and at no time shall the Contractor place excavated material at the work site. Prior to disposal of any material, the Contractor shall submit to the Engineer written authorization for such disposal of material and entry permission signed by the owners of the disposal site, and shall comply with all other requirements of disposal, such as City and County permits, as may be required.

12" Drain Inlets shall be NDS 12" x 12" Tapered Polyethylene Catch Basin with 12" square polyethylene grate with openings and risers as needed, or approved equal.

Bubble Up Drain shall be 4" Nyloplast domed ductile iron grate drain, or approved equal.

65-1.03 Payment:

12" Drain Inlets: Shall be paid for at the contract price per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in 12" drain inlet installation, including but not limited to: excavation and disposal of excavated materials; placing and compacting all required bedding and backfill; complete as shown on the plans and as specified herein, and no additional allowance will be made therefor.

Bubble Up Drain: Shall be paid for at the contract price per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in bubble up drain installation, including but not limited to: excavation and disposal of excavated materials; placing and compacting all required bedding and backfill; connecting to storm drain pipe; exfiltration trench including drain rock and filter fabric; cobble stone and straw roll dissipators; complete as shown on the plans and as specified herein, 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.

65-2.05 Payment: Full compensation for **Trench Bracing and Shoring** shall be paid for at the contract price per **lump sum**, which price shall be considered as included in the prices paid for the various contract items of work which price shall include furnishing all labor, materials, tools and equipment and doing all work involved in trench bracing and shoring as specified herein, and no additional allowance will be made therefor.

SECTION 73

CONCRETE CURBS, SIDEWALKS, FOOTINGS, AND PAVING

73-1.01 Description: Work includes, but is not necessarily limited to, the following: miscellaneous slabs, footings, posts, mowstrips, sidewalks, plazas, pathways, decorative bands, and playground containment band; integral concrete coloring; concrete joints and finishes; finish sample mock-ups.

Materials and procedures for forming and reinforcing concrete shall conform with Sections 51, 52, and 90 of the Caltrans Standard Specifications, unless otherwise noted in the Drawings or in these Specifications.

All concrete to be removed shall be disposed of by the Contractor away from the site of work. All 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 at a recycler for this material. The Contractor's attention is directed to Section 124, Material Recycling, of these Special Provisions.

73-1.02 Concrete Mix: Concrete shall be Portland cement concrete conforming to Section 90 of these Special Provisions and Caltrans Standard Specifications and subject to approval by City Materials Engineering Division. Concrete mixture subject to field sampling and core testing during installation and before final acceptance.

Contractor shall submit the following prior to preparing mock-ups: mix designs and lab tests for all concrete components and ad-mixtures, material cut sheets for expansion joint materials and filler, and manufacturer's product data for all coloring agents listed on the drawings.

Contractor shall prepare 3'x3' test slabs for each finish described on the plans. Test slab shall demonstrate color, finish treatment, control joints, and edge tooling. Contractor shall allow for costs and time to provide two test slabs for each finish. Additional tests may be negotiated at the request of the Engineer. Approved samples to be kept on site until all flatwork is completed and approved.

Forming and reinforcing shall be observed and approved by the Engineer before the concrete is poured. Any observation by the Engineer of the concrete work shall be requested by the Contractor at least two (2) working days prior to the anticipated observation.

73-1.03 Joints: Joints shall be constructed in accordance with the details shown on the Project Plans. Contraction joints shall be formed with hand-tools. Expansion joint material shall be premolded joint filler conforming to Caltrans Standard Specifications. Expansion joint caulk shall be an approved polyurethane sealant, conforming Caltrans Standard Specifications, color to match at least one adjacent surface.

73.1.04 Other Materials: Formwork materials shall conform to Caltrans Standard Specifications. Base rock shall be Class 2 aggregate base as specified on the drawing. Joints shall be constructed in accordance with the details shown on the drawings. Contraction joints shall be formed with hand-tools.

Reinforcing bars (rebars) shall be intermediate grade deformed bars conforming to Section 52-1.02B of the Caltrans Standard Specifications. Bars shall be clean, new stock, free of rust, scale, or other coatings that could affect the bond between the bars and the concrete.

73-1.05 Concrete Color: Concrete Pavement and Concrete Pavement – Integral Color colors shall be as shown on the plans and shall be submitted to the Engineer for approval.

73-1.06 Tests:

Contractor shall supply (2) concrete testing cylinders with each delivered load. At the discretion of the Engineer, all non-structural concrete (e.g. flatwork) may be tested by an independent or city testing laboratory for conformance with the plans and Specifications. Testing services for this non-structural concrete will be paid for by the City.

Concrete which does not conform to the requirements of the plans and Specifications as determined by testing, shall be removed from the site and replaced at the Contractor's expense. In the event that the concrete does not conform to the requirements of the plans and Specifications as determined by testing, the Contractor is to reimburse the Owner for all testing costs related to the non-structural concrete. The engineer retains the right to test replaced concrete, and require that the Contractor reimburse the Owner for these additional testing expenses.

73-1.07 Grade Tolerance: The aggregate base to receive P.C.C., immediately prior to placing, shall conform to the compaction and elevation tolerances specified, and shall be free of loose or extraneous material. Aggregate base shall be uniformly moist, and any excess water standing in pools or flowing on the surface shall be removed prior to placing concrete.

73-1.08 Stationary Side Form Construction: Concrete pavement shall be placed using stationary side form construction and shall conform with Section 40-1.03F(4) of the Caltrans Standard Specifications, and as specifically outlined, or unless otherwise noted in the Drawings.

All surfaces which will be below grade or totally hidden from view shall conform to "Ordinary Surface Finish" Section 51-1.03F(2) of the Caltrans Standard Specifications. All surfaces exposed to view shall conform to "Class I Surface Finish," Section 51-1.03F(3) unless otherwise noted on the drawings. The Contractor shall build forms with degree of care, and shall select form materials of adequate strength and smoothness to produce smooth, even surfaces of uniform texture and appearance, free of unsightly bulges, depressions, or other imperfections. The Engineer shall be the sole judge in this respect.

Transition of curves to straight lines and of curves to curves shall be formed as smooth, continuous, and uninterrupted, with typical ninety-degree (90°) radius alignment at the points of tangency. Curves and arcs shall be smooth and of consistent radius. Deviations shall not exceed the lesser of 0.25' or 0.1% of the listed dimension.

Form vertical surfaces to full depth and securely position to required lines and levels. Ensure form ties are not placed so as to pass through concrete. Arrange and assemble formwork to permit easy dismantling and stripping and to prevent damage to concrete during formwork removal. Before concrete is placed in forms, all inside surfaces of forms which will later be removed shall be thoroughly coated with commercial quality form oil, unless otherwise noted, as specified, which will permit the ready release of the forms and will not discolor the concrete.

Contractor shall verify the design intent, prior to placing concrete, whenever an unusual or non-standard condition becomes evident during forming.

73-1.09 Final Finishing: Concrete paving final finishing shall conform to the plans, these Special Provisions, and Section 40-1.03H(3) "Final Finishing" of the Standard Specifications as modified herein.

In advance of curing operations, the pavement surface shall be finished to grade and cross section with a float, and troweled smooth. Concrete adjacent to the joints and lip of gutter shall be finished with and edger tool. All edges of slabs, curbs and other structures shall be tooled with one-half (1/2) inch radius edging tool, unless otherwise specified in the Drawings. All flange marks resulting from tooling of edges shall be carefully troweled out.

Surfaces shall be finished as shown on the plans. Surface binders shall be required during curing.

Fixed forms shall not be removed in less than 12 hours after the finishing has been completed.

All concrete work shall display even surfaces of uniform texture and appearance, free of unsightly bulges, depressions, and other imperfections. The Engineer shall be the sole judge in this respect. Patching of concrete to disguise flaws, imperfections, or other damage shall commence only with the approval of the Engineer. Patching finish shall conform to the original adjacent concrete color and finish, and the Engineer shall be the sole judge in this respect.

All oil, paint, tire marks, and other discoloring shall be removed from concrete by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting.

Flatwork shall have a minimum pitch of one percent (1%), and two percent (2%) maximum unless otherwise noted on the drawings. The finished surface shall be within the tolerance specified when a 12-foot straight edge is utilized. Finish surface shall drain properly with no areas of standing water. Tops of curbs shall be level unless otherwise specified.

Flatwork shall in no case exceed allowable cross-slopes or directional grading without required accommodations. In the event field conditions create a discrepancy between the design drawings and applicable code, contractor to notify the engineer prior to proceeding with work.

73-1.10 Methods of Curing: The P.C.C. shall be cured using the same methods used during implementation of Section 40-1.02, "Concrete Mix" of these Special Provisions.

The Contractor shall use a pre-approved concrete admixture to obtain the necessary strength within the specified timeframe.

Concrete that is uncured at the end of the work day shall be protected in a manner approved by the Engineer, this may require trench plates. All newly placed concrete shall be protected in accordance with the provisions in Section 90-1.03C "Protecting Concrete" of the Caltrans Standard Specifications. Specifically, the Contractor shall provide all necessary security to protect the concrete from vandalism before it sets and hardens. Vandalism to uncured concrete surface shall be removed. If it cannot be removed from the surface, then the vandalized concrete shall be removed and replaced to the nearest score mark at no additional cost to the City.

73-1.11 Built-Ins: See Drawings for built-ins to be coordinated with concrete work (e.g. fence posts, site furnishings footings, art work, drinking fountains, etc.). Tops of embedded footings of furnishings shall be set below the base rock of finished concrete surface per detail. Posts shall

then be wrapped with 1/8" foam expansion joint material and slabs to be poured up to post. Remove foam joint filler and seal with polyurethane sealant.

73-1.12 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.

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

Curb shall be cured in accordance with the requirements of Section 90 of the Standard Specifications except that the Contractor may substitute other than a pigmented sealer upon the approval in writing of such substituted sealer by the Engineer.

73-2.01 Payment:

Concrete Pavement shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, lamp black coloring, class 2 base, materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing concrete paving complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Concrete Pavement – Integral Color shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, integral color, class 2 base, materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing concrete paving complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Playground Ramp shall be paid for at the contract price per **each** which price shall include full compensation for furnishing and applying curing materials, class 2 base, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing playground ramp complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Curb shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing and applying curing materials, class 2 base, materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing concrete curb complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Concrete Stairway shall be paid for at the contract price per **lump sum**, which price shall include full compensation for furnishing and applying curing materials, class 2 base, materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing concrete paving complete in place as specified, including integral color, furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Full compensation for furnishing and concrete test panels complete in place, shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.

SECTION 75

MISCELLANEOUS METAL

75-1.01 GENERAL

75-1.01A Summary

Section 75 includes specifications for fabricating and installing miscellaneous metals. Welding must comply with AWS D1.1.

75-1.01C Submittals

Reserved

75-1.01D(2) Qualifications

Welders and welding operators must be qualified under AWS D1.1.

75-1.01D(3) Department Acceptance

The following miscellaneous metal materials are inspected at the fabrication site:

1. Miscellaneous iron and steel

Notify the Engineer:

1. When materials listed above have been delivered to the fabrication site
2. At least 10 days before starting fabrication

75-1.02 MATERIALS

75-1.02A General

Materials must comply with the requirements shown in the following table:

Miscellaneous Metal Materials

Material	Requirement
Steel bars, plates, and shapes	ASTM A36/A36M, A575, or A576 (AISI or M Grades 1016–1030)
Steel fastener components for general applications:	
Bolts and studs	ASTM A307
Anchor bolts	ASTM F1554 ^a
HS bolts and studs	ASTM A449, Type 1 ^a
HS threaded rods	ASTM A449, Type 1 ^a
HS nonheaded anchor bolts	ASTM F1554, Grade 105, Class 2A ^a
Nuts	ASTM A563, including appendix X1 ^b
Washers	ASTM F844
Hardened washers	ASTM F436, Type 1, including S1 supplementary requirements
Components of HS steel fastener assemblies for use in HS joints:	
Bolts	ASTM F3125, Grade A325, Type 1
Tension control bolts	ASTM F3125, Grade F1852, Type 1
Nuts	ASTM A563, including appendix X1 ^b
Hardened washers	ASTM F436, Type 1, Circular, including S1 supplementary requirements
Direct tension indicators	ASTM F959, Type 325, zinc-coated
Stainless steel fasteners, alloys 304 & 316, for general applications:	
Bolts, screws, studs, threaded rods, and nonheaded anchor bolts	ASTM F593
Nuts	ASTM F594 or F836M
Washers	ASTM A240/A240M and ASME B18.22M
Gray iron castings:	
Ductile iron castings	ASTM A536, Grade 80-55-06
Carbon-steel castings	ASTM A27/A27M, Grade 65-35, Class 1
Malleable iron castings	ASTM A47/A47M, Grade 32510
Cast iron pipe	Commercial quality
Steel pipe	Commercial quality, welded or extruded
Other parts for general applications	Commercial quality

^aUse hardened washers.

^bZinc-coated nuts tightened beyond snug or wrench tight must be furnished with a dry lubricant complying with supplementary requirement S2 in ASTM A563.

Remove burrs, rough and sharp edges, and other flaws. Straighten warped pieces after fabricating and galvanizing.

75-1.02B Galvanizing

Galvanize miscellaneous metal materials under the schedules and specifications shown in the following table:

Galvanizing Schedules and Specifications

Material	Schedule ^a	Specification
Rolled, pressed, and forged steel shapes, plates, bars, and strip ≥1/8 inch thick	Except for pregalvanized standard pipe, galvanize material after fabrication into the largest practical sections	ASTM A123/A123M
Steel <1/8 inch thick	Galvanize before or after fabrication	Galvanized before fabrication: ASTM A653/A653M, Coating Designation G210 Galvanized after fabrication: ASTM A123/A123M except the weight of zinc coating must average at least 1.2 oz/sq ft of surface area with no individual specimen having a coating weight of less than 1.0 oz/sq ft
Standard pipe	--	ASTM A53/A53M except the zinc coating for fence pipes and structural shapes except for metal line posts for barbed and woven wire fences must average at least 1.2 oz/sq ft of surface area with no individual specimen having a coating weight of less than 1.0 oz/sq ft
Iron and steel hardware except threaded studs, bolts, nuts, and washers specified to comply with ASTM A307; F3125, Grade A325; A449; A563; F436; or F1554 ^b	Galvanize after fabrication	ASTM A153/A153M
Rail elements, backup plates, terminal sections, and end and return caps of guardrail	--	AASHTO M 180

^aFabrication includes shearing, cutting, punching, forming, drilling, milling, bending, welding, and riveting.

^bFor threaded studs, bolts, nuts, and washers specified to comply with ASTM A307; F3125, Grade A325; A449; A563; F436; or F1554, galvanize under their ASTMs.

Galvanizing is not required for stainless steel, monel metal, and similar corrosion-resistant parts.

Galvanizing is not required for the following miscellaneous bridge metal:

1. Portions of plates, shapes, or other items embedded more than 2 inches in concrete.
2. Embedded steel pipe ending at or below the surface of encasing concrete.
3. Items described to receive other finishes.

Clean welded areas before galvanizing to remove slag or other material that would interfere with the adherence of the zinc.

Galvanize parts of fastener assemblies separately before assembly.

Tapping of nuts or other internally threaded parts to be used with zinc-coated bolts, anchor bars, or studs must (1) be performed after galvanizing and (2) comply with thread dimensions and overlapping allowances in ASTM A563.

Repair damaged galvanized surfaces as follows:

1. Clean by thoroughly wire brushing damaged areas and removing loose and cracked coating.
2. Paint cleaned areas with 2 applications of organic zinc-rich primer from the Authorized Material List for organic zinc-rich primers. Do not use aerosol cans.

75-1.03 Construction: Stairway Handrail construction shall be in accordance with the details as shown on the plans, these Special Provisions, and as directed by the Engineer. Paint color and type shall be determined and approved by City Parks Department.

75-1.04 Payment: **Stairway Handrails** 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 work involved in constructing stairway handrails including furnishing and installing posts and rails, welding, painting, forming and placing in concrete, and no additional allowance will be made therefor.

SECTION 80

FENCES

80-0.00 Temporary construction fence: Temporary construction fence shall be 6' high chain link panels with hardware for fastening the panels together. It shall be placed around the perimeter of the project limits for the duration of construction at each park location. Temporary Construction Fence shall be paid under various contract items of work including furnishing material, labor, and equipment and maintenance until project acceptance by the City.

80-1.01 Description: All wood and metal fence shall be constructed in accordance with Section 80 of the Standard Specifications, the details as shown on the plans, these Special Provisions, and as directed by the Engineer.

80-3.01 Materials: Fencing materials shall conform to applicable type of fence described in Section 80 of the Standard Specifications and the details as shown on the plans.

- A. All wood members shall be standard, rough-sawn redwood.
- B. All piping and tube for fence and gates shall be Schedule 40 hot-dipped galvanized steel or approved equal for size, finish, material composition, strength, appearance, performance and ease of maintainability.
- C. Galvanizing shall be in accordance with ASTM F 668-88. All fence fittings shall comply with ASTM F626-89a.

80-3.02 Submittals: Shop Drawings: Submit shop drawings for approval prior to construction showing complete details of fences, including sizes and shapes of members, dimensions, spacing of components, paint, connections, accessories, fittings, hardware including anchorages and footings.

80-3.03 Construction: Fence construction shall be in accordance with Section 80-3.03 of the Standard Specifications, the details as shown on the plans, these Special Provisions, and as directed by the Engineer.

80-3.04 Payment:

Metal Fence 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 work involved in constructing metal fence including furnishing and installing posts and rails, welding, painting, excavating and backfilling holes, disposing of surplus excavated material, and furnishing and placing concrete footings as shown on the plans, and no additional allowance will be made therefor.

36" Split Rail Wood Fence 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 work involved in constructing split rail fence including furnishing and installing posts and rails, excavating and backfilling holes, disposing of surplus excavated material, and furnishing and placing concrete footings, and no additional allowance will be made therefor.

42" Split Rail Wood Fence 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 work involved in constructing split rail fence including furnishing and installing posts and rails, excavating and backfilling holes, disposing of surplus excavated material, and furnishing and placing concrete footings, and no additional allowance will be made therefor.

[Updated: 10/3014CDA STD2010]

SECTION 86 ELECTRICAL SYSTEMS

86-1 General

86-1.01 Description: The Contractor shall furnish and install or modify lighting 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, these special provisions, and as directed by the Traffic Engineer.

86-1.07 Scheduling of Work: Scheduling of work shall conform to Section 86-1.07 of the Standard Specifications.

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.

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.

86-2.02A Pedestrian Barricade: Pedestrian barricades shall be Type I and shall be installed at the locations shown on the plans per State Standard ES-7Q TYPE 1. Existing pedestrian barricades shown on the plans to be removed shall remain in place until the traffic signal has been turned on.

86-2.03 Foundations: The Contractor shall construct foundations per Caltrans Standard 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, SERVICE PEDESTAL, POST TOP LIGHTS AND SIGNAGE LIGHTING

86-2.04A General: Install post top lights as specified and that fit the existing light poles as noted. Provide service pedestal at locations noted. Provide sign lighting as noted.

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 Special Provisions.

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 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.

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.

86-2.11 Service

86-2.11A General: Electrical service shall be per STD 733A or B of the City Traffic Standards. Service cabinet shall be equipped with P.G. & E. approved manual test bypass facilities.

The service cabinet shall be a Tesco Type III-BF installed at the location shown on the plans and conform to State Std. Plan ES-2E and Part IV-D of the City Traffic Standards.

86-2.14C Functional Testing: The functional test for each lighting system shall consist of not less than 96 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 96 hours of continuous, satisfactory operation is obtained.

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

86-6 Lighting

86-6.01A Light Emitting Diode (LED) Luminaires: The Contractor shall supply and install LED (full cutoff style) Luminaires with 120/240 volt built-in drivers, individual photo cell control (or as shown on the plans), at the location(s) and with the wattage as shown on the plans. LED luminaires shall conform to the provisions in the Standard Specifications.

The Contractor shall submit the proposed type of luminaire to the Engineer for approval before ordering.

86-6.11 Photoelectric Control: The photoelectric unit shall be installed as shown on the plans. A separate contactor shall be located in the service cabinet.

86-6.11A Types: Photoelectric control shall be Type II.

86-6.01A LED Drivers: Drivers shall conform to the provisions of the Standard Specifications and these Special Provisions. The drivers shall be integral type.

86-8.10 Payment: **Electrical System Installation or Modification** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment to construct the Park electrical systems complete in place, including but not limited to all excavation and backfill, foundations, standards, steel pedestals and posts, conduit, conductors, wiring, service cabinet, fittings, electrical components, and testing, as shown on the plans, as specified, and no additional allowance will be made therefor.

Compensation for removing and replacing existing improvements at each park 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.

Installation of Pull Boxes shown on the plans shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, material, tools, equipment and doing all work involved as shown on the plans and as specified herein and no additional allowance will be made therefor.

Lighting System 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 including furnishing and installing lamps, drivers, and photo cell controls, foundations, No. 5 pull boxes, conduit, conductors, excavation, and backfilling, and no additional allowance will be made therefor.

SECTION A3 ELECTRICAL WORK

A-1 Scope: Included in the work are providing of Main Load Center Service Pedestal electrical components, furnishing and installing power control equipment, conduits, wires, pull boxes, flood lights, lamps, and all materials necessary for the lighting systems complete and operating for both of the parks.

All equipment to be removed, as indicated in these specifications and on the plans, shall be carefully removed, cleaned of excess dirt, and delivered to the City Municipal Services Center (55 Stony Point Road).

Incidental parts which are not shown on the plans or specified herein and which are necessary to complete the work shall be furnished and installed as though such parts were shown on the plans or specified herein.

In the event of apparent conflict between the plans, Standard Specifications, and these Special Provisions, the requirement as determined by the Traffic Engineer which will give the greatest protection or best installation shall govern.

Bidder shall examine carefully the site of the proposed work, the plans, Standard Specifications, and these Special Provisions before submitting his bid.

All equipment shall be complete and in operation to the satisfaction of the Traffic Engineer at the time work is accepted.

All equipment, material, and supplies called for by the plans and specifications shall be new unless otherwise specified.

A-2 Rules and Regulations: All electrical equipment shall conform to the standards of the National Electrical Manufacturers Association. All material and work shall conform, where applicable, to the requirements of the National Electrical Code; the California Administrative Code, Title 24, Part 3, Basic Electrical Regulations; and the Uniform Building Code.

A-3 Equipment List and Drawings: Within 15 days following notification and award of the contract, the Contractor shall submit to the Engineer for approval a listing of all equipment and material which he proposes to furnish and install, which shall include all material identified on the plans or in these specifications. The list shall be complete as to name of manufacturer, size and catalog number of unit, and shall be supplemented by such other data as may be required, including detailed scale drawings, manufacturer's cut sheets, and wiring diagrams. At least five copies of the above data shall be submitted to the Engineer for checking and/or approval.

A-4 Substitution: In these Specifications, one or more makes of materials or methods have been specified for use in this installation. This has been done to establish the standards of quality, workmanship, finish, and design required, but other materials or methods equal in design, required quality, workmanship, finish, and guaranteed performance will be accepted. This implies no right on the part of the Contractor to use materials or methods other than those specified, unless approved as equal in writing by the Engineer.

The decision of the Engineer shall govern as to what is equal to the item specified, but the burden of proof as to the equality of the proposed material or method shall be upon the Contractor. If the Engineer considers it necessary, tests to determine the quality of the proposed materials shall be made, at the expense of the Contractor, by an unbiased laboratory satisfactory to the Engineer.

A-5 Load Centers

A-5.01 Main Load Center: Provide a new Main Load Center at each Park and each shall include:

- A. Furnish and install the following equipment:
 - 1. Circuit breaker load center which shall be adequate in size to handle the number of circuits shown on the plans with 20% spare. The load center shall be housed in a NEMA 4X weatherproof enclosure with 12 space panel enclosure as shown on the plans. The circuit breakers shall be as specified in Section A-5.03.
 - 2. Pedestal shall contain the lighting control equipment as shown.

A-6 Lights and Floodlighting

A-6.01 General: Provide lighting per drawings.

Contractor shall submit to the Engineer for approval five sets of detail lighting layouts, complete with certified laboratory photometric test data, NEMA beam spread of each unit, aiming diagram.

After final adjustment of all fixtures and complete controls installation and adjustments request the acceptance of the work by the Traffic Engineer.

Poles are existing and are to be reused. Remove pole top fixtures and render to the City.

A-8 Conduit and Fittings: Underground conduit shall be PVC schedule 40, rigid metal conduit, or approved equal, with all ends fitted with bell type fittings. Underground conduit shall have 24 inches of cover to finish grade unless otherwise noted on the plans.

All other conduit shall be rigid steel hot dip galvanized. Boxes and fittings in rigid steel conduit work shall be galvanized cast ferrous material with threaded hubs.

Rigid steel conduit shall be secured using approved clamps or straps.

After underground conduits, wires and rope have been installed, the ends of all conduits terminating in controller cabinets or pull boxes shall be sealed with an approved type of sealing compound.

A-9 Wire: Wire shall be copper as shown on the plans. All wire shall have type THW insulation for 600 V.A.C. and shall be stranded.

All conductors shall conform to the latest requirements of the National Electric Code and be labeled by Underwriters Laboratories, Inc. Conductors shall be soft drawn copper thoroughly tinned. Wire size, insulation type, and the manufacturer's name shall be permanently marked on the conductor jacket at regular intervals.

All wire shall be delivered to the job in complete coils containing the manufacturer's name with an approval tag indicating wire size and type of insulation. Wire shall be color-coded with a separate color for each phase. White color insulation shall be used for neutral conductors only and green color insulation shall be used for the equipment ground conductors.

A-10 Bonding and Grounding: All equipment, floodlight poles, and metal conduit shall be made mechanically and electrically secure to form a continuous system and shall be effectively grounded. Bonding and grounding jumpers shall be copper wire or copper strap of the same cross-sectional area as No. 6 AWG.

Bonding wire or strap shall be secured to the lower section of each floodlight pole by a brass or

bronze bolt with suitable brass washer.

A-11 Pull Boxes

A-11.01 Ground Level: Pull boxes shall be installed at the location shown on the plans or at locations designated by the Engineer at site of work.

Contractor may, at his own expense, install such additional pull boxes that may be desired to facilitate the work.

All pull boxes shall be precast reinforced concrete boxes and each box shall be set in concrete.

All pull box covers shall be inscribed with the word "Electrical". All covers shall be supplied with at least two bronze or brass hold down bolts.

The bottom of all boxes shall be left open and at least 12 inches of crushed rock shall be placed below the box for drainage as shown on the plans or as directed by the Engineer.

All pull boxes shall be of the size called for on the plans.

A-12 Foundations: All concrete in the foundation shall be poured against undisturbed earth. Any other excavation beyond the foundation outline shown on the plans shall be filled with concrete. Concrete for the foundation shall conform to the requirements of Section 90 of the Standard Specifications for Class "A" concrete.

A-13 Trenches: All trenches shall be dug to a width of not greater than eight inches and to the depths shown on the plans. The Contractor shall schedule his operations so that trenches shall be opened and closed in one working day.

Trenches shall be backfilled and surfaced in conformance with City Standard 215.

Aggregate base shall be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the City of Santa Rosa Construction Specifications, with the following modifications and additional requirements.

A-14 Field Test: Prior to acceptance of the work, the Contractor shall cause the following tests to be made:

- A. For continuity of each circuit.
- B. For ground in each circuit.
- C. A Megger test on each circuit.
- D. A functional test in which it is demonstrated that each and every part of the system functions as specified or intended herein.
- E. Trenches and aggregate base subject to approval by City Materials Engineering division

The Contractor shall correct any defects indicated by these tests and make such adjustments as the Engineer may direct.

SECTION 90

CONCRETE

90-1.01 General

90-1.01A Summary: All concrete shall conform to Section 90 of the Standard Specifications, and any modifications herein or on the Project Plans.

90-1.01C(6) Mix Design: The Contractor shall submit a separate mix design for each type of concrete used for approval by the Engineer prior to placement. Field samples required by City Materials staff. The following concrete mix shall be considered "Class A Concrete". Except where otherwise specified herein or on the Project Plans, all concrete used on this project shall be truck-mixed, ready-mixed concrete consisting of a mixture of Type II Portland Cement and Supplementary Cementitious Materials (SCM), sand, fine aggregate, coarse aggregate and water. The proportions of the water, sand and aggregate shall be regulated so as to produce a plastic, workable and cohesive mixture. All materials required and the procedure of mixing shall conform to the provisions of Section 90 of the Standard Specifications and any modifications herein. Hand mixing of any amount of Portland cement concrete must first be approved by the Engineer.

90-1.01D(2) Cementitious Material Content: Class A 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 unless otherwise approved by the Engineer.

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

90-1.01D(6) Curing Compound: The Contractor shall submit on any proposed material and method used to cure concrete. Concrete shall be cured per Section 90-1.03C of the Standard Specifications, and any modifications contained herein or on the Project Plans. 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.

90-1.02E(4) Fiber Reinforcement: All concrete shall have "Grace Fiber" reinforcement per ASTM C1116 – standard specification for "Ready-Mixed" concrete. Fibers shall be 20mm collated, fibrillated polypropylene fibers as supplied by Grace Construction Products, Cambridge, MA 92140. Grace Fibers shall be used in strict accordance with the supplier's recommendations and within time as specified in ASTM C 94. The fibers shall comply with ASTM Designation C 1116 Type III 4.1.3 and with applicable building codes. Certification of compliance shall be made available on request. Standard ACI 302 procedures for placing, finishing and curing shall be followed when using Grace Fibers.

Fiber reinforcing from the following manufacturers at the following dosage rates shall be acceptable:

- a. Forta Fiber Nylo Mono Fiber applied at the rate of 1 lb per cubic yard
- b. Grace Microfiber applied at the rate of 0.75 lb per cubic yard
- c. BASF M 100 Microfiber applied at the rate of 0.5 lb per cubic yard

90-1.04 Payment: Full compensation for Concrete shall be considered as included in the prices paid for the various contract items of work, which price shall include furnishing all labor, materials, tools and equipment, and doing all work involved in forming, placing and curing Concrete, in conformance with the provisions of this section, and no additional allowance will be made therefor.

SECTION 96

POROUS PAVE

PERMEABLE SURFACING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Permeable Surfacing: Provide for the following applications as indicated on the Drawings:
 - 1. Paths and Trailways
 - 2. Sidewalks and Walkways
 - 3. Unique Features
 - 4. Drainage Applications
 - 5. Tree Surrounds

1.2 RELATED SECTIONS

- A. Section 19 - Earthwork
- B. Section 20-4 – Landscape planting and establishment
- C. Section 20-5 - Irrigation
- D. Section 73 – Concrete Curbs, Sidewalks and Paving

1.3 REFERENCES

- A. ASTM C 666 - Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing.
- B. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine
- C. ASTM D 4798 - Standard Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)
- D. ASTM F 1292 - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment
- E. ASTM G 155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials
- F. U.S. Green Building Council, LEED Building Design and Construction (BD+C) Version 4.0 Rating System.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Independent Test Data of Permeable Surfacing:
 - 1. Porosity: Calculated void content of 27 percent.
 - 2. Permeability: Coefficient of permeability for a 6 inch diameter core sample of

5.98x101 inches/second. Flow rate for a 6 inch diameter core sample of 0,043 CF/Sec.

3. Compressive Strength:
4. 10,000 lbs Test: Average reading after 4 hours after release, 0.0609
5. 20,000 lbs Test: Average reading after 3 hours after release, 0.0350
6. Durability: Weathering: Accelerated Weathering in accordance with ASTM D 4798, Cycle A, ASTM G 155. Xenon UV exposure, 120 hours.
7. Durability: Freeze-Thaw: ASTM C 666, Method B, 300 cycles of freeze/thaw; Panel 1 Mass Change minus 1.2 percent, Panel 2 Mass Change minus 0.5 percent, Panel 3 Mass Change plus 5.6 percent. No change in visual appearance from all panels
8. Slip Resistance: Static Coefficient of Friction when tested in according to ASTM D 2047, Average of 0.66
9. Safety: Critical Fall Porous Pave XLS: Tested in accordance with ASTM F 1292, maximum critical fall height of 4 feet.
10. Safety: Critical Fall Porous Pave XLS with Foam: Tested in accordance with ASTM F 1292, maximum critical fall height of 7 feet.
11. Safety: Chemical Leaching: EPA Tested for metals, mercury, semivolatiles; The analyte was not detected at or above the reporting limit.
12. Flame Resistance: Tested in accordance with ASTM E 84, Flame Spread Index 90, Smoke developed Index 600.

1.5 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- B. Selection Samples: For each finish product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.
- C. Verification Samples: For each finish product specified, two samples, minimum size 5 inches (127 mm) round, representing actual product, color, and finish.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with a minimum for three years documented experience with the products specified
- B. Installer Qualifications: Certified Porous Pave personnel or authorized agents experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
- C. Pre-Installation Meetings:
 1. Convene a pre-installation meeting a minimum of two weeks prior to start of porous surfacing system.
 2. Verify project requirements, sub-base and base conditions, manufacturer's

- installation instructions and coordination with other related work.
3. Require attendance of parties directly affecting work of this section, including the Contractor, Architect, engineer, and installer. Manufacturer's representative may attend by phone conference as needed.
 4. Review installation procedures and coordinate installation with other work around installation area.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Binder components shall be shipped in sealed water-tight containers.
- C. Granite aggregate shall be shipped in commercial-grade, moisture-proof 50 lb pre-measured bags.
- D. Storage: Store materials in accordance with manufacturer's instructions.
- E. Store binder above 45 degrees F. Rock and stone must be kept dry and stored out of direct sunlight to prevent condensation inside the bags
- F. Handling: Protect materials during handling and installation to prevent damage.
- G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic maintenance as required.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not place Hard Surface Porous Paving System when the following conditions exist.
 1. Unstable wet, saturated, muddy or frozen base.
 2. During rain or snow.
 3. When air temperature is less than 45 degrees F or more than 95 degrees F for at least six hours after installation.
- C. Do not begin installation of porous pavements until all hard surface paving adjacent to porous pavement areas is completed.
- D. Protect partially completed porous surfacing against damage from other construction traffic when work is in progress.

1.9 WARRANTY

- A. Warranty: Porous Pave material, when installed by certified Porous Pave personnel or authorized agents, will carry a warranty for materials of two years from the date of installation. Porous Pave's warranty is limited to the structural and mechanical integrity of the installed materials

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Porous Pave Inc., which is located at: 4385 E. 110th St.; Grant, MI 49327; Toll Free Tel: 888-448-3873; Tel: 231-834-7720; Fax: 231-834-5537; Email: request info (sales@porouspaveinc.com); Web:www.porouspaveinc.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 MATERIALS

- A. Permeable Surfacing: Porous Pave is a pour-in-place permeable paving material. With 27 percent void space that delivers 5,800 gallons per hour per square foot permeability.
 - 1. Porous Pave XL - Strongest, most durable blend consisting of 50 percent recycled rubber chips and 50 percent kiln-dried aggregate, plus a Hard Binder, for hard-wearing permeable pavement.
 - 2. Porous Pave XLS - 100 percent recycled rubber chips with a Soft Binder for more impact-absorbing permeable surfaces.
 - 3. Porous Pave XLB - 50-50 rubber-rock blend mixed with a binder selected for golf course bunker liner applications
- B. Kiln-Dried Aggregate: Washed, kiln-dried, consistently sized all-granite aggregate.
- C. Recycled Rubber Chips: Clean, consistently sized rubber chips, 99 percent of steel fragments removed. Consistent rubber chip colors are infused not just a thin outer coating.
- D. Hard Binder: B5HN hard binder.
- E. Soft Binder: B5SN soft binder.
- F. Samples may be required by City Materials Engineering Division.

2.3 FABRICATION

- A. Mix permeable surfacing components to the base mixing ratio required for the mix and color specified.
 - 1. Mix in mortar mixer 45-60 seconds or until material is evenly coated with binder, over-mixing may change the color of the material.
 - 2. Mix different colors separately.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify layout, gradients and elevations of subgrade and base are correct. Notify the Engineer if not acceptable. Do not begin preparation or installation until

unsatisfactory conditions have been corrected.

- C. Ensure that adjacent hard-surfaced paving work is completed before installing porous pavement system.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Carefully protect adjacent materials not to receive surfacing to avoid exposure to binder or mix. Materials will stain and cannot be cleaned.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and review by City Materials staff.
- B. Install each area to be surfaced in a single monolithic pour with no expansion strips.
- C. Provide 1-1/2 inches of XL over a compacted aggregate base for patios, golf cart paths, residential walkways and other non-commercial applications.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Protect adjacent materials.
- C. Protect porous surfacing until fully cured.
- D. Avoid construction traffic over installed surfacing.
- E. Touch-up, repair or replace damaged products before Substantial Completion.

PERMEABLE SURFACE BINDER

PART 4 GENERAL

4.1 SECTION INCLUDES

- A. Permeable Surface Binder.

4.2 RELATED SECTIONS

- A. Section 19 - Earthwork
- B. Section 20-4 – Landscape planting and establishment
- C. Section 20-5 - Irrigation
- D. Section 73 – Concrete Curbs, Sidewalks and Paving

4.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Selection Samples: For each finish product specified, two complete sets of color charts representing manufacturer's full range of available colors.
- C. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance.

4.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with a minimum of three years documented experience with the products specified
- B. Installer Qualifications: Certified Porous Pave personnel or authorized agents experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
- C. Pre-Installation Meetings:
 - 1. Convene shall convene a pre-installation meeting a minimum of two weeks prior to start of porous surfacing system, subject to City Materials Engineering review and approval.
 - 2. Verify project requirements and surface conditions, manufacturer's installation instructions and coordination with other related work.
 - 3. Review installation procedures and coordinate installation with other work around installation area.
 - 4. Review methods of protecting adjacent materials during spray application to avoid exposure to binder. Materials will stain and cannot be cleaned.

4.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in accordance with manufacturer's instructions.
- C. Store binder above 45 degrees F. Products must be kept dry and stored out of direct sunlight.
- D. Handling: Protect materials during handling and installation to prevent damage.

4.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not apply binder when the following conditions exist.
 - 1. During rain or when rain is anticipated within 2 hours of binder application.
 - 2. When air temperature is less than 45 degrees F or more than 95 degrees F for at least six hours after installation.

- C. Do not begin application of porous binder until all hard surface paving adjacent to porous pavement areas is completed.
- D. Protect partially completed porous surfacing against damage from other construction traffic when work is in progress.

PART 5 PRODUCTS

5.1 MANUFACTURERS

- A. Acceptable Manufacturer: Porous Pave Inc., which is located at: 4385 E. 110th St.; Grant, MI 49327; Toll Free Tel: 888-448-3873; Tel: 231-834-7720; Fax: 231-834-5537; Email: request info (sales@porouspaveinc.com); Web: <http://www.porouspaveinc.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

5.2 MATERIALS

- A. Binder: Porous Pave moisture cured urethane binder.
 - 1. B5HN Hard Binder.
 - 2. B5SN Soft Binder.
 - 3. Colorant:
 - a. Per plan

5.3 MIXING

- A. Mix binder components to the ratio required for the mix and color specified.
 - 1. Mix one gallon of Porous Pave Binder Thinner (BT128) into one five gallon pail of binder. Stir consistently until thinner mixes with the binder. If colorant is needed add that in the same mix at this time.
 - 2. Mix different colors separately.

PART 6 EXECUTION

6.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.

6.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Blow/sweep the surface of the Porous Pave prior to applying the binder.
- D. Remove all leaves, sticks, stones and other surface debris before application.
- E. Vacuuming the surface with a shop vac, lawn vac or street sweeper may be necessary if dirt, sediment or leaves remain after blowing/sweeping has been completed.
- F. Carefully protect adjacent materials not to receive surfacing to avoid exposure to

binder. Materials will stain and cannot be cleaned.

6.3 ROLLER APPLICATION

- A. Install in accordance with manufacturer's instructions.
- B. Once Porous Pave binder is thinned it can be applied by a standard paint roller.
- C. Mix one gallon of BT128 thinner with five gallons of binder. Also add one gallon of colorant if specified. Mix for at least 30 - 40 seconds to properly thin the thicker binder. The mix will cover 250-300 square feet.
- D. An even application is required to ensure the entire surface is coated with the proper amount of binder to provide the best performance.
- E. Place a marker at 300 square feet and be sure to evenly spread the pail of thinned binder throughout the area
- F. Continually move your marker 300 square feet at a time throughout the installation to cover the entire area with one even coat of binder.

6.4 SPRAY APPLICATION

- A. Install in accordance with manufacturer's instructions.
- B. Mix one gallon of BT128 thinner with five gallons of binder. Also add a one gallon of colorant if specified. Mix for at least 30 - 40 seconds to properly thin the thicker binder. The mix will cover 550-600 square feet.
- C. Once Porous Pave binder is thinned applied by a standard paint airless sprayer with the largest tip available.
- D. An even application is required to ensure the entire surface is coated with the proper amount of binder to provide the best performance.
- E. Place a marker at 600 square feet and evenly spray the pail of thinned binder throughout the area
- F. Continually move your marker 600 square feet at a time throughout the installation to cover the entire area with one even coat of binder.

6.5 PROTECTION

- A. Carefully protect adjacent materials not to receive surfacing. Materials will stain and cannot be cleaned.
- B. Protect surfacing until fully cured.
- C. Avoid construction traffic over installed surfacing.
- D. Touch-up, repair or replace damaged products before Substantial Completion.

6.6 PAYMENT:

Porous Pave shall be paid for at the contract price per **square foot** which price shall include full compensation for furnishing all labor, materials including angular drain rock, tools, and equipment, and doing all the work involved in supplying and placing Porous Pave, as specified herein, including compacting subgrade, placing and compacting angular drain rock, and any other item necessary for Porous Pave not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.

SECTION 104

SITE FURNISHINGS

A-1 General

104-1.01 Description

- A. Work Included: Provide all material, labor, equipment, and services necessary for the furnishing and installation of all site furniture as shown on the drawings and as specified herein.
- B. Related Work
 - 1. Section 73: Concrete Curb & Gutter, Sidewalks, and Paving
 - 2. Section 20: Landscape

104-1.02 Submittals

- A. General: Submit the following to the City Representative for review and acceptance. Approval by the City Representative is required prior to commencement of work.
 - 1. Manufacturer's shop drawings or catalogue literature for the products specified. Show profiles, sizes, and connections; method of fabrication and erection, including connectors and welds.
 - 2. Images of landscape boulders and 3 headstone size samples. Samples to be representative of landscape boulder stockpile and contain lichens, mosses, provide general color range, variations and characteristics of boulders to be imported and installed.

104-1.03 Product Delivery, Storage, and Handling

Site furniture shall be delivered and unloaded at job site in such a manner that no damage occurs to the product during hauling, handling, or unloading, storage, and installation.

A-2 Products

104-2.01 Bollards

- A. **Collapsible Bollard Type 1** – Bollard will be 36 in. tall with a diameter of 4-1/3 inches. Bollard will have a cylindrical rounded top, smooth with no noticeable join to the post. Bollard will be made of steel and have a polyester powder coat over epoxy primer. Bollard shall be collapsible in new or existing concrete via steel surface-mount hinged receiver and padlock hasp. Stainless steel lock and key set to be included for each bollard. Collapsible Bollard Type 1 shall be Model #R-7902, Steel Bollard, fold down mount, safety yellow by Reliance Foundry, or approved equal.
- B. **Collapsible Bollard Type 2** – Bollard will be 36 in. tall with a diameter of 4-1/3 inches. Bollard will have a cylindrical rounded top, smooth with no noticeable join to the post. Bollard will be made of steel and have a polyester powder coat over epoxy primer. Bollard shall be collapsible in new or existing concrete via steel surface-mount hinged receiver and padlock hasp, and bollard shall include a 3/8" chain eye, quick link connector, and 5/16" chain. Stainless steel lock and key set to be included for each bollard. Collapsible Bollard Type 1 shall be Model #R-7902, Steel Bollard, fold down mount, optional chain accessory, safety yellow by Reliance Foundry, or approved equal.
- C. **Fixed Bollard** – Bollard will be 36 inches tall with a diameter of 4-1/3 inches. Bollard will have a cylindrical rounded top, smooth with no noticeable join to the post. Bollard will be made of steel and have a polyester powder coat over epoxy primer. Bollard shall be embedded in concrete footing. Fixed Bollard shall be Model #R-7902, Steel Bollard,

- safety yellow by Reliance Foundry, or approved equal.
- D. **Removable Bollard** – Bollard will be 36 inches tall with a diameter of 4-1/3 inches. Bollard will have a cylindrical rounded top, smooth with no noticeable join to the post. Bollard will be made of steel and have a polyester powder coat over epoxy primer. Bollard shall be removable in new concrete with stainless steel receiver with chain and lock. Removable Bollard shall be Model #R-7902, Steel Bollard, polyester powder coat over epoxy primer in black textured semi-gloss by Reliance Foundry, or approved equal.

104.2-02 Benches

- A. **Bench Type 1** – Bench shall be 72" long with seat height between 17-19". Bench seat is made of two (72"x9-1/2"x4") concrete woodgrain texture planks with a 1" smooth concrete gap between the two planks. Bench seat shall contain three armrests; two on the end and one in the center of the bench seat. Armrests are concrete woodgrain texture planks joined together in a "T-shape". Backrest is two (72"x4"x5") concrete woodgrain texture planks with 1" smooth concrete gaps between the two planks. Bench legs will be two polygons composed of connected rectangular concrete woodgrain texture planks. There shall be two threaded inserts in each leg for mounting dowels. Four 3/4"x8" coil rods shall be used for mounting. Back of bench and bench seat is attached to two 4" wide, 3/4" thick powder coated steel brackets. Concrete mix shall include a mixture of Portland Cement, water, coarse and fine aggregates, pure mineral oxide coloring agents to yield a minimum compressive strength of 5,000 psi. Final product shall be reinforced with #4 and #5 rebar grid. Concrete shall be integrally colored, rubbed with a top coat stain, and sealed with a factory-applied non-sacrificial graffiti sealant capable of being cleaned with common household cleaners. Product is to be completed as one piece weighing at minimum 1,000 lbs. Bench shall be Model #427, Timber Bench with Back, Armrests, and Center Armrests, 'Light Grey' with 'Black' top coat stain and factory-applied non-sacrificial graffiti sealant by Outdoor Creations (www.outdoorcreations.com, 530-365-6106), or approved equal.
- B. **Bench Type 2** – Bench frame end and center shall be constructed of 1/2x3" carbon steel flat bar and 1/2"x2-1/2" carbon steel flat bar. Flat bar shall be made of ASTM A36 carbon structural steel. Bench seating shall be 3"x4" IPE wood nominal unfinished solid stock with eased edges. Bench shall be Model #Walden II Bench, Walden II Bench with Back, 'COLOR' by Thomas Steele (www.thomas-steele.com, 800-448-7931), or approved equal.

104-2.03 Picnic Tables

- A. **Picnic Table Type 1** – Picnic table seat shall be made of two (96"x5"x4") concrete woodgrain texture planks with a 1" smooth concrete gap between the two planks. Picnic table top shall be six (96"x5"x4") with 1" smooth concrete gap between each of the planks. The table top shall contain 12" long minimum drain holes within the 1" smooth concrete gap to allow water to drain and pass through the table. Picnic table legs shall be connected concrete woodgrain texture planks to resemble a wooden picnic table. Concrete mix shall include a mixture of Portland Cement, water, coarse and fine aggregates, pure mineral oxide coloring agents to yield a min. compressive strength of 5,000 psi. Final product shall be reinforced with #4 and #5 rebar grid. Concrete shall be integrally colored, rubbed with a top coat stain, and sealed with a factory-applied non-sacrificial graffiti sealant capable of being cleaned with common household cleaners. Product is to be completed as one piece weighing at minimum 2,550 lbs. Picnic Table Type 1 shall be Model #114, 96" Wood Grain Timber Table with Custom Slats for Draining in 'Light Grey' with 'Black' top coat stain and factory-applied non-sacrificial graffiti sealant by Outdoor Creations

- (www.outdoorcreations.com, 530-365-6106), or approved equal.
- B. **Picnic Table Type 2** (Accessible) – Picnic table shall be similar to Picnic Table Type 1 except seat shall be made of two (96"x5"x4") concrete woodgrain texture planks with a 1" smooth concrete gap between the two planks for seating on one side of the table and two (66"x5"x4") concrete woodgrain texture planks with a 1" smooth concrete gap between the two planks for the other side of the table. Clearances which comply with California Building Code accessibility requirements shall be provided. Picnic Table Type 2 shall be Model #114-2E, 96" Wood Grain Timber Table Double Entry with Custom Slats for Draining in 'Light Grey' with 'Black' top coat stain and factory-applied non-sacrificial graffiti sealant by Outdoor Creations (www.outdoorcreations.com, 530-365-6106), or approved equal.
 - C. **Picnic Table Type 3** – Picnic table shall be made of 1/4"x1-1/2" horizontal solid steel slats and 3/8"x1" solid steel bracing and 1-7/8" tubular steel cross members. All fabricated metal components shall be steel shotblasted, etched, phosphatized, preheated, and electrostatically powder-coated with TGIC polyester powder coatings. Products are fully cleaned and pretreated, preheated and coated while hot to fill crevices and build coating film. Coated parts are fully cured to coating. The thickness of the resulting finish coat averages 8-10 mils (200-250 microns). Picnic Table Type 3 shall be Model #FBF-56, by Victory Stanley (www.victorstanley.com, 310-855-8300), or approved equal.
 - D. **Picnic Table Type 4** (Accessible) – Picnic table shall be made of 1/4"x1-1/2" horizontal solid steel slats and 3/8"x1" solid steel bracing and 1-7/8" tubular steel cross members. All fabricated metal components shall be steel shotblasted, etched, phosphatized, preheated, and electrostatically powder-coated with TGIC polyester powder coatings. Products are fully cleaned and pretreated, preheated and coated while hot to fill crevices and build coating film. Coated parts are fully cured to coating. The thickness of the resulting finish coat averages 8-10 mils (200-250 microns). Picnic Table Type 4 (Accessible) -- Picnic Table Type 4 shall be Model #FBF-56, by Victory Stanley (www.victorstanley.com, 310-855-8300), or approved equal.

104-2.04 Community Board

- A. **Community Board** – The community board shall have a steel frame and ribbed, galvanized steel sheet roof. Over dimensions shall be per detail with a sloping roof. Roof surface shall be painted with Kynar 500 color "Hartford Green". Metal roofing trim shall match the color of the roof and shall be factory made of 26-gauge Kynar 500 painted steel. Trim shall include panel ridge caps, hip caps, eave trim, splice channels, rake trim, roof peak cap, and corner trim. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on all the sides. The community board structural framing shall be painted with Standard Poli-5000 color "Tudor Brown". The community board shall be 113" tall from finished grade to the top of the roof. The community board shall have a clearance of 90" from finished grade to the roofs eaves. The weatherproof display case shall be 72" by 36" x 2 1/4" and single sided. The display case shall have two doors with a turn-key-lock built into the aluminum frame for each door. The display case shall have a clearance of 48" from finished grade to the display case. Community Board shall be SSG-08x09MR with single sided display case by Poligon (www.poligon.com, 616-888-3500), or approved equal.

104-2.05 Barbeque

- A. **Barbeque** – Barbeque shall be made of a solid concrete. Concrete mix shall include a mixture of Portland Cement, water, coarse and fine aggregates, pure mineral oxide coloring agents to yield a minimum compressive strength of 5,000 psi. Final product

shall be reinforced with #4 and #5 rebar grid. Product is to be competed as one piece weighing at minimum 1,800 lbs. Barbeque Type 1 shall be Model #300A, Single Concrete Barbeque in 'Black' with factory-applied non-sacrificial graffiti sealant by Outdoor Creations (www.outdoorcreations.com, 530-365-6106), or approved equal.

104-2.06 Trash, Recycling, & Compost Receptacles

- A. **Trash Receptacle** – Trash receptacle shall be made of ASTM 1018 rolled steel bar 1-1/2"x3/16". All metal parts shall be etched phosphatized, preheated, primer powder coated, and final coat electrostatically powder coated. Receptable shall have three leveling feet and four 1/1-2x1/4" tab for mounting with 1/2" hole and shall be Model #IVTR, Powder coated Steel Trash Receptacle with Cable Lock, black, side empty, with matching Rain Top #IVTR-RT, 45 gal. plastic liner, pedestal mount, by Kings River Casting (www.kingsrivercasting.com), or approved equal.
- B. **Recycling Receptacle** – Recycling receptacle shall be made of ASTM 1018 rolled steel bar 1-1/2"x3/16". All metal parts shall be etched phosphatized, preheated, primer powder coated, and final coat electrostatically powder coated. Receptable shall have three leveling feet and four 1/1-2x1/4" tab for mounting with 1/2" hole and shall be Model #IVTR with Recycling Decals, Steel Trash Receptacle with Cable Lock, black, side empty, with matching Rain Top #IVTR-RT, 45 gal. plastic liner, pedestal mount, by Kings River Casting (www.kingsrivercasting.com), or approved equal.
- C. **Compost Receptacle** – Compost receptacle shall be made of ASTM 1018 rolled steel bar 1-1/2"x3/16". All metal parts shall be etched phosphatized, preheated, primer powder coated, and final coat electrostatically powder coated. Receptable shall have three leveling feet and four 1/1-2x1/4" tab for mounting with 1/2" hole and shall be Model #IVTR with Compost Decals, Steel Trash Receptacle with Cable Lock, black, side empty, with matching Rain Top #IVTR-RT, 45 gal. plastic liner, pedestal mount, by Kings River Casting (www.kingsrivercasting.com), or approved equal.

104-2.07 Water Fountains and Sumps

- A. **Drinking Fountain** – Drinking fountain shall be a heavy duty 12 gauge galvanized steel with a green powder-coat finish incorporates a recessed push button and welded bubbler guard to provide extra durability, a large access panel for wase of service, and a vandal-resistant bottom plate. The recessed push button valve offer the only all stainless steel valve body machined out of soil bar stock, shall be fully serviceable through the front of the push button assembly offering access to the water control cartridge and integral water supply strainer, and with front access to the water stream height adjustment. Operating pressure range of 30 to 90 psi. All chrome plated brass push button resists vandalism by allowing it to spine without unscrewing. Bubbler head shall be polished chrome-plated brass with integral basin shank. Bubbler head shielded, angled stream opening provides a steady, sanitary source of drinking water at .45gpm. Water Fountain shall be Model #3202, powder coated steel (green) by Haws (www.hawscos.com), or approved equal.
- B. **Sump for Drinking Fountains** shall be as shown on plans.

104-2.08 Basketball Hoop

- A. **VERTICAL POLE** – Vertical post shall be constructed of 6 5/8" O.D. Schedule 40 galvanized tubing. Design shall allow for a 48" bury into the ground and a 72" setback from post to backboard. Backboard attachment shall be telescoping to allow up to 78" extension if desired. Two 1" round tubular braces shall support the top corners of the backboard and connect directly to the pole. The pole shall be designed so that the

rim mounts directly through the backboard into the horizontal extension to eliminate backboard stress during play. Pole systems where rim mounts to backboard only are not considered equal. Concrete post mix requires approval by City Materials Engineering.

- B. BACKBOARD – Backboard shall be 42"x 60" rectangular steel. Skin shall be 10 gauge steel with ¼" thick vertical struts. Backboard shall have a white powdercoat finish, and have an official orange shooters square.
- C. RIM - Standard rim shall be fabricated from 3/16" backplates and sideplates fully welded. Rim shall be double 5/8" diameter, high strength steel welded together at a minimum of six places. Nets shall be attached by means of a continuous netlocking system constructed of 3/16"x 1" steel with punched slots that facilitate the use of either nylon or chain nets (nylon net included). The entire rim shall be powdercoated orange. Rim shall be heavy-duty, double-rim, and fixed.
- D. WARRANTY - Pole, backboard, and standard rim shall carry a Lifetime Unconditional Warranty. Entire system weight shall be approximately 515#.
- E. PRODUCT – Basketball Hoop (Vertical Pole, Backboard, and Rim) to be "Tyrant Playground" by First Team (1-800-649-3688) or approved equal.

104-2.09 Landscape Boulder

- A. Install landscape boulders by preparing location to receive boulder then mechanically placing boulder. Care should be taken to position boulder as it occurred in a natural setting whenever possible and ensure no sides overhang. Conceal equipment scars as described on the plans.
- B. Existing landscape boulders that are less than 36" in diameter are to be installed in groups of 2-3 at new locations as directed by landscape architect. Existing landscape boulders are the property of the City and shall not be removed from the site unless directed by the City.
- C. Landscape boulders, or boulder groupings should be installed at 8' maximum spacing between boulders to deter vehicle entry into the park. Coordinate boulder placement with fence and landscape installation.
- D. Contractor to coordinate stockpiling of new landscape boulders and existing landscape boulders with landscape architect. Boulder stockpiling and installation shall avoid conflicts with other trades and work.

A-3 Installation

104-3.01 Bollards

- A. Layout and installation of bollards shall be carefully coordinated with concrete paving.
- B. Install bollards as shown on plans and in conformance with manufacturer's recommendations.

104-3.02 Benches

- A. Layout and installation of benches shall be carefully coordinated with concrete paving.
- B. Install benches as shown on plans and in conformance with manufacturer's recommendations.

104-3.03 Picnic Tables

- A. Layout and installation of picnic tables shall be carefully coordinated with concrete paving.

- B. Install picnic tables as shown on plans and in conformance with manufacturer's recommendations.
- 104-3.04 Community Board
 - A. Install community board as shown on plans and in conformance with manufacturer's recommendations.
- 104-3.05 Barbeque
 - A. Install barbeque as shown on plans and in conformance with manufacturer's recommendations
- 104-3.06 Trash, Recycling, & Compost Receptacles
 - A. Layout and installation of trash & recycling receptacles shall be carefully coordinated with concrete paving.
 - B. Install trash & recycling receptacles as shown on plans and in conformance with manufacturer's recommendations.
- 104-3.07 Drinking Fountains
 - A. Install drinking fountains and sump as shown on plans and in conformance with City requirements and manufacturer's recommendations.
- 104-3.08 Basketball Hoop
 - A. Layout and installation of basketball hoop shall be carefully coordinated with concrete paving.
 - B. Install basketball hoop as shown on plans and in conformance with manufacturer's recommendations.
- 104-3.09 Landscape Boulders
 - A. Install landscape boulders by preparing location to receive boulder then mechanically placing boulder. Care should be taken to position boulder as it occurred in a natural setting whenever possible and ensure no sides overhang. Conceal equipment scars as described on the plans.
 - B. Existing landscape boulders shall be installed as shown in the plans and directed by landscape architect.
 - C. Coordinate boulder placement with fence and landscape installation.
 - D. Contractor to coordinate stockpiling of existing landscape boulders with landscape architect. Boulder stockpiling and installation shall avoid conflicts with other trades and work.

104-4.01 Payment

- A. **Collapsible Bollard Type 1** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Collapsible Bollard Type 1, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- B. **Collapsible Bollard Type 2** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Collapsible Bollard Type 2, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- C. **Fixed Bollard** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Fixed Bollard, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- D. **Removable Bollard** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Removable Bollard, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- E. **Bench Type 1** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Bench Type 1, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- F. **Bench Type 2** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Bench Type 2, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- G. **Picnic Table Type 1** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Picnic Table Type 1, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- H. **Picnic Table Type 2** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Picnic Table Type 2, complete in

place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.

- I. **Picnic Table Type 3** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Picnic Table Type 3, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- J. **Picnic Table Type 4** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Picnic Table Type 4, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- K. **Community Board** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Community Board, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- L. **Barbeque** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Barbeque, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- M. **Trash Receptacle** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Trash Receptacle, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- N. **Recycling Receptacle** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Recycling Receptacle, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- O. **Compost Receptacle** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Compost Receptacle, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.

- P. **Drinking Fountain** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Drinking Fountain, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- Q. **Drinking Fountain Sump** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Sump for Drinking Fountain, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- R. **Basketball Hoop** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install Basketball Hoop, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- S. **Supply and Place Landscape Boulders:** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to supply and install landscape boulders, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.
- T. **Place Landscape Boulders:** shall be paid for at the contract unit price for **each** as listed on the bid schedule, which price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all work involved and necessary to install existing landscape boulders, complete in place and in accordance with the plans, including protection of existing improvements and facilities, as specified in these Special Provisions, and as directed by the Engineer.

SECTION 105

PLAYGROUND EQUIPMENT

105-1.01 SECTION INCLUDES

- A. Play Equipment: 2 to 5 and 5 to 12 area
- B. Fall Attenuating Surfacing
- C. Drain Rock at Playground

105-2.01 MATERIALS

- A. Landscape Structures playground equipment to be procured by contractor and installed by Ross Recreation Equipment: 707-538-3800 or info@rossrec.com, or qualified playground installer.
- B. Play It Safe Playground Fibar to be installed by contractor or Ross Recreation in both play areas; minimum depth of 12" in fall zones.
 - 1. To be certified to meet ASTM F1951-08 and ASTM F1292-04.
 - 2. To be made of 100% virgin wood; individual pieces to be from ½" to 1-½" long and no more than ½" wide.
 - 3. Available from Ross Recreation Equipment: 707-538-3800 or info@rossrec.com.
- C. Drain rock at playground subsurface drains shall be ¾" drain rock as shown on plans and in conformance with Section 26A of these Special Provisions.

105-3.01 GENERAL

- A. Play equipment to be procured from and installed by Ross Recreation Equipment: 707-538-3800 or info@rossrec.com, or a qualified playground installer.
- B. Completed playground to be inspected and certified as compliant by a CPSI.
- C. Inspection will include playground and adjacent area of play area, and a Critical Fall Height Test (Impact Test). Testing procedures will adhere to ASTM F1292, F3351 and F3313. A copy of all test reports will be provide for record to city park representative.

105-4.01 PAYMENT

- 1.1 **Ages 2-5 Playground** complete, in place, shall be made at the contract **lump sum** price, which shall be considered full compensation for furnishing all labor, materials, equipment, tools, transportation, and incidentals necessary for installation of playground complete, in place, and fully operational, and any other item necessary not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.

- 1.2 **Ages 5-12 Playground** complete, in place, shall be made at the contract **lump sum** price, which shall be considered full compensation for furnishing all labor, materials, equipment, tools, transportation, and incidentals necessary for installation of playground complete, in place, and fully operational, and any other item necessary for playground not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.
- 1.3 **Playground Surfacing**, complete, in place, and to required depth, shall be made at the contract per **cubic yard** price, which shall be considered full compensation for furnishing all labor, materials, equipment, tools, transportation, and incidentals necessary for installation of Fibar, play surfacing complete, in place and fully operational, and any other item necessary for Fibar play surfacing not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.
- 1.4 **Drain Rock at Playground** shall be paid for at the contract price per **cubic yard** which price shall include full compensation for furnishing all labor, materials including angular drain rock, tools, and equipment, and doing all the work involved in supplying and placing drain rock and filter fabric at playground, as specified herein, including compacting subgrade, placing and compacting angular drain rock, and any other item necessary not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.

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SECTION 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, except where shown on plans.

No compaction of the soil within the root zones of protected trees shall occur, except when required as part of a paving section where shown on plans.

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.

SECTION 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.

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.

SECTION 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. Provide receipts to Engineer or City staff.

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.

SECTION 125

SPECIAL CONDITIONS FOR DEMOLITION AND SITE CLEARANCE

125-1.01 Project or Demolition Area: The area of the project is six parks in the City of Santa Rosa, as shown on the plans.

Upon receipt of Notice to Proceed, the Contractor shall have control of the progress and sequence of the demolition of the walkways, concrete, etc. as specified in the project demolition plan as released and removal and Clearance of Site, subject to all contract stipulations and covenants.

125-1.02 Responsibility of Contractor: Except as otherwise specifically stated in the contract documents and technical specifications, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees, off haul or other expenses incurred, job site security after work hours and on weekends, and all other services and facilities of every nature whatsoever necessary for his performance of the contract within the specified time.

125-1.03 Scope of Work: The provisions for demolition and removal work included in these specifications shall apply to all work performed under this contract and shall include the demolition and removal of all items as specified shown on the attached plans and all other structures, existing rubbish and debris from the site as detailed in these specifications and plans.

Access to the site of the work is available from adjacent public streets.

125-1.04 Utilities: All utilities within and across the project area and all utilities serving structures or facilities not under this contract but adjacent to the sites of the work shall be preserved and kept in operating condition during the progress of this contract. In addition, these utilities shall be left operable after completion of demolition and cleanup. Any damage to any utility due to the operation of the Contractor shall be repaired or replaced to the requirements of the City of Santa Rosa.

The Contractor shall notify Pacific Gas and Electric Company at 3965 Occidental Road, Santa Rosa, California (Post Office Box 640, Santa Rosa, California, 95402); Pacific Telephone Company at 3442 Mendocino Avenue, Santa Rosa, California; and Comcast Cable at 3242 Airway Drive, Santa Rosa, California (Post Office Box 11668, Santa Rosa, California, 95406) prior to beginning demolition work.

125-1.05 Demolition and Removal: The process of demolition, clearance, and removal by the Contractor shall be performed and supervised by him using employees experienced in this kind of work. The Contractor shall use care and proper precautions to insure the safety of workmen, inspectors, and the public, and to insure no unreasonable disturbances to surrounding business establishments.

All existing foundations, steps, concrete slabs, and other similar types of construction shall be completely removed.

125-1.06 Treatment of Areas: The Contractor shall demolish and remove from the site as required by these specifications all paving, etc. All exterior concrete shall be removed.

125-1.07 Dust Nuisance: The Contractor shall at all times during his operations control movement of dust. Water shall be available and used to lay dust wherever necessary and at the Contractor's expense.

125-1.08 Burning: The site of the work is within an air pollution control district. No burning of any kind will, therefore, be permitted.

125-1.09 Blasting: No use of explosives will be permitted in the process of demolition.

125-1.10 Prevention of Accidents: The prevention of accidents shall be a prime consideration under the operations of this contract. The Contractor is instructed to take due care to comply with all provisions of these specifications as to accident prevention. Enclosed security fencing shall be provided by Contractor during project demolition and construction at all sites.

125-1.11 Sidewalk and Street Repair: All sidewalks adjacent to the job site which are broken as a result of the Contractor's operation and any damage to streets, curbs, or gutters shall be repaired in accordance with the Standard Specifications of the City of Santa Rosa.

125-1.12 Payment: **Concrete Removal** 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 for doing all the work involved in demolition, concrete removal and disposal as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

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SECTION 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.

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

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

132-1.15A Water Services: New service laterals shall be installed with a minimum horizontal clearance of 3 feet from gas laterals. Water services shall be installed via 'open trench' construction methods only, unless otherwise specified herein. Existing meters may require tests.

132-1.30 Payment:

1" Irrigation Water Service with Backflow: Shall be paid for at the contract price per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in 1" irrigation water service and backflow installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; water service piping and fittings as required; backflow device and fittings as required; backflow enclosure and insulated cover; meter boxes and lids to grade; meter shut off valves; tie-in at back of curb; placing and compacting all required bedding and backfill; testing and chlorination; removal and replacement of concrete curb as needed; as specified herein, and no additional allowance will be made therefor.

3/4" Water Service with Backflow: Shall be paid for at the contract price per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in 3/4" water service and backflow installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; water service piping and fittings as required; backflow device and fittings as required; backflow enclosure and insulated cover; meter boxes and lids to grade; meter shut off valves; tie-in at back of curb; placing and compacting all required bedding and backfill; testing and chlorination; removal and replacement of concrete curb as needed; as specified herein, and no additional allowance will be made therefor.

1-1/4" PVC Water Pipe 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 1-1/4" water pipe installation, including but not limited to: excavation and disposal of excavated materials; hand digging if needed; root pruning;

dewatering and disposal of trench groundwater; contamination awareness; water piping and fittings as required; placing and compacting all required bedding and backfill; testing and chlorination; as specified herein, and no additional allowance will be made therefor.

Backflow Device Testing: Shall be paid for at the contract price per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the 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. See next page for approved testing services.

APPROVED LIST OF BACKFLOW CONTRACTORS
INSTALLATION, TESTING & REPAIR

ACCO ENGINEERED SYSTEMS 1111 ALADDIN AVE. SAN LEANDRO, CA 94577 PHONE: (510) 346-4300 LICENSE #: 120696	AIR SYSTEMS SERVICE 1900 BATES AVE., SUITE E CONCORD, CA 94520 PHONE: (888) 504-2772 LICENSE#: 406794	ALL OUT PLUMBERS/C. CROSS P.O. BOX 599 CLOVERDALE, CA 95425 PHONE: (707) 894-8434 LICENSE #: 812540
ALL PRO BACKFLOW/J.LOTITO P.O. BOX 2193 FOLSOM, CA 95763 PHONE: (916) 276-7162 FAX: (916) 435-4167 LICENSE #: 934557	APB BACKFLOW, INC. 1599 FELTA RIDGE ROAD HEALDSBURG, CA 95448 PHONE: (888) 356-7761 LICENSE: 1032328	ASTI SERVICES/M.DESCHLER 102 COUCH ST. VALLEJO, CA 94590 PHONE: (707) 645-1782 FAX: (707) 645-1807 LICENSE #: 742693
C.V. PLUMBING/C. VINE P.O. BOX 219 CLOVERDALE, CA 95425 PHONE: (707) 894-8580 FAX: (707) 894-9642 LICENSE #: 843366	CAGWIN & DORWARD P.O. BOX 1600 NOVATO, CA 94948-1600 PHONE: (800) 891-7710 FAX: (415) 897-7864 LICENSE #: 202399	CHECKRITE BACKFLOW SERV. 3618 CHANATE RD. SANTA ROSA, CA 95404 PHONE: (707) 575-5296 FAX: (707) 578-6595 LICENSE #: 836022
DEVOTO PLUMBING* 1345 TRIPLE OAK WAY FULTON, CA 95439 PHONE: (707) 545-0734 LICENSE #: 824608	ECONOMY PLUMBING 1058 N. DUTTON AVE. SANTA ROSA, CA 95401 PHONE: (707) 545-4455 FAX: (707) 543-8111 LICENSE #: 748220	GAC COMPANY P.O. BOX 5511 SANTA ROSA, CA 95402 PHONE: (707) 538-8000 LICENSE #: 927846
GROUND HOG CONSTRUCTION 5353 HESSEL RD. SEBASTOPOL, CA 95472 PHONE: (707) 529-2085 FAX: (707) 823-9389 LICENSE #: 723766	JV PLUMBING & BACKFLOW* 2911 MONTECITO AVE. SANTA ROSA, CA 95404 PHONE: (707) 799-2692 LICENSE #: 955698	LEDUC & DEXTER PLUMBING 2833 DOWD DR., SUITE A SANTA ROSA, CA 95407 PHONE: (707) 575-1500 FAX: (707) 527-0281 LICENSE #: 651401
NORTHBAY BACKFLOW P.O. BOX 2765 PETALUMA, CA 94953 PHONE: (707) 484-3949 LICENSE #: 878332	NORTHWOOD BACKFLOW 911 LAKEVILLE ST., #369 PETALUMA, CA 94952 PHONE: (800) 750-4547 LICENSE #: 749187	ONGARO AND SONS PLUMBING 2995 DUTTON AVE. SANTA ROSA, CA 95407 PHONE: (707) 579-3511 LICENSE #: 215233
PUMPMAN NORCAL 4000 S. MOORLAND AVE. SANTA ROSA, CA 95407 PHONE: (707) 584-9191 LICENSE: 200068	RH & SONS WATER SERVICES 225 GOLDEN RIDGE AVE. SEBASTOPOL, CA 95472 PHONE: (800) 675-3569 LICENSE #: 698774	ROBERTS MECHANICAL & ELECTRICAL, INC. 39 LARK CENTER DR. SANTA ROSA, CA 95403 PHONE: (707) 584-5880 LICENSE #: 556014
ROBERTSON'S BACKFLOW 3170 DEEP HAVEN RD. POLLOCK PINES, CA 95726 PHONE: (530) 306-1056 FAX: (530) 303-1497 LICENSE #: 972547	SCOTT CRAMER PLUMBING P.O. BOX 750084 PETALUMA, CA 94975 PHONE: (707) 778-8789 FAX: (707) 658-1043 LICENSE #: 889152	STEAD BACKFLOW PREVENTION 2715 W. KETTLEMAN LN., #203-321 LODI, CA 95242 PHONE: (209) 327-3900 LICENSE #: 848490

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

**Spanish speaking*

(Updated List Only: 11/2/2021)

SECTION 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.

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

If groundwater is encountered during any trenching or excavating work. The Contractor is permitted to discharge it to the nearest sanitary sewer manhole under the One Time Wastewater Discharge permit requirements which will be furnished by the City after contractor award.

[Version: 2/2/15CDA STD2010]

SECTION B

SHOP DRAWINGS

The Contractor shall submit shop drawings and/or manufacturer's specifications for all mechanical and electrical equipment for review by City Traffic Engineer and Electrical Department.

The Contractor shall prepare or secure and submit five copies of each submittal for review by the Engineer. All submittals shall be approved by the Traffic Engineer prior to manufacture, fabrication, or shipment.

After approval of the drawings by the Engineer, the Contractor shall submit copies of purchase orders for items of equipment and material to the Traffic Engineer as proof of placing the order. Each copy of a purchase orders shall be submitted immediately after the order has been placed and will clearly indicate the date the order was placed. Copies of purchase orders shall be submitted on the following items:

- A. Pumps
- B. Motors
- C. Valves
- D. All electrical equipment

SECTION C

TESTS AND INSPECTIONS

All materials, equipment, installation, and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements. Electrical items shall be submitted to Traffic Engineer.

All mechanical and electrical equipment shall be tested by the Contractor to the satisfaction of the Engineer before any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted, and connected. Any changes, adjustments, or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

At least 60 days before the time allowed in his construction schedule for commencing testing and start-up procedures, the Contractor shall submit to the Engineer, in duplicate, details of the procedures he proposes to adopt for testing and start-up of all mechanical and electrical equipment to be operated singly and together, excepting when such procedures have been covered in the specifications. Tests on hydraulic or pumping equipment shall be conducted using clear potable water. The water required for such tests shall be provided by the Contractor.

During the testing of mechanical, instrumentation, and electrical equipment, the Contractor shall make available experienced factory trained representatives of the manufacturers of all the various pieces of equipment, or other qualified persons, who shall instruct the City's personnel in the operation and care thereof. Instruction shall include step-by-step troubleshooting procedures with all necessary test equipment.

If, under test, any portion of the work shall fail to fulfill the contract requirements and is altered, renewed, or replaced, tests on that portion when so altered, removed, or replaced, together with all other portions of the work as are affected thereby, shall, if so required by the Engineer, be repeated within reasonable time and in accordance with the specified conditions, and the Contractor shall pay to the City all reasonable expenses incurred by the City as a result of the carrying out of such tests.

Where, in the case of an otherwise satisfactorily installed test, any doubt, dispute, or difference should arise between the Engineer and the Contractor regarding the test results or the methods or equipment used in the carrying out of the test by the Contractor, then the Engineer may order the test to be repeated. If the repeat test, using such modified methods or equipment as the Engineer may require, substantially confirms the previous test, then all costs in connection with the repeat test will be paid by the City; otherwise the costs shall be borne by the Contractor. Where the results of any installed test fail to comply with the contract requirements for such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the Contractor at his own expense.

As soon as possible after each Contractor's submittal for equipment defined herein has been approved by the Engineer, and no later than the time of delivery of that equipment to the job site, a single copy of operating and maintenance instructions and procedures shall be presented to the Engineer for review and acceptance. Since such instructions

are considered to be an integral part of the equipment provided, ten percent of the materials and labor costs for each such item of equipment will be withheld from payment to the Contractor until the instructions have been accepted by the Engineer.

Items or assemblies requiring operating and maintenance instructions shall include all mechanical equipment, electrical, and instrumentation equipment, and, in addition, any other items specifically noted in the specifications.

The operating and maintenance instructions shall include, as a minimum, the following data for each item of equipment.

- A. An itemized list of all data provided.
- B. Name and location of the manufacturer, the manufacturer's local representative, the nearest supplier, and spare parts warehouse.
- C. Approved submittal information applicable to operation and maintenance.
- D. Recommended installation, adjustment, start-up, calibration, and troubleshooting procedures.
- E. Recommended lubrication and an estimate of yearly quantity needed.
- F. Recommended step-by-step procedures for all modes of operation.
- G. Complete internal and connection wiring diagrams.
- H. Recommended preventive maintenance procedures and schedule.
- I. Complete parts lists, by generic title and identification number, with exploded views of each assembly.
- J. Recommended spare parts.
- K. Disassembly, overhaul, and reassembly instructions.

Following completion of installation of an item of equipment, operating and maintenance instructions and procedures shall be modified by the Contractor to reflect field changes and corrections made by the Engineer. After corrections have been made, four complete copies shall be submitted.

BID FORMS

CITY OF SANTA ROSA

STATE OF CALIFORNIA

SIX FIRE DAMAGED PARKS RECOVERY

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

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

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

NAME OF BIDDER:

**CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C02248 SIX FIRE DAMAGED PARKS - RECOVERY**

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	TRAFFIC CONTROL	1	LS	\$ _____	\$ _____
2	WATER POLLUTION CONTROL	1	LS	\$ _____	\$ _____
3	CLEAN CONCRETE	1	LS	\$ _____	\$ _____
4	REPAIR PAVERS	1	LS	\$ _____	\$ _____
5	REFINISH METAL FURNISHINGS	125	LF	\$ _____	\$ _____
6	REFINISH EXISTING BOLLARD	9	EA	\$ _____	\$ _____
7	RELOCATE EXISTING BENCH	2	EA	\$ _____	\$ _____
8	REMOVE AND REPLACE EXISTING WHEEL STOPS	4	EA	\$ _____	\$ _____
9	CLEARING AND GRUBBING	1	LS	\$ _____	\$ _____
10	EARTHWORK EXCAVATION & FINE GRADING (F)	45	CY	\$ _____	\$ _____
11	EXCAVATION IN TREE DRIPLINE	1	LS	\$ _____	\$ _____
12	TURF	43720	SF	\$ _____	\$ _____
13	SUPPLY AND PLANT 5 GALLON SHRUB AND GROUND COVER	362	EA	\$ _____	\$ _____
14	90-DAY LANDSCAPE MAINTENANCE & ESTABLISHMENT	1	LS	\$ _____	\$ _____
15	MULCH PATHWAY	215	CY	\$ _____	\$ _____
16	IRRIGATION SYSTEM	1	LS	\$ _____	\$ _____
17	PARK RULES SIGNS	11	EA	\$ _____	\$ _____
18	MONUMENT SIGN - CONCRETE AND METAL	1	EA	\$ _____	\$ _____
19	MONUMENT SIGN - METAL	1	EA	\$ _____	\$ _____
20	ALUMINUM SIGN	8	EA	\$ _____	\$ _____
21	12" STORM DRAIN	12	LF	\$ _____	\$ _____
22	4" STORM DRAIN	76	LF	\$ _____	\$ _____
23	4" SUBDRAIN	251	LF	\$ _____	\$ _____
24	12" STORM DRAIN INLETS	4	EA	\$ _____	\$ _____
25	BUBBLE UP DRAIN	3	EA	\$ _____	\$ _____
26	TRENCH BRACING AND SHORING	1	LS	\$ _____	\$ _____
27	CONCRETE PAVEMENT	925	SF	\$ _____	\$ _____
28	CONCRETE PAVEMENT - INTEGRAL COLOR	1937	SF	\$ _____	\$ _____
29	PLAYGROUND RAMP	2	EA	\$ _____	\$ _____

NAME OF BIDDER:

**CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C02248 SIX FIRE DAMAGED PARKS - RECOVERY**

Item No.	Description	Quantity	Units	Unit Price	Total Price
30	CURB	12	LF	\$ _____	\$ _____
31	CONCRETE STAIRWAY	1	LS	\$ _____	\$ _____
32	STAIRWAY HANDRAILS	99	LF	\$ _____	\$ _____
33	METAL FENCE	61	LF	\$ _____	\$ _____
34	36" SPLIT RAIL WOOD FENCE	1903	LF	\$ _____	\$ _____
35	42" SPLIT RAIL WOOD FENCE	650	LF	\$ _____	\$ _____
36	ELECTRICAL SYSTEM INSTALLATION OR MODIFICATION	1	LS	\$ _____	\$ _____
37	INSTALLATION OF PULL BOXES	2	EA	\$ _____	\$ _____
38	LIGHTING SYSTEM	1	LS	\$ _____	\$ _____
39	POROUS PAVE	920	SF	\$ _____	\$ _____
40	COLLAPSIBLE BOLLARD TYPE 1	6	EA	\$ _____	\$ _____
41	COLLAPSIBLE BOLLARD TYPE 2	2	EA	\$ _____	\$ _____
42	FIXED BOLLARD	4	EA	\$ _____	\$ _____
43	REMOVABLE BOLLARD	1	EA	\$ _____	\$ _____
44	BENCH TYPE 1	5	EA	\$ _____	\$ _____
45	BENCH TYPE 2	1	EA	\$ _____	\$ _____
46	PICNIC TABLE TYPE 1	2	EA	\$ _____	\$ _____
47	PICNIC TABLE TYPE 2	3	EA	\$ _____	\$ _____
48	PICNIC TABLE TYPE 3	1	EA	\$ _____	\$ _____
49	PICNIC TABLE TYPE 4	2	EA	\$ _____	\$ _____
50	COMMUNITY BOARD	1	EA	\$ _____	\$ _____
51	BARBEQUE	1	EA	\$ _____	\$ _____
52	TRASH RECEPTACLES	6	EA	\$ _____	\$ _____
53	RECYCLING RECEPTACLES	6	EA	\$ _____	\$ _____
54	COMPOST RECEPTACLE	6	EA	\$ _____	\$ _____
55	DRINKING FOUNTAINS	4	EA	\$ _____	\$ _____
56	DRINKING FOUNTAIN SUMP	2	EA	\$ _____	\$ _____
57	BASKETBALL HOOP	1	EA	\$ _____	\$ _____
58	SUPPLY & PLACE LANDSCAPE BOULDERS	4	EA	\$ _____	\$ _____

NAME OF BIDDER: _____

**CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C02248 SIX FIRE DAMAGED PARKS - RECOVERY**

Item No.	Description	Quantity	Units	Unit Price	Total Price
59	PLACE EXISTING LANDSCAPE BOULDERS	2	EA	\$ _____	\$ _____
60	AGES 2-5 PLAYGROUND	1	LS	\$ _____	\$ _____
61	AGES 5-12 PLAYGROUND	1	LS	\$ _____	\$ _____
62	PLAYGROUND SURFACING	78	CY	\$ _____	\$ _____
63	DRAIN ROCK AT PLAYGROUND	19	CY	\$ _____	\$ _____
64	CONCRETE REMOVAL	1	LS	\$ _____	\$ _____
65	1" IRRIGATION WATER SERVICE WITH BACKFLOW	1	EA	\$ _____	\$ _____
66	3/4" WATER SERVICE WITH BACKFLOW	1	EA	\$ _____	\$ _____
67	1-1/4" PVC WATER PIPE	891	LF	\$ _____	\$ _____
68	BACKFLOW DEVICE TESTING	2	EA	\$ _____	\$ _____
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 8-1.05.

LIST OF SUBCONTRACTORS

NAME OF BIDDER: _____

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

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

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

LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER:

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 is registered with the Department of Industrial Relations, Registration No. _____.

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

Secretary of State Business Entity Number: _____.

Business Address

Telephone Number

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

BIDDER'S SIGNATURE: _____

TITLE: _____

DATE: _____

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

This certification is required by the regulations implementing Executive Orders 12549 and 12689, 2 C.F.R part 180, Debarment and Suspension, and 2 C.F.R. § 200.213. Copies of the regulations may be obtained by contacting the person to which this proposal is submitted.

**(BEFORE COMPLETING CERTIFICATION,
READ INSTRUCTIONS FOR CERTIFICATION BELOW)**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Firm Name: _____

Name and Title of Authorized Representative: _____

Signature of Authorized Representative: _____

Date: _____

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out above.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

CERTIFICATION REGARDING LOBBYING

The undersigned [Contractor] certifies, to the best of his or her knowledge, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

1. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official:

Name and Title of contractor's Authorized Official:

Date:

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

CITY CONTRACT NO. C02248

**FEDERAL PUBLIC ASSISTANCE PROJECT CONTRACT NO. 36360, 36380, 64204
SIX FIRE DAMAGED PARKS RECOVERY**

This Contract is made and entered into as of _____ at Santa Rosa, California, between the City of Santa Rosa ("City") and _____, of _____, California ("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 State of California Department of Transportation Standard Specifications 2015 and Revised Standard Specifications 2015, 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 2015 and Revised Standard Plans 2015 (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.

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

provided, that in the event of a conflict between any Federal Requirement in Section 10 of the Special Provisions and any other provision in the Contract Documents, the more stringent provision shall control and prevail.

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 8-1.05 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: _____