INVITATION FOR BIDS

City of Santa Rosa

FOR CONSTRUCTING

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

CONTRACT NUMBER

C01178

ISSUED BY

CAPITAL PROJECTS ENGINEERING DIVISION

CITY OF SANTA ROSA, CALIFORNIA

2022

Last Updated: March 1, 2016

A T T E N T I O N
Prebid Conference
See Page 1

City of Santa Rosa

STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

Contract No. C01178

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

TABLE OF CONTENTS

CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➢	For technical questions regarding this project, contact Christopher Catbagan at (707) 543-4521 or ccatbagan@srcity.org.
➢	For direct access to plans, specifications and planholders' lists, go to www.srcity.org/bids and click on Bid/Proposal Opportunities or call (707) 543-3800.
➢	For direct access to bid results, go to www.srcity.org/bids. Under Link to Capital Projects, click on Capital Projects Contracts.

- 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., March 1, 2022, for Fulton Rd from Guerneville Rd to Piner Rd – Widen to Four Lanes, Contract No. C01178. (Engineer's Estimate: $14,300,000.00).

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

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., March 1, 2022. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 417-9875#.

Project Description/Scope of Work

The purpose of this project is to ease future traffic congestion. Fulton Road will be reconstructed and widened to 4 lanes with bike lanes and sidewalks between Guerneville Road and Piner Road. The Project includes PG&E Rule 20A underground district, roller compact paving, 2 travel lines in each direction, widen sidewalk, bike lanes, median islands and storm drain improvements.

Mandatory Pre-Bid Teleconference Call

Prospective bidders are required to attend a mandatory pre-bid teleconference call scheduled to be held at 11:00 a.m., February 15, 2022. The teleconference can be accessed by dialing 1 (707) 543-4700, participant code 823-7719#.

Subcontractor Information; Department of Industrial Relations Registration

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

CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units
1	TEMPORARY TRAFFIC CONTROL	1	LS
2	ENVIRONMENTAL MITIGATION	1	LS
3	MOBILE STORAGE TANK / MONTH - 21,000 GALLONS	3	EA
4	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	1	LS
5	TREE PROTECTION FENCING	936	LF
6	REMOVE AND RESET MAILBOX	11	EA
7	REMOVE CATCH BASIN	4	EA
8	REMOVE MANHOLE	5	EA
9	REMOVE DROP INLET	3	EA
10	REMOVE AND RESET CITY MONUMENT	12	EA
11	REMOVE / RELOCATE BOULDERS	3	EA
12	REMOVE FENCE	2,833	LF
13	ABANDON SEWER FORCE MAIN	954	LF
14	ABANDON SEWER MAIN / PLUG AT MANHOLE	2	EA
15	RELOCATE BUS BENCH	1	EA
16	REMOVE PAVEMENT MARKERS	1	LS
17	REMOVE STORM DRAIN / CULVERT	1,206	LF
18	REMOVE SANITARY SEWER LINE / PLUG	36	LF
19	REMOVE INTERIM DIVIDER (PARKING CURBS)	1	LS
20	REMOVE CATCH BASIN TOP	10	EA
21	ABANDON STORM DRAIN	77	LF
22	REMOVE AND SALVAGE TRANSIT SHELTER	2	EA
23	ABANDON IRRIGATION SERVICE / REMOVE METER BOX	2	EA
24	REMOVE ASPHALT CONCRETE DIKE	1,100	LF
25	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	1	EA
26	REMOVE WALL / SIGN	4	EA
27	RELOCATE EXISTING IRRIGATION / WATER SYSTEM	5	EA
28	REMOVE AC PATHWAY / DRIVEWAY	1,610	SY
29	REMOVE CURB AND GUTTER	5,970	LF
30	REMOVE CONCRETE	3,940	SY
31	REMOVE AND RESET GATE AND POST	2	EA
32	UTILITY CLEARANCES	1	LS
33	INSTALL TEMPORARY FENCE	1,613	LF
34	REMOVE JUNCTION STRUCTURE	1	EA
35	REMOVE TREE	177	EA
36	REMOVE OBJECT MARKERS	4	EA
37	REMOVE AND RESET BOLLARDS	5	EA
38	EXISTING SHED TO BE DEMOLISHED	1	EA
39	REMOVE ABANDONED GAS MAIN	470	LF
40	SUBGRADE STABILIZATION/DIG-OUT	3,630	SF
41	HMA STABILIZATION / DIGOUT	500	SF
42	ROADWAY EXCAVATION (F)	11,250	CY
43	CLASS 4 AGGREGATE SUBBASE	2,600	CY
44	CLEARING AND GRUBBING	3	AC
45	ADJUST DROP INLET / CATCH BASIN TO GRADE	7	EA

CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units
46	ADJUST STORM DRAIN MANHOLE TO GRADE (IN ROADWAY)	13	EA
47	ADJUST SANITARY SEWER MANHOLE TO GRADE (IN ROADWAY)	20	EA
48	ADJUST MANHOLE TO GRADE (OUTSIDE OF ROADWAY)	5	EA
49	ADJUST SEWER CLEANOUT TO GRADE	1	EA
50	ADJUST VALVE BOX TO GRADE	54	EA
51	ADJUST FIRE HYDRANT TO GRADE	4	EA
52	ADJUST AT&T MANHOLE TO GRADE	1	EA
53	TYPE II CATCH BASIN (36" BASE)	15	EA
54	TYPE II CATCH BASIN (48" BASE)	6	EA
55	STORMDRAIN DRAIN INLET WITH SIDE OPENING (36" BASE)	12	EA
56	STORMDRAIN DRAIN INLET WITH STD GATE (36" BASE)	9	EA
57	48" STORM DRAIN MANHOLE	6	EA
58	72" STORM DRAIN MANHOLE	10	EA
59	RAISE / LOWER WATER MAIN	8	EA
60	48" SANITARY SEWER MANHOLE	1	EA
61	6" SANITARY SEWER MAIN - PVC	65	LF
62	12" SANITARY SEWER MAIN - DIP	163	LF
63	FIRE HYDRANT (INCLUDES CUT-IN TEE, VALVES AND LATERAL)	16	EA
64	RELOCATE / ADJUST BACKFLOW PREVENTER	8	EA
65	ADJUST WATER METER TO GRADE	5	EA
66	DUAL WATER METER AND SERVICE	3	EA
67	10" STORM DRAIN HDPE	85	LF
68	12" STORM DRAIN - RCP	124	LF
69	15" STORM DRAIN - RCP	941	LF
70	18" STORM DRAIN - RCP	438	LF
71	24" STORM DRAIN - RCP	92	LF
72	30" STORM DRAIN - RCP	609	LF
73	42" STORM DRAIN - RCP	1,526	LF
74	72" STORM DRAIN - RCP	20	LF
75	ROCK SLOPE PROTECTION	120	SY
76	BIORETENTION AREA	26,970	SF
77	6" PERFORATED PIPE -PVC	26	EA
78	PCC CURB AND GUTTER	7,280	LF
79	PCC CURB AND GUTTER WITH RETAINER WALL	2,360	LF
80	PERVIOUS GUTTER	530	LF
81	PCC CURB (AT PERVIOUS GUTTER)	530	LF
83	TYPE A MEDIAN CURB	5,350	LF
82	MEDIAN STAMPED CONCRETE	8,500	SF
84	COBBLE PAVING	250	SF
85	SIDEWALK	62,210	SF
86	RETAINER CURB ADJACENT TO SIDEWALK	2,900	LF
87	CURB RAMP	42	EA
88	CONCRETE DRIVEWAY	3,820	SF
89	CONCRETE VALLEY GUTTER	155	LF
90	CONCRETE BUS PAD	5,300	SF

CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units
91	ROLLER COMPACTED CONCRETE(RCC) PAVEMENT (F)	8,930	CY
92	CLASS 2 AGGREGATE BASE	1,885	CY
93	GRIND CONCRETE PAVEMENT	38,200	SY
94	2" GRIND - VARIABLE THICKNESS HMA OVERLAY	2,440	SY
95	4" GRIND - HMA INLAY	1,200	SY
96	CONFORM GRIND HMA PAVEMENT	830	SY
97	ROADWAY HMA PAVING (TYPE A - 1/2" MIX) (F)	800	TN
98	DRIVEWAY HMA PAVING (F)	140	TN
99	RETAINING WALL 1	1	LS
100	RETAINING WALL 2	1	LS
101	RETAINING WALL 3	1	LS
102	RETAINING WALL 4	1	LS
103	BOX CULVERT AND TRANSITION STRUCTURE	1	LS
104	DETAIL 9 (LANELINES FOR MULTILANE HIGHWAYS)	9,527	LF
105	DETAIL 10 (LANELINES FOR MULTILANE HIGHWAYS)	144	LF
106	DETAIL 22 (NO PASSING ZONES - TWO DIRECTION)	538	LF
107	DETAIL 23 (NO PASSING ZONES - TWO DIRECTION)	83	LF
108	DETAIL 25A (LEFT EDGELINES FOR DIVIDED HIGHWAYS)	50	LF
109	DETAIL 27B (RIGHT EDGELINES)	265	LF
110	DETAIL 29 (MEDIAN ISLANDS)	226	LF
111	DETAIL 32 (TWO-WAY LEFT TURN LANES)	1,463	LF
112	DETAIL 38 (CHANNELIZING LINE)	1,645	LF
113	DETAIL 39 (BIKE LANE LINE)	7,880	LF
114	DETAIL 39A (BIKE LANE)	1,450	LF
115	DETAIL 40 (LANE EXTENSIONS THROUGH INTERSECTIONS)	160	LF
116	12" WHITE LINE	2,126	LF
117	12" YELLOW LINE	768	LF
118	TYPE IV ARROW (A=15 SF)	720	SF
119	"BIKE LANE" LEGEND W/ARROW (A=10.5 SF)	260	SF
120	BIKE LOOP DETECTOR SYMBOL (A=2 SF)	68	SF
121	MEDIAN NOSE TREATMENT	16	EA
122	FURNISH AND INSTALL NEW POST	32	EA
123	FURNISH AND INSTALL NEW SIGN	57	EA
124	RELOCATE SIGN	25	EA
125	REMOVE & DISPOSE SIGN & POST	62	EA
126	STREET LIGHT	29	EA
127	PULL BOXES	31	EA
128	TRAFFIC SIGNAL MODIFICATIONS - FULTON/GUERNEVILLE	1	LS
129	TRAFFIC SIGNAL MODIFICATIONS - FULTON/APPLETREE	1	LS
130	TRAFFIC SIGNAL INSTALLATION - FULTON/PINER HS	1	LS
131	RELOCATE TYPE 17 STANDARD	1	LS
132	HAWK BEACON INSTALLATION	1	LS
133	SIGNAL INTERCONNECT	5,300	LF
134	SOIL IMPORT	783	CY
135	SOIL EXPORT	200	CY

CITY OF SANTA ROSA
ESTIMATED QUANTITIES
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units
136	SOIL AMENDMENT	55,540	SF
137	24" BOX TREES	142	EA
138	1 GALLON PLANTS	3,328	EA
139	MULCH	450	CY
140	TREE ROOT BARRIER	2,930	LF
141	IRRIGATION SYSTEM	1	LS
142	FENCING - 4' BLACK VINYL CL	530	LF
143	FENCING - 6' CL	440	LF
144	FENCING - SPLIT RAIL	1	LS
145	TUBULAR HAND RAILING	120	LF
146	4' REMOVABLE BOLLARD	5	EA
147	INSTALL TRANSIT SHELTER	4	EA
148	PLANT ESTABLISHMENT	1	LS
149	TREE TRIMMING	32	EA

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 C01178 Fulton Rd from Guerneville Rd to Piner Rd – Widen to Four Lanes may be obtained through PlanetBids at www.srcity.org/bids. These documents can no longer be obtained at the Transportation and Public Works Department.

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

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

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

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

GRANT BAILEY, PE
Supervising Engineer

01/31/2022
Date

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

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 160 sheets entitled Fulton Rd from Guerneville Rd to Piner Rd – Widen to Four Lanes, 2019-0008
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

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

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

For State of California - the City of Santa Rosa;

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

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

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

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

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

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

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

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

2 BIDDING

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

2-1.07 Approximate Estimate: The quantities given in the Contract Documents are approximate only, being given as a basis for the comparison of bids, and the City does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or part of the work or to omit parts of the work, as may be deemed necessary or advisable by the Engineer.

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

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

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

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

1. Unit Price Schedule
2. List of Subcontractors
3. List of Previous Similar Jobs
4. Noncollusion Declaration
5. Bid Guaranty Information and Bidder's Information and Signature
6. Bid Guaranty (Bid Bond or alternate security)

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

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

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

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

2. The portion of the work that will be done by each subcontractor. Only one subcontractor shall be listed for each portion.

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

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

2-1.34 Bid Guaranty: All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check, or by a bidder's bond made payable to the City of Santa Rosa and executed as surety by a corporate surety authorized and admitted to transact a surety business in the State of California in an amount equal to ten percent of the amount of the bid. No bid shall be considered unless such cash, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

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

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

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

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

3 CONTRACT AWARD AND EXECUTION

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

3-1.05 Contract Bonds

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

a. Performance Bond: A performance bond to guarantee the faithful performance of the terms and conditions of the Contract by Contractor, which shall be executed in a sum of not less than one-half of the Contract price;

b. Labor and Materials Bond: A labor and materials bond (payment bond) in accordance with Part 6 of Division 4, sections 8000 *et seq.* of the California Civil Code, to guarantee against any and all claims of subcontractors or other third parties furnishing labor, materials, or supplies for the Contract, which shall be executed in a sum of 100% of the Contract price; and

c. Material Guaranty Bond: A material guaranty bond (warranty bond) to serve as surety for the guarantee requirements outlined in Section 6-3.01B, which shall be executed in a sum of not less than one-half of the Contract price.

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

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

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

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

Insurance: Contractor shall maintain in full force and effect all of the insurance coverage described in and in accordance with the insurance requirements set forth below. Maintenance of such insurance coverage during the entire performance of the Contract is a material element of the Contract. Failure by Contractor to (i) maintain or renew coverage, (ii) provide notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, if necessary, may be deemed a material breach of the Contract by Contractor, whereas the City shall be entitled to all rights and remedies at law or in equity. Notwithstanding the foregoing, any failure by Contractor to maintain required insurance coverage shall not excuse or alleviate Contractor from any of its other duties or obligations under the Contract. In the event Contractor retains or utilizes any subcontractors or sub-consultants in performance of the work, Contractor shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverage requirements herein set forth below.

Insurance Requirements:

A. Insurance Policies: Contractor shall maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with an AM Best rating of no less than A-:VI or a rating otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	$5 million per occurrence $5 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include products liability and completed operations coverage which shall continue for a period of three years after acceptance of the work by the City. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. Coverage may be met by a combination of primary and umbrella or excess insurance, but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Completed Operations Coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as ISO Form CG 20 37 04 13. See endorsements below for other Additional Insured Requirements. Coverage shall not exclude subsidence.
2.	Business auto coverage	$3 million	Coverage at least as broad as ISO Form Number CA 00 01 covering any auto (Code 1). Insurance shall cover owned, non-owned and hired autos.

3.	Workers' compensation and Employer's Liability	$1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than $1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor, its employees, agents and subcontractors.
4.	Contractor's pollution legal liability and/or asbestos legal liability and/or errors and omission (if the City determines, in its sole discretion, that the project involves environmental hazards)	$1 million per occurrence or claim $2 million aggregate	If the work involves lead-based paint or asbestos identification/remediation, the pollution liability policy must not contain lead-based paint or asbestos exclusions. If the work involves mold identification, the pollution liability policy must not contain a mold exclusion and a definition of "Pollution" in said policy shall include microbial matter including mold.
5.	Course of construction/ builders' risk	Amount of completed value of project without co-insurance provisions	Required for construction projects over $3 million. The City shall be named as loss payee.

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled by either party, except after prior written notice has been provided to the City in accordance with the policy provisions.
2. Liability policies shall provide or be endorsed to provide the following:
   a. For any claims related to this Contract, Contractor's insurance coverage shall be primary, and any insurance or self-insurance maintained by City shall be in excess of Contractor's insurance and shall not contribute with it. Endorsements at least as broad as 20 01 04 13 or evidence of policy language will be required in non-ISO CGL policies.
   b. **The City of Santa Rosa, its officers, agents and employees are to be covered as additional insureds on the CGL policy**. Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.

C. Verification of Coverage and Certificates of Insurance: Contractor shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Contract. The City reserves the right to require complete copies of all required policies and endorsements during the duration of the Contract and for a period of three years following City's acceptance of the work.

D. Other Insurance Provisions:

1. No policy required by this Contract shall prohibit Contractor from waiving any right of recovery prior to loss. Contractor hereby waives such right with regard to the indemnitees.
2. All insurance coverage amounts provided by Contractor and available or applicable to this Contract are intended to apply to the full extent of the policies. Nothing contained in this Contract limits the application of such insurance coverage. Coverage for an additional insured shall NOT be limited to the insured's vicarious liability. Defense costs must be paid in addition to coverage amounts.
3. Self-insured retentions above $10,000 must be approved by the City. At the City's option, Contractor may be required to provide financial guarantees.
4. City reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

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

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

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

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

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

4 SCOPE OF WORK

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

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

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

5 CONTROL OF WORK

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

1. Special Provisions
2. Project Plans, consisting of 160 sheets entitled Fulton Rd from Guerneville Rd to Piner Rd – Widen to Four Lanes, 2019-008
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

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

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

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

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

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

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

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

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

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

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

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

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

a. Stockpiling of equipment and/or materials;
b. Staging of construction;
c. Placement of work trailers or mobile offices;
d. Storage of trench spoils; or
e. Other construction related activities not specifically enumerated above.

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

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

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

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

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

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

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

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

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

PRIOR TO STARTING ANY EXCAVATION, CONTRACTOR SHALL (AT LEAST TWO WORKING DAYS IN ADVANCE) CALL UNDERGROUND SERVICE ALERT (USA) toll free at (800) 227-2600 and provide USA with all necessary data relative to the proposed excavation. USA will accept calls and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m., calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours, and on Saturdays, Sundays and holidays, Contractor shall contact the owner of the affected facility.

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

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

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

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

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

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

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

mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

6 CONTROL OF MATERIALS

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

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

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

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

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

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

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

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

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

6-4 Water Utility

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

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

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

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

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

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

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

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

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

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

a. Promptly notify City in writing of the following conditions before any such conditions are disturbed:

   1. Material that the Contractor believes may be hazardous waste as defined in Health and Safety Code section 25117 that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law;
   2. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
   3. Physical conditions at the site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in the type of work under the Contract.

b. The City will investigate the conditions and will issue a change order under the terms of the Contract if it finds that the conditions warrant it.

c. If a dispute arises between City and Contractor as to whether a change order is warranted, Contractor shall not be excused from any scheduled completion date provided for in the Contract but shall proceed with all work to be performed under the Contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8 PROSECUTION AND PROGRESS

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

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

400 WORKING DAYS

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

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

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

9 MEASUREMENT AND PAYMENT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

_____,
(Name)

_____ of
(Title)

_____
(Contractor)

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

Dated _____

/s/_____

Subscribed and sworn before me this _____ day of

_____

_____
Notary Public

My Commission Expires _____

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

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

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

City of Santa Rosa

TECHNICAL SPECIFICATIONS

FOR

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

CONTRACT NO. C01178

2021

10-5 DUST CONTROL

10-5 DUST CONTROL

10-5.01 General: Dust control will conform with the requirements of the Standard Specifications and these Special Provisions.

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

All dust-producing work and unpaved construction sites will require a minimum watering in the middle and ending of each workday. The frequency of watering will increase if dust is airborne. Watering will l not produce runoff.

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

At the end of each workday, you will thoroughly sweep all streets effected by the Project to minimize airborne dust.

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

At no cost, the Engineer has the discretion for requesting and requiring additional sweeping or watering, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place dust or debris is apparent.

12 TEMPORARY TRAFFIC CONTROL

12-1 GENERAL

12-1.01 General: Construction area temporary traffic control devices will be installed and maintained in accordance with the applicable sections of these Special Provisions, the 2018 Standard Specifications, the current Edition of the California Manual on Uniform Traffic Control Devices (CA MUTCD), the Americans with Disabilities Act (ADA), Project Mitigation Measures and as directed by the Engineer. **Your temporary traffic control plans will be prepared, stamped, and signed by a California Licensed Traffic Engineer.**

Type K temporary railing (12-3.20) will be required during excavating and paving of the widened areas. Install a N-E-A-T System crashworthy end treatment or submit for review an equally approved crashworthy end treatment meeting NCHRP 350, Test Level 2 criteria on the approach end of the Type K temporary railing with consideration to application and space availability.

During widening, excavation, and construction activities, you are required to maintain a driveway opening to the adjacent private properties (residences, churches, etc.), Youth Community Park, SCWA pedestrian/maintenance accesses for Forestview Creek, and all schools (Piner High School, etc.). Each of these properties is accessed solely from Fulton Road and one functional driveway to each address must be open and accessible during construction, with the exception of closures pre-approved by the Engineer for work immediately adjacent that is communicated to the owners more than 5 (five) working days in advance of the closure.

During widening, excavation, and any construction activities, the pre-school located at 1592 Fulton Road will have at least one driveway accessible during business operations.

You will only be allowed to construct improvements along the portion of Fulton Road adjacent to Piner High School, during the summer months (i.e., school in recess) during normal working hours (7 a.m. to 6 p.m.) OR outside of normal drop-off and pick-up hours when school is back in session (i.e., work may occur from 8:30 a.m. – 2:30 p.m. from August 11, 2021, through June 3, 2022 and from August 10, 2022, through June 2, 2023). Work in this area, during the months of June, July and August, between the hours of 6 p.m. to 10 p.m., may be permitted with City pre-approval. Evening work will not be allowed the day prior and day after events held at Piner High School.

You will be required to maintain access to all adjacent commercial properties (including, but not limited to, Fulton Marketplace, IHOP, Rotten Robbies, Green Tea Massage, etc.). Access will be provided at all times during business hours by you. This work may require shifting working hours to accommodate the businesses schedule and multiple work zones rather than one continuous work zone to complete the widening work, excavation, grinding and paving of asphalt concrete and construction and placement of asphalt concrete, PCC driveways and sidewalks. If you chose to shift work hours to accommodate business operations in the area, costs to do so will be reflected in bid prices and not result in additional costs to the City.

Additionally, for all properties with only one existing driveway, you will be required to provide and maintain access using non-skid steel plates, Type K temporary railing or other appurtenances that may be required to bridge and protect vehicles and pedestrians accessing the properties from entering the work zone as well as protecting the construction operation including excavation, asphalt and concrete pavement from damage.

Project Mitigation Measures, include but are not limited to:

TR-1: Traffic Controls
The City will I require you to develop and implement a temporary Traffic Control Plan outlining work zones, activities, and time needed to complete the work in each zone. As stated in the "Traffic Standards" section of the City's Design and Construction Standards, no work will be completed in the public right-of-way during peak hours, unless permitted by the City Traffic Engineer. The project will keep at least one lane open in each direction of travel on Fulton Road at all times during the construction process. Work performed on the segment adjacent to Piner High School will be scheduled to occur during the summer months when school is in recess to minimize impacts to school operations, or outside of normal drop-off and pick-up hours.

TR-2: Maintain Emergency Access and Notify Emergency Responders
The City will require you to provide adequate emergency access to all properties along the corridor during the construction process. At locations where the access to a nearby property is temporarily blocked, you will be required to have ready the means necessary to accommodate access by emergency vehicles to such properties, such as plating over excavations. As construction progresses, emergency providers will be notified in advance of the timing, location, and duration of construction activities and the locations and durations of any temporary lane closures.

TR-3: Reduce Construction Impacts on Transit, Bicycle, and Pedestrian Facilities
The City will ensure that pedestrian and bicycle access and circulation will be maintained during project construction where safe to do so. Where it is unsafe to maintain pedestrian and bicycle facilities at their current location, temporary signage will be used to guide users to alternate temporary paths. Temporary signage and other traffic control measures necessary to inform users of construction conditions will be utilized. Any transit stops impacted by construction will be temporarily relocated (with proper signage) within the temporary construction zone, if necessary, to maintain the existing transit service throughout the segment.

12-1.04 Payment: All work and materials required to provide for temporary traffic control measures and facilitate temporary pedestrian access routes, including plans, will be considered included in the contract price paid for Temporary Traffic Control.

Flaggers will be considered as included in the contract price paid for Temporary Traffic Control.

12-2 TRAFFIC-HANDLING EQUIPMENT AND DEVICES

12-2.01 General: Prior to commencing construction which will affect existing vehicular and pedestrian traffic, you will submit for review by the Engineer, Traffic Control Plans on 11" x 17" sheets of paper which contains only information specifically related to work zone vehicular and pedestrian traffic control. Traffic Control Plans will be prepared, sealed, and signed by a Professional Engineer registered in the State of California. If you propose to use the current edition of the CA MUTCD published by Caltrans in lieu of a traffic control plan, in specific work operations, they will 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 will be submitted for review at least two calendar weeks prior to implementation.
Traffic Control Plans will contain a title block which contains your 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 will 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 will be in compliance with the requirements of ADA during and after work hours.
7. Identify message board locations. A minimum of 4 changeable message boards will be required. Location to be determined by Engineer.
8. Demonstrate how two-way traffic will be maintained.
9. Type K temporary railing plan showing the phases of Type K temporary railing placement as the excavation and paving in the widening areas advances.
    a. Show driveway access and pedestrian routing.

No work except for installation of project identification signs will be allowed to commence prior to approval of the Work Zone Traffic Control Plans. Exact locations of Project Identification signs and Advance Notice signs (7-1.03, “Public Convenience”) will be determined in the field by the Engineer.

12-3 TEMPORARY TRAFFIC CONTROL DEVICES

12-3.20A General: Type K temporary railing will be as specified in the Standard Specifications, these Special Provisions and be required at all widening locations where the existing adjacent edge to the excavated widening area will be greater than 0.17’. When placing Type K temporary railing, all areas will have 12” minimum separation from excavated edge to closest edge of Type K temporary railing.

Type K temporary railing will be placed as shown on the plans, as specified in the Standard Specifications or these special provisions or where ordered by the Engineer and will conform to the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Reflectors on Type K temporary railing will conform to the provisions in "Prequalified and Tested Signing and Delineation Materials" of the Standard Specifications and these special provisions.

Type K temporary railing will conform to the details shown in the Standard Plans.

12-4 MAINTAINING TRAFFIC

12-4.01A General:

1. The full width of the traveled way will 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 will be monitored frequently (four to five times per day) to verify their proper location. All traffic signal and other traffic control devices will be maintained at all times.
3. Conduct these operations so as to cause the minimum obstruction and inconvenience to traffic and to places of business, multiple dwelling units and residences adjacent to the work. 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, notify and receive permission from the affected businesses and residents. Attention is directed to Section 7-1.03, "Public Convenience". **Full access** will **be provided to all driveways during non-working hours.**
5. At locations where traffic is routed perpendicular to trench excavation, the excavation will be conducted in a manner to provide a surface reasonably satisfactory for traffic at all times. Substructure installation or construction will be conducted on only one-half the width of the roadway at a time, and that portion of the roadway being used by traffic will 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 will be brought to a smooth, even condition free from humps and depressions and made satisfactory for traffic.

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.

Submit a temporary bus stop plan along with the traffic controls plans for approval by the Engineer.

Existing pavement damaged by your operations and not shown to be replaced will be replaced at your expense, per City Standards and to the satisfaction of the Engineer.

12-4.02 TRAFFIC CONTROL SYSTEMS

12-4.02A(1) Summary: Attention is directed to Section 7-1.03, "Public Convenience", of these Special Provisions.

Exact locations of Project Identification signs and Advance Notice signs (7-1.03, "Public Convenience") will 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 in each direction at a time may be closed and no lanes will be closed at any other hours unless specifically approved by the Engineer. Flashing arrow boards will be required at the beginning of all lane closures and side street approaches to a closure. Four changeable message boards will be required with traffic control signing and delineation for the duration of the project and will be located, relocated and message changed as required by the Engineer.

Two-way traffic will be maintained at all times along Fulton, Piner and Guerneville Roads, unless specifically approved by the Engineer. Existing and regulatory signs are to be temporarily relocated, as directed by the Engineer, until new traffic signals are in place and operable for two-way traffic.

Maintain vehicle access to homes and other properties at all times while work is in progress.

You and your Licensed Traffic Engineer on the project are required to coordinate with City staff and consultants to notify the general public of upcoming traffic revisions and lane modifications through public outreach measures.

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

Keep the City of Santa Rosa Fire Department and Piner High School informed regarding the closure of any traveled way. At a minimum, call the Fire Department at (707) 543-3535 and the Communications Center at (707) 543-3666 **daily** to report any traveled way closure. This means immediately upon closure of that traveled way for that day and again immediately after removal of that closure. For closures over multiple days, the daily notification still applies. This requirement does not apply for single lane closures on multiple lane streets.

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

Existing traffic signals will remain in service at all times, with the exception of traffic signals being modified on the day of a switchover. Traffic signal switchovers will be required to take place at night between the hours of 8:30 p.m. to 7:00 a.m. Notification to the Signal Section Supervisor at 707-543-3888 will be required 7 working days prior to scheduling the switchover.

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

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

Notification will 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 will not bar use of cars within the block, as individual plans change and emergencies arise.
2. Type 1 barricades every 50 (to 100 feet per Table 1, Caltrans Standard Plan T9) 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 remove “No Parking” notices.

Maintain vehicle access to all homes and other properties along the work zone. During paving operations, you 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, you will 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 will 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.

Maintain traffic control as necessary and as directed by the Engineer for "cat-tracking" operations by you. Flaggers, barricades, signing, etc., will remain in place for protection of City personnel until such time as all temporary lane delineation is complete.

12-4.04 TEMPORARY PEDESTRIAN ACCESS ROUTES

12-4.04A(1) Summary: You are directed to Chapter 6D, Pedestrian and Worker Safety, of the CA MUTCD, the Standard Specifications and these Special Provisions.

- Reference Caltrans “Temporary Pedestrian Facilities Handbook.”
- http://www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf

All temporary facilities will comply with Section 16 of the 2018 Standard Specifications.

Pedestrians will 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 will the sidewalks on both sides of the road be closed at the same time. Curb Ramps will be installed in a sequence such that pedestrians will have access to one side of each street at all times.

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

Pedestrian routes will not be impacted for the purposes of any non-construction activities such as parking of vehicles or equipment, or stock piling of materials. Pedestrians will not be led into conflicts with work site vehicles, equipment or operations. When pedestrians are brought into the traveled way as part of a Pedestrian Traffic Control Plan, K-rail or approved equal will be used to provide protection from vehicular traffic.

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

Lighting for temporary pedestrian facilities must comply with Section 48 of the Standard Specifications for falsework lighting.

13 WATER POLLUTION CONTROL

13-1 GENERAL

13-1.01A Summary: Water Pollution Control will be performed in accordance with Section 13, Water Pollution Control of the Standard Specifications and these Special Provisions. In addition, construction activities will comply with:

The current California Water Quality Control Board, North Coast Region Order No. R1-2009-0050 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 will 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 these Special Provisions the CASQA Handbook BMP numbers are appended to the associated Standard Specification sections. If a conflict occurs the CASQA Handbook BMP's will govern.

13-1.01B Definitions:

Construction phase: The construction phase starts at the start of job site activities and ends at Contract acceptance.

13-2.04 Payment: Refer to Section 13-3.04 for Payment

13-3 STORM WATER POLLUTION PREVENTION PLAN

13-3.01 General: This project requires coverage under the State Water Resources Control Board Order No. 2009-0009-DWQ, (as amended by 2010-0014DWQ & 2012- 0006-DWQ), National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (General Permit).

The above referenced Orders can be found here:

https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Section 13-3 includes specifications for developing, implementing and maintaining a Storm Water Pollution Prevention Plan (SWPPP) required by this General Permit. This project has been determined to be a Risk Level 2 traditional construction project. A Notice of Intent for coverage under the General Permit will be prepared by you and reviewed and submitted by the City. You will be responsible to provide all required documents for upload to submit the Notice of Intent. The City will provide required owner signatures and all permit fees. It is your responsibility to develop and implement the SWPPP. Included in the SWPPP will be a project description, site map, erosion control plan, construction site monitoring program, reporting and inspection forms, contact list, and all other information necessary to comply with the

requirements of the General Permit. The work under this section also includes updating the SWPPP.

Information on storm water best management practices (BMPs), preparing storm water pollution prevention plans, forms, reports, and other documents can be found in **CASQA**'s *Storm Water Best Management Practice Handbook Portal: Construction (January 2015)*. A PDF copy of this handbook is available for viewing at the City Public Works Office, 69 Stony Circle and will be made available to the you.

The SWPPP will reference CASQA BMP fact sheets and follow the format suggested in Appendix B of the CASQA handbook. You may substitute another format if approved by the Engineer and it complies with all requirements of the General Permit. All discharges of storm water from the project must comply with the General Permit. A storm water annual report will be prepared and submitted by you. The annual report must cover the preceding period from July 1st to June 30th (or Notice of Termination). A Notice of Termination under the General Permit will be prepared by you and filed by the City. The City will provide required owner signatures for the Notice of Termination.

You will collect and submit all required data to SMARTS (online system), to comply with the Annual Report requirements of the General Permit and SMARTS. You will not start job site activities until:

1. The SWPPP is approved.
2. The waste discharge identification number (WDID) is issued.
3. Letter confirmation by RWQCB has been provided for the authorized General Construction Permit.

A current copy of the SWPPP, including any amendments, will be kept at the project site at all times. The SWPPP will be accessible to any entity at all times.

13-3.01A Summary: You will be responsible for obtaining the State Water Resources Control Board General NPDES Permit for the Discharge of Storm Water related to Construction Activities (Construction General Permit). Construction will not start until the permit is obtained. You will l prepare, submit and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Section 13-3, Storm Water Pollution Prevention Plan, of the Standard Specifications and all applicable Mitigation Measures, including:

HWQ-1: Seasonal Work Restrictions
Construction activities within Forestview Creek and Peterson Creek will be conducted during the dry season, when the creeks are completely or almost without standing water. Refer to A: Fees and Permits.

HWQ-2: Stormwater Control Measures during Construction
The City (“you / Contractor” on behalf of City) will obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. The City (“you / Contractor” on behalf of City) and/or its contractor will submit permit registration documents (notice of intent, risk assessment, site maps, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and certifications) to the State Water Resources Control Board. The SWPPP will address pollutant sources, non-storm water discharges, best management practices, and other requirements specified in the above-mentioned Order. The SWPPP will also include dust control practices to prevent wind erosion, sediment tracking, dust

generation by construction equipment, management of concrete slurry, asphalt, pavement cutting, and other street and road activities to avoid discharge to storm drains from such work. A Qualified Storm Water Pollution Prevention Plan Practitioner will oversee implementation of the Plan, including visual inspections, sampling and analysis, and ensuring overall compliance.

HWQ-3: Manage Drinking Water System Discharges
If construction dewatering is required, the City ("you / Contractor" on behalf of City) and its contractor will evaluate reasonable options for dewatering management that would avoid discharging to a local surface water or storm drain. The following management options will be considered:

Reuse the water on-site for dust control, compaction, or irrigation.

Retain the water on-site in a grassy or porous area to allow infiltration/evaporation.

Discharge (by permit) to a sanitary sewer. If discharging to the sanitary sewer, the City will comply with a one-time discharge permit or other type of approval requiring, as necessary, measures for characterizing the discharge and ensuring filtering methods and monitoring to verify that the discharge is compliant with the City's local wastewater discharge requirements.

If discharging to a local surface water or storm drain, the City will obtain coverage under Order No. R1-2009-0045, Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region. The City will submit permit registration documents to the North Coast Regional Water Quality Control Board, including development of a Best Management Practices/Pollution Prevention Plan to characterize the discharge and to identify specific measures to control the discharge, such as sediment controls to ensure that excessive sediment is not discharged, and flow controls to prevent erosion and flooding downstream of the discharge. The City will ensure that you oversee implementation of the Best Management Practices/Pollution Prevention Plan during construction dewatering activities, including visual inspections and ensuring overall compliance.

13-3.01B SWPPP Preparation and Implementation: The SWPPP will be written, amended and certified by a Qualified SWPPP Developer (QSD) as defined in the General Permit, Section VII.B.1.

You will provide a Qualified SWPPP Practitioner (QSP), as defined in the General Permit, Section VII.B.3, to ensure full compliance with the General Permit and implementation of all elements of the SWPPP, including all storm water inspections and visual observations, Rain Event Action Plans, sampling and analysis and record keeping. The QSP will ensure that all BMPs required by this SWPPP are implemented and maintained. The QSP will notify the QSD of needed revisions to the SWPPP to reflect current conditions and all proposed changes.

This work includes gathering and presenting, in an approved format, all information necessary to produce a SWPPP that complies with the General Permit. The SWPPP will be developed by a QSD and include, but not limited to: project description, site maps, erosion control plans, construction site monitoring program, contact information, monitoring and reporting forms, project specific BMP fact sheets, schedule, training documentation, designated QSD and QSP qualifications, SWPPP amendment log sheet and all other information necessary to comply with the General Permit and these Special Provisions. The SWPPP will be updated to reflect current project conditions, personnel, schedule, alterations to plans, BMP modifications or substitutions, relocation of staging and material stockpiling areas and any other changes that are not reflected in the SWPPP.

You are directed to A Fees and Permits for additional information.

13-3.01C Submittals: Within 20 days of Contract approval:

1. Submit 1 copy of your SWPPP for review. Allow 20 days for the City's review. The Engineer provides comments and specifies the date when the review stopped if revisions are required.
2. Change and resubmit a revised SWPPP within 5 days of receiving the Engineer's comments. The City's review resumes when a complete SWPPP has been resubmitted.
3. When the Engineer authorizes the SWPPP, upload an electronic copy to the State's **Storm Water Multiple Application and Report Tracking System** (SMARTS) and submit 2 printed copies of the authorized SWPPP to the City.
4. If the Engineer requests changes to the SWPPP based on the RWQCB's comments, amend and resubmit the SWPPP within 5 days.

13-3.01D Training: Employees must receive initial water pollution control training before starting work at the job site. For project managers, supervisory personnel, subcontractors, and employees involved in water pollution control work:

1. Provide storm water training in the following subjects:
   a. Water pollution control rules and regulations
   b. Implementation and maintenance for:
      i. Temporary soil stabilization
      ii. Temporary sediment control
      iii. Tracking control
      iv. Wind erosion control
      v. Material pollution prevention and control
      vi. Waste management
      vii. Non-storm water management
2. Conduct weekly training meetings covering:
   a. Deficiencies and corrective actions for water pollution control practices
   b. Water pollution control practices required for work activities during the week
   c. Spill prevention and control
   d. Material delivery, storage, usage, and disposal
   e. Waste management
   f. Non- storm water management procedures

Storm Water training will be documented in the SWPPP.

13-3.01E Construction Site Monitoring Program: The SWPPP includes a Construction Site Monitoring Program containing instructions and forms. Monitoring and inspections will take place during normal working hours.

BMP inspection will be performed by a QSP and documented on an approved form. A copy of the inspections will be kept in the SWPPP on site. An additional copy will be given to the City. Noted deficiencies will be brought to the yours and the Engineer's attention and corrective action taken within 2 working days or before any rain event.

Monitor the National Weather Service's forecast on a daily basis. For the National Weather Service's forecast, go to the Web site for the National Weather Service. Printed copies of the forecast will be kept in the SWPPP.

The QSP will prepare all Rain Event Action Plans (REAP) 48 hours in advance of predicted rain event with a 50% or greater probability. The REAP will be kept on site. Use the *Storm Water Site Inspection Report* form for documenting site inspections.

1. Inspections of BMPs identified in SWPPP:
    a. On a predetermined schedule of at least once a week;
    b. Before a forecasted storm event;
    c. After a qualifying rain event that produces site runoff;
    d. At 24-hour intervals during extended storm events;
2. Daily inspections of (if applicable):
    a. Storage areas for hazardous materials and waste
    b. Hazardous waste disposal and transporting activities
    c. Hazardous material delivery and storage activities
3. Inspections of:
    a. Vehicle and equipment cleaning facilities:
        i. Daily if vehicle and equipment cleaning occurs daily
        ii. Weekly if vehicle and equipment cleaning does not occur daily
    b. Vehicle and equipment maintenance and fueling areas:
        i. Daily if vehicle and equipment maintenance and fueling occur daily
4. Pre and post rain inspections:
    a. pre-rain event inspection within 48 hours of predicted qualifying storm to verify the site and the BMPs are ready for the predicted rain.
    b. post-rain event inspection within 48 hours after a qualifying storm to observe the discharge locations and the discharge of any stored or contained rainwater; determine if BMPs functioned as designed; and identify if any additional BMPs are required.

This work includes providing a QSP, performing weekly BMP inspections, documentation, coordinating with you and project inspector, providing QSD with SWPPP update information and all other work necessary to comply with the inspection requirements of the SWPPP.

Qualifying Rain Event Inspections, include both pre-rain and post-rain inspection, include providing a QSP, performing pre-rain inspections and post-rain inspections for qualified rain events as required in the SWPPP, documentation, coordinating with you and project inspector and all other work necessary to comply with the qualifying rain event inspection requirements of the SWPPP.

13-3.01F Sampling: The QSP will sample for pH and turbidity during each qualifying rain event at all locations where runoff from the project is discharged offsite. Samples must be representative of the runoff flow and characteristics of the site's discharges. All locations discharging runoff from the site must be sampled. Additional samples for nonvisible pollutants may be collected for lab analysis if required.

Three measurements will be taken at each discharge location for each working day of a qualified rain event. Measurements will be taken at the beginning of the work day or discharge, in the middle and one near the end of the discharge or work day. All measurements will be documented on sampling forms with a copy kept in the SWPPP and one given to the City. Discharge locations will be marked on the site map in the SWPPP.

Measurements will be made using portable field meters. Each meter will have been calibrated prior to use. A meter calibration log sheet will be kept in the SWPPP. Measurements will be made during normal working hours. This work includes collecting samples, measuring pH and turbidity,

documentation, maintaining and calibrating pH and turbidity meters, submitting data to SMARTS and all other work necessary to comply with the sampling requirements of the SWPPP and the General Permit.

13-3.01G Construction Updates: The SWPPP will be updated to reflect current project conditions, personnel, schedule, alterations to plans, BMP modifications or substitutions, relocation of staging and material stockpiling areas and any other changes that are not reflected in the SWPPP or on the plans. A printed copy of the authorized SWPPP will be at the job site whenever there is project related activity at the site.

You will:

1. Install appropriate BMP materials and devices as listed in the SWPPP, before performing work activities.
2. Install soil stabilization materials (BMPs) in all work areas that are inactive or before storm events.
3. Repair or replace water pollution control practices within 48 hours of discovering any damage, unless a longer period is authorized by the Engineer.
4. The City does not pay for the cleanup, repair, removal, disposal, or replacement of BMP devices due to improper installation or Contractor negligence.
5. You will have all BMPs in place prior to rain at the project site.

The QSP will report all non-compliance to the City.

13-3.01H Definitions:

Active Area: Area where soil-disturbing work activities have occurred at least once within 15 days.

Construction Phase: Includes (1) highway construction phase for building roads and structures, (2) plant establishment and maintenance phase for placing vegetation for final stabilization, and (3) suspension phase for suspension of work activities or winter shutdown. The construction phase continues from the start of work activities to Contract acceptance.

Inactive Area: Area where soil-disturbing work activities have not occurred within 15 days.

Normal Working Hours: For purposes of the Water Pollution Control, normal working hours will be from 7 a.m. to 4 p.m., Monday through Friday, unless otherwise approved by the Engineer.

Qualifying Rain Event: Storm that produces at least 0.5 inch of precipitation with a 48-hour or greater period between rain events.

Storm Event: Storm that produces or is forecasted to produce at least 0.10 inch of precipitation within a 24-hour period.

13-3.04 Payment: Compensation for conforming to the requirements of this Section will be done as follows:

1. Total of 50 percent of the item total upon authorization of the SWPPP
2. Total of 90 percent of the item total upon work completion
3. Total of 100 percent of the item total upon Contract acceptance.

The City will not pay for the preparation, collection, laboratory analysis, and reporting of stormwater samples for nonvisible pollutants if SWPPP practices are not implemented before precipitation or if you fail to correct a SWPPP practice before precipitation.

The City will not adjust the unit price for an increase or decrease in the quantity of Rain Event Action Plans, storm water sampling and analysis day, storm water annual report.

13-4 JOB SITE MANAGEMENT

13-4.03B: Spill Prevention and Control: You will also comply with CASQA Spill Prevention and Control (BMP WM-4). If a spill occurs at the construction site and you do not take immediate and adequate steps to contain and clean up the spill, especially if rain is threatening or if a discharge to a storm drain or creek could occur, the City will 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, will be deducted from any amounts owed to you hereunder.

In the event there are insufficient amounts owed to you hereunder to cover the foregoing costs and charges, the City will 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 you/ Contractor for violations of City Code Chapter 17-12, "Storm Water".

13-4.03C(3): Stockpile Management: You will also comply with CASQA Stockpile Management (BMP WM-3). Do not block storm water flows.

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

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

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

3-4.03D(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:
You will also comply with CASQA Water Conservation Practices (BMP NS-1 and NS-2).

13-4.03E(3): Vehicle and Equipment Cleaning:
You will also comply with CASQA Vehicle and Equipment Cleaning (BMP NS-8).

13-4.03E(4): Vehicle and Equipment Fueling and Maintenance:
You will also comply with CASQA Vehicle and Equipment Fueling (BMP NS-9), and CASQA Vehicle and Equipment Maintenance (BMP NS-10).

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

1. Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
2. Install BMPs at all susceptible storm drain inlets and manholes to prevent paving products and tack coat from entering
3. Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses
4. Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt
5. Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
6. Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled, or disposed of properly per Section 13-4.03D(5) of the Standard Specifications.
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 per Section 13-4.03D of the Standard Specifications.
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
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 per Section 13-4.03C(1) of the Standard Specifications.
13. Include water pollution control measures to address the handling of the grinding pavement residue per Section 42 Groove and Grind Pavement within the Stormwater Pollution Prevention Plan. At a minimum, the roadway will be swept at the end of each day of grinding operations.

13-4.03F: Sweeping: You will also comply with CASQA Street Sweeping and Vacuuming (BMP SE-7).

13-4.04 Payment: Job Site Management will be included in the contract price for the various items of work.

13-6 TEMPORARY SEDIMENT CONTROL

Note: Temporary Sediment Control items will conform to the latest version of the Caltrans Storm Water Quality Handbook.

13-6.03C Temporary Drainage Inlet Protection: You will comply with Temporary Drainage Inlet Protection (BMP SC-10) for **Catch Basin Protection** and **Storm Drain Inlet Protection**.

13-7 TEMPORARY TRACKING CONTROL

13-7.01A: General: You will comply with Stabilized Construction Entrance and Exit (BMP TC-1), Entrance Outlet Tire Wash (BMP TC-3). Stabilized Construction Entrance and Exit will be installed at locations where your equipment routinely transitions between unpaved surfaces (Forestview

Creek area, adjacent staging locations, etc.) and paved surfaces (Fulton Road, adjacent streets, etc.).

13-7.01C Construction: You will comply with CASQA Stabilized Construction Site Entrance/Exit (BMP TC-1).

13-7.03D Payment: Installing and maintaining a temporary construction entrance or roadway will be included in the contract price for the various items of work.

13-10 TEMPORARY LINEAR SEDIMENT BARRIER

Temporary Linear Sediment Barrier items will conform to the latest version of the Caltrans Storm Water Quality Handbook.

13-10.01A Summary: You will comply with **Temporary Silt Fence** (BMP SC-1) and **Fiber Rolls** (BMP SC-5) for temporary linear sediment barriers.

14 ENVIRONMENTAL STEWARDSHIP

14-10 SOLID WASTE DISPOSAL AND RECYCLING

14-10.01 General: Environmental Stewardship will be performed in accordance with the applicable sections of these Special Provisions, the Standard Specifications, Project Mitigation Measures contained herein and identified in the ***Mitigation and Monitoring Program - Fulton Road Widening Improvement Project*** in these Specials Provisions and as directed by the Engineer.

All other excess materials from the Project will become your property and will be disposed of at your expense.

14-10.02 Solid Waste Disposal and Recycling Report: You will dispose of all portland cement concrete and asphalt concrete, generated from removal or demolition activities on the project, at a recycler for these materials. All other excess materials from the project will become your property and will be disposed of by you, at your expense. 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.

You will provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to any material recyclers.

14-11 HAZARDOUS WASTE AND CONTAMINATION

14-11 GENERAL

14-11.01 General: A portion of the proposed project is located adjacent to or within an area that has potentially hazardous soils. Refer to Section 14 Environmental Stewardship, the Standard Specifications and these Special Provisions for additional requirements.

Data indicates an area of the site, adjacent to Guerneville Road intersection – Project Beginning to STA 15+00, may be impacted with trace concentrations of petroleum hydrocarbons and/or metals. Documents and additional information is available on the State Water Resources Control Board online GeoTracker database. Soil removed from this area of Fulton Road should be acceptable at a Class 3 landfill.

Excavated materials from this area will not be disposed of on the work site.

Soils will be disposed of at a licensed landfill facility permitted to accept these materials. Disposal will include transport, gate and treatment fees and taxes. You are the owner of the excavated soils and responsible for final characterizing the soils, selecting the disposal sites and obtaining landfill acceptance. You are responsible for informing the Engineer of the contact person at the disposal site for concurrence and approval. Loading and transporting of the soils to the landfill is your responsibility as are any permits, and acceptance requirements. Excavated soils will not be disposed at any location or facility that is not licensed to accept these materials.

Prior to disposal of any excavated material, you will submit to the Engineer written authorization for such disposal of material and entry permission signed by the owners of the disposal site. You will also comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

There is no guarantee expressed or implied that the conditions indicated are representative of those existing throughout the work site or that unforeseen developments may not occur. If at the time of excavation, soil conditions that are different than stated in the report, the Engineer will be notified immediately.

You will maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and will notify the City immediately upon discovery. Conditions indicative of contamination may be either visual (staining in soil, sheen on water surface) or olfactory (petroleum hydrocarbon odors.)

Upon the discovery of suspected hazardous materials, You will immediately contact the Engineer and City representatives. You are to provide 40-hour OSHA-HAZWOPER certified workers in the suspected hazardous materials area. You will also provide a field Site Safety Officer that is also an 8-hour OSHA-HAZWOPER Supervisor trained to directly oversee the contaminated materials removal and handling operation. All workers in this circumstance must have their initial and annual renewal refresher training, medical clearance and personal protection equipment in accordance with 8CCR Section 5192. You will adhere to the Section 14-11.03 for the handling of *Potentially Contaminated Soil and Groundwater*.

You will perform all operations, testing, monitoring, transport and disposal in conformance with applicable regulations and Project Mitigation Measures.

Based on communications with the Regional Water Quality Control Board, and analytical tests of project soils, this project runs adjacent to or within an area that has contained subsurface petroleum hydrocarbon contamination.

In general, you will maintain awareness of potential signs of hazardous materials soil and groundwater throughout the project limits and will notify the City immediately upon discovery of any potential soil or groundwater contamination.

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

14-11.07C Transport and Disposal of Department-Generated Hazardous Waste: Based on information from site monitoring, the highest groundwater elevation identified was 3.1 feet below surface at the north west corner of Fulton and Guerneville Road. Soil from excavations below this elevation on this project from beginning of Project to Station 15+00 will be considered contaminated and will be transported to and disposed of at an approved landfill for petroleum hydrocarbon contaminants.

Project Mitigation Measure(s) include but are not limited to:

Mitigation Measure HAZ-1: Handling and Disposal of Hazardous Wastes

You will prepare and implement a Soil and Groundwater Management Plan for excavation and dewatering activities in the vicinity of the Fulton Road/Guerneville Road intersection (between approximately STA 12+00 (“Begin Project”) and 15+00 on the project plans). Elements of the Soil and Groundwater Management Plan will include, but would not necessarily be limited to, the following:

- Measures to address hazardous materials and other worker health and safety issues during construction, including the specific level of protection required for construction workers. This will include preparation of a site-specific health and safety plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal-OSHA regulations (8 CCR Title 8, Section 5192) to address worker health and safety issues during construction.
- Monitoring of excavation activities for soil and groundwater contamination. Monitoring will include, at minimum, visual and organic vapor monitoring by personnel with appropriate hazardous materials training, including 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training. If visual or organic vapor monitoring indicates signs of suspected contaminated soil, then soil and groundwater samples will be collected and analysed to characterize soil and water quality.
- Groundwater brought to the surface as a result of construction dewatering will be handled in a manner appropriate to construction-related permits for dewatering. If contamination is suspected or noted during the construction phase, then the groundwater will be containerized and analysed for contamination by a laboratory, certified by the California Environmental Protection Agency (CalEPA) Environmental Laboratory Accreditation Program (ELAP), using United States Environmental Protection Agency (USEPA)-approved analytical methods. If

contaminated groundwater is encountered, precautions will be taken to assure that the installation of piping or other construction activities do not further disperse contamination.

- If soil contamination is discovered, segregate and stockpile contaminated soil at an approved site, you will have the soil tested by a California-certified laboratory, and coordinate a disposal facility acceptance for disposal of soil determined to be hazardous at a facility licensed to accept such soil.
- All potentially contaminated materials encountered during project construction activities will be evaluated in the context of applicable local, state and federal regulations and/or guidelines governing hazardous waste. All materials deemed to be hazardous will be remediated and/or disposed of following applicable regulatory agency regulations and/or guidelines. Disposal sites for both remediated and non-remediated soils will be identified prior to beginning construction. Management of these sites will be documented in a Material Management Plan acceptable to applicable agencies. All evaluation, remediation, treatment, and/or disposal of hazardous waste willl be supervised and documented by qualified hazardous waste personnel.

You will prepare and furnish completed hazardous waste manifests ready for the Engineer's signature.

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

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

Pre-construction soil sampling as described in Section *14-11.06* of the Standard Specifications indicated the presence of petroleum hydrocarbons such as motor oil and diesel, heavy metals, and other contaminants.

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

Within 5 business days of transporting Department-generated hazardous waste, you will submit documentation of proper disposal from the receiving landfill. You will be aware of disposal limitations at the landfills based on weather, time of year, etc.

14-11.30 SOIL AND GROUNDWATER DISPOSAL

14-11.30 Soil: All non-hazardous soil originating from the Project is the property of you. If suspected soil contamination is discovered, you **will** maintain separate stockpiles for potentially hazardous soil such that potentially hazardous soil is not comingled with non-hazardous soil at the location identified in your Soil and Groundwater Management Plan.

You will prepare a 10-mil, polyethylene plastic sheeting lined containment area for stockpiling and covering of potentially hazardous soils. Overlap the plastic sheeting a minimum of two feet to prevent run off underneath the plastic sheeting.

You will hire a qualified professional to sample soil and a California-certified laboratory to test the potentially contaminated soil in accordance with sampling requirements of the most cost-effective Class III Non-hazardous landfill or similar disposal facility. Note: Class III landfills generally only accepts non-hazardous materials. In general, for gasoline and diesel contaminated soils, this includes the collection of one 4-point composite for every 100 cubic yards of excavated contaminated soil, and analysis for TPH-gas and TPH-diesel by EPA 8015, for volatile organic compounds by EPA 8260 and CAM 17 metals, but can vary depending on the disposal facility requirements. Complete the analyses as required by the disposal facilities.

Should the laboratory testing confirm the presence of contaminated soil, submit test results and any additional reporting requirements to the appropriate disposal facility for their approval at least seven (7) working days prior to plan disposal. Upon review of the test results, the disposal facility will determine if the contaminated soil may be disposed of at the facility.

If the test results exceed the acceptance limits of a Class III disposal facility, you will submit test results and any additional reporting requirements to other cost effective disposal facilities. Upon review of the test results, the disposal facility will determine if the contaminated soil may be disposed at the facility or if additional testing is required.

If additional testing is necessary, you will hire a qualified professional to sample soil and a California-certified laboratory to test the contaminated soil in accordance with the additional sampling requirements.

Hazardous wastes will be removed from the site within 90 days from the date of generation. The date of generation is the day that a waste is first placed in a container or tank.

You will label waste containers in accordance with 49 CFR 172, 173, and 178.

Hazardous waste transporters will be licensed in accordance with 49 CFR 171-179. You will arrange the hauling and disposal of the contaminated soil at the accepted disposal facility, licensed to accept such soil under paper manifest.

You will submit copies of all manifests signed by the disposal facility to the City.

14-11.31 Groundwater: In the area of potential contamination near the intersection of Guerneville Road and Fulton Road as noted above, groundwater may be encountered during the course of excavation. If groundwater is encountered, you will immediately notify the City and Engineer representatives. You will **remove and contain all water** that accumulates in the excavation during the progress of work until the road, trenches, pipes or other structures are installed and until backfilling has progressed to a sufficient height to anchor the work against possible flotation or leakage. You will have a minimum of two (2) working pumps available for immediate use at all times when groundwater is encountered. The amount and size of pumps onsite will be adequate to keep ahead of demand, with adequate backup as well.

You will be responsible for having a 21,000 gallon nominal capacity, ‘closed top’ type mobile storage tank(s) available if groundwater is encountered and ensure it is secure from public access. You will be responsible for furnishing and removing the groundwater storage tank(s) and pumping to and from the tank(s). The storage tank(s) will be filled to the manufacturers

recommended maximum water surface level prior to filling any additional tanks that may be required. Any unused tanks brought to project site will be at your expense. You will provide all necessary testing of groundwater.

Groundwater will be collected, stored and tested for Volatile Organics by EPA 8260, TPH-gas and TPH diesel by EPA Method 8015M and other contaminants prior to any discharge to the sanitary sewer. You are responsible to apply for and obtain all necessary permits. Once water in any given tank has been sampled, no further un-characterized water will be pumped into the tank. You will furnish a sufficient amount of tank(s) on site at any given time to facilitate groundwater storage for continuous excavation operations prior to discharge to the sanitary sewer.

Upon review of the test results and if approved to do so by the City's Environmental Compliance Section, the stored water may be discharged directly to the sanitary sewer system at an approved location and flow rate under the conditions set forth in the One-Time Discharge Permit issued by the City's Environmental Compliance Section. Payment of the permit fee and any other fees for discharge into the sewer system will be paid for by the City. A copy of the Authorization to Discharge is included herein. The City will pay for any additional costs of treatment or non-sewer disposal of groundwater should it be required.

Prior to the start of construction, you will submit a plan depicting the proposed location and specific traffic control measures for tank(s). Tank(s) will not impede into any travel lanes and will be restricted to no more than a period of 72 consecutive hours at the same location.

Should it be determined by the City that groundwater may be discharged directly to the sanitary sewer system; the discharge will be monitored by the City to verify the water quality and chemical concentration meet the permitted discharge requirements. Periodic samples will be analyzed by the City's Environmental Compliance Section, to confirm the acceptability of the discharge. **If any odor, sheen or other visual discrepancy is noted during excavation or discharge, stop discharging directly to the sewer and immediately notify the Engineer.** Pumping may only continue if the discharge is re-routed to a storage tank(s) for storage until the water can be characterized. If the trench is for a water line, You will maintain an "Air Gap" from the discharge conduit to the receiving sanitary sewer structure with a minimum vertical distance of twice the diameter of the discharge conduit. Further, all water will be disposed of in a manner as to cause no injury to public or private property or be a menace to public health. Sediment will be removed from any water to be disposed of prior to discharge.

You will be responsible for constructing, operating and maintaining all necessary features to complete the work including furnishing, installing and maintaining all pumping filtration equipment and other equipment required to dewater as well as properly disposing of or storing all pumped water, as may be encountered during performance of the work. A Dewatering Plan for each occurrence will be approved by the Engineer, prior to implementation. When dewatering operations are no longer needed, you will remove all dewatering equipment from the job site.

14-11.32 Treatment of Groundwater Exceeding Sanitary Sewer Contaminant Limits: Any contained groundwater or construction related water not meeting contaminant level allowable limits will be treated on site to meet local limits prior to being discharged to the sewer. You will provide mobile treatment equipment and ensure it is safe from public access. The treatment equipment will have the capability of removing all contaminants to levels accepted and set forth by the City of Santa Rosa's Treatment Plant. You will be responsible for furnishing and removing all treatment equipment including but not limited to media filter(s), bag and cartridge filter(s), activated virgin carbon, carbon vessel(s) and sediment filtration tank(s). You will remove the groundwater from the trench using pump(s) then storing the water in 21,000 gallon liquid storage

tank(s). You will store potential contaminated groundwater in the tank(s) until the water can be characterized. All potential contaminated groundwater will be stored and characterized prior to disposal. Once approved by the City's Environmental Compliance Section, and once it meets with their sediment removal and contaminant level allowable limits, you will pump water from the tank(s) and discharge directly to the sanitary sewer system at an approved location and flow rate. The discharge water must be measured by a flow meter with totalizer to determine the discharge flow rate and volume. Water may be discharged to the sanitary sewer under the conditions set forth in the discharge permit issued by the City's Environmental Compliance Section. You will provide all necessary testing for contaminated groundwater.

The amount of liquid handling equipment and required duration may vary.

All treated groundwater that will be discharged to the sanitary sewer system will be done during the dry months of the year which will be April 1st through October 1st. All items detailed per the One-Time Waste Discharge Permit, #SR-1x09431, attached, previously obtained from the City of Santa Rosa by the City of Santa Rosa effective on 8-23-2021, will be complied with.

14-11.33 Payment: Full compensation for disposal of all excavated material and trench water, including, but not limited to, transportation costs, tipping and soil disposal fees, and providing all necessary equipment and labor (including back-up pumping equipment) will be considered as included in the contract prices paid for various contract items of work and no additional compensation will be made therefor. The City will pay discharge fees for the necessary disposal of trench water.

Mobile Storage Tank will be paid for at the contract price per **each** tank monthly, for storage and pumping of ground water to and from a storage tank, which will include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in storage, removing, and cleaning of 21,000 gallon tank(s); required traffic control measures specific to tank; coordination with City for testing, disposal of groundwater, and compliance with the discharge permit and returning area used for storage of tank to pre-construction condition or better, as determined by the Engineer, and no additional allowance will be made therefor. Tanks may be required for trenching and utility installation near the intersection of Fulton Road and Guerneville Road, Forestview Creek, and Peterson Creek. You will be responsible for confirming required locations for compliant groundwater disposal. Dormant tanks that remain on site will not be eligible for compensation. This item may be eliminated in its entirety based on field conditions by the City, and no adjustment in the contract bid price will be made therefor. The provisions in Section 4-1.05 of the Standard Specifications will not apply. No additional compensation will be made therefor except as stated in the payment item for "Storage and Disposal of Groundwater Exceeding Sanitary Sewer Contaminant Limits".

Contaminated Groundwater Treatment will be paid for on a **Force Account** basis **(FA),** by contract change order, and no additional compensation will be allowed therefor.

15 EXISTING FACILITIES

15-1.01 GENERAL: Existing facilities disturbed by construction will conform to the applicable provisions of the Section. All existing active utilities found to reside in excavated areas will be supported in place with service maintained during construction. You will be responsible for any damage caused by your operations and any needed repairs will be completed to the Engineer's satisfaction.

This will include, but not be limited to, the removal and/or relocation of all structures, surface utilities, fences, traffic control facilities, street light facilities, asphalt concrete pavement, concrete pavement, bollards, street signs and posts, bus stop benches and shelters, abandoned in place footings and any other miscellaneous improvements or facilities not mentioned in this Section, located in the areas to be cleared and grubbed and areas for construction.

You will be responsible for adjusting all existing City utility access covers to grade and coordinating the adjustment to grade of all non-City utility access covers within the limits of the construction area; refer to Section 100-1 and 100-2.

Irrigation and private electrical facilities may be encountered during demolition and construction. You will exercise care and repair any damage done by his operations.

Landscaping and other surfaces will be restored to original condition or as shown on the plans.

Conversion of the overhead utilities to underground relocation is underway. The installation of Comcast and AT&T facilities and the removal of joint poles are anticipated to be completed October 1st, 2022. You will coordinate your work activities with Comcast and AT&T to ensure conflicts do not arise.

NOTE: In addition to water, sewer, storm drain, streetlight, irrigation and other municipal existing facilities, there is an existing Rule 20A joint trench (PG&E, AT&T, Comcast) and a separate active gas main (PG&E) within Fulton Road.

Existing unforeseen items or conditions may occur or be encountered during demolition and construction. Refer to Section 15-2 Utility Clearances of these Special Provisions.

Any equipment damaged in the course of normal removal and salvage operations shall become your property.

A Geotechnical Engineering Study is available for review by listed plan holders upon email request to Chris Catbagan at ccatbagan@srcity.org. Geotechnical Engineering Study is for reference only and shall not be considered part of the contract.

15-1.01A Payment: All work required for coordination with PG&E, AT&T, Comcast, and any other utility shall be included in various items of work. This includes identifying and removing conflicting portions of the abandon gas lines.

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

Existing storm drains found to reside in excavated areas shall be supported, removed, or replaced at your option and at no additional cost to the City. You shall be responsible for maintaining the existing line and grade of the storm drains. If you elect to remove and replace, it shall be done per applicable City Standards and these Special Provisions and at no additional cost to the City.

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

15-1.03B Removing Concrete: Concrete removal shall conform to applicable provisions of Section 15-3 of the Standard Specifications and these Special Provisions.

All concrete to be removed shall be disposed by you away from the site of the work. Burying of broken concrete within the limits of the project is prohibited.

All concrete which is to be removed from sidewalk, curb, gutter, driveway areas, raised median, old PCC highway and existing City monuments shall be removed to the nearest score mark construction joint or sawcut 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.

All removed concrete will become your property and will be immediately off-hauled. None of the removed concrete will be dumped or stockpiled on the work site. You will 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.

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

Where new concrete is to join existing concrete, remove enough concrete to allow splicing of new reinforcement. Protect existing reinforcement to be incorporated into the new work from damage.

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

Landscaping and other surfaces or structures will be restored to original condition at no additional cost to the City.

15-1.03D Traffic Stripes and Pavement Markings: All traffic stripes, pavement markings or any other traffic markings will be removed by you to the satisfaction of the Engineer and in accordance with Sections 84 of the Standards, and the Plans.

Existing thermoplastic pavement markings will be removed to the fullest extent possible from the pavement by grinding. Sand or other material deposited on or adjacent to the pavement as a result of removing pavement markings will be removed as the work progresses. Existing pavement markings will not be removed more than three days prior to and limited to the immediate area of grinding/paving of the street. Care will be taken not to remove any more material than is necessary.

You will provide, install, and maintain temporary reflective pavement marking on the same day as the permanent markings are removed or as directed by the Engineer and maintain these until final markings are in place. Any temporary striping on ground surfaces will be one coat of paint with reflective glass beads. All ground surfaces will be clean and dust removed prior to applying paint. All temporary markings will be removed immediately before final overlay. Attention is directed to Section 84-2, “Traffic Stripes and Pavement Markings” of these Special Provisions.

15-1.03E Pavement Markers: All raised pavement markers and interim dividers will be removed by you to the satisfaction of the Engineer and in accordance with Sections 81 of the 2018 Standard Specifications, City Standards, and the Plans.

Existing pavement markers will be removed prior to the overlay of the existing road surface. You will be responsible for their proper disposal away from the site of work. Existing pavement markers may be removed not more than three days prior to the overlay of the street.

You will provide, install, and maintain temporary reflective pavement markers on the same day as the existing permanent markers are removed or as directed by the Engineer and maintain this delineation until final pavement markers are in place. Temporary markers on non-ground surfaces will be plastic adhesive reflective delineators. All temporary markers will be maintained by you until placement of permanent pavement markers.

Holes left in the pavement due to the removal of raised pavement markers in areas that will not receive an AC overlay will be filled with enough marker adhesive to replace any asphalt which comes off with the removal of the pavement markers, leaving a level driving surface.

Attention is directed to Section 81-3, "Pavement Markers” of these Special Provisions.

15-1.03F Remove Asphalt Concrete Pavement: Removing asphalt concrete pavement and AC dikes will conform to the provisions of the Standard Specifications and these Special Provisions. Existing asphalt concrete pavement will be saw-cut to a line where new asphalt concrete or concrete is to join existing asphalt concrete, as shown on the plans.

15-1.03G Asbestos Cement Pipe: You are advised that asbestos cement pipe (ACP) will likely be encountered on the project and must be cut, handled, and disposed of according to Contractor’s State Licensing Law and all other applicable laws and regulations.

15-1.03I City Facility Boxes and Lids: Reset existing City facility boxes and lids to grade. The City will furnish at no cost to you new material to replace existing boxes and lids that do not comply with current City Standards or damaged prior to your operations.

15-1.03J Adjust Frames, Covers, Grates, and Manholes: Existing manhole frames and covers, drop inlets, catch basins, fire hydrant assemblies, valve boxes, mainline cleanouts and monuments adjusted to grade will conform to City Standards.

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

Under this item, you will lower utility structure frames and covers that are located in any pavement grinding, edge grinding, and transverse grinding, to below any pavement grinding, deep pavement grinding, edge grinding, conform grinding or transverse grinding grade prior to grinding operations. The resulting excavation will be capped with a temporary cover and filled with paving material that will result in a smooth, unyielding surface, and will be maintained until final overlay

application. You will coordinate the lowering of PG&E, AT&T, Comcast, Monitoring Wells and other utility structures in a timely manner with outside agencies, so as to not impact the progression and completion of work.

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

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

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

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

All silt and debris will be removed from finished structures. This will include all existing silt and debris plus material caused by your operation.

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

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

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

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

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

Existing Monuments adjusted will conform to City Standards 280 to 284 and 78-2 Survey Monuments, of these Special Provisions.

15-1.03K Tree Root Pruning: All tree roots two inches and greater which are encountered during excavation will be pruned by hand. The root will be cut cleanly with a saw to avoid splits. When digging within the drip line of trees, you will exercise extreme caution to avoid pulling on roots with excavation equipment. Hand dig around all roots greater than one inch in diameter. You will 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, you will redirect crews to other contract work after safeguarding the area.

15-1.03L Remove Abandoned Gas Main: Abandoned gas lines of various sizes and materials in conflict with the proposed improvements will be removed. These abandoned gas lines are shown in the plans. Prior to removal of these facilities, you will positively confirm in the field the locations of the segments to be removed, confirm abandonment of the main(s) with PG&E, and coordinate for PG&E inspection of the required removals by you. Care will be taken to protect existing facilities that are to remain.

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

In general, work includes 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.

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

You will investigate, confirm and/or determine the exact locations of existing utilities, and verify clearances between existing and proposed utilities (including LID trenching) monument at crossings and/or known potential conflicts. You will determine elevations and alignments of existing utilities at connection points.

You will 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.

You will 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 will not be considered by the City. You will not proceed with any work that is in conflict until direction is provided by the Engineer and will 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 will be provided to the Engineer on a set of Plans when the investigative effort is complete.

15-7.01 Payment: Utility Clearances will be paid for at the contract **lump sum** price, which price will not exceed 0.5% of the contract amount and will include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in verifying utility clearances, including but not limited to: potholing to verify potential conflicts, grades and alignments of existing facilities to be connected to; excavation; backfill; notification; and coordination and redirection of crews to other contract work if required, as specified herein, and no additional allowance will be made therefor.

17-2 CLEARING AND GRUBBING

17-2 CLEARING AND GRUBBING

17-2.01 General: Clearing and grubbing will conform with the requirements of Section 17-2 of the 2018 Standard Specifications and these Special Provisions.

Clearing, grubbing, and access will be confined to the limits shown on the plans and will not exceed the minimum necessary to complete operations.

You will 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 will be replaced in kind by you before completion of the project.

All unsuitable material will be disposed of away from the site by you. You will make all necessary arrangements for disposal of material.

All existing street designation and traffic control signs and posts within the aforementioned limits of work will be carefully removed, cleaned of excess earth and delivered to the City Corporation Yard at 55 Stony Point Road except those required for traffic control as determined by the Engineer.

All existing surface facilities (e.g. mailboxes, pull boxes, vaults, water services, hydrants, storm drain structures, sewer structures, street light and traffic signal) to remain will be protected.

All existing private property landscaping, irrigation, signage, lighting, drainage and pavement surfaces outside of the right-of-way will be maintained and protected at all times. Any damage that occurs will require immediate repair at your expense.

17-2.03 Construction: The area to be cleared and grubbed will be the area within the right-of-way shown on the plans, unless otherwise specified in the Special Provisions.

All stumps, large roots and other objectionable material will be removed to a depth of three feet below finished grade in the area of construction. The resulting spaces will be backfilled with material suitable for the planned use. Such suitable material will be placed and compacted in layers as specified in Section 19-6 "Embankment Construction" of the Standard Specifications.

[Version: 09/10/19 CDA STD2018]

19 EARTHWORK

19-1 GENERAL

19-1.01A Summary:
Roadway excavation will include all excavation, embankment construction, disposal of excess material, and other work as specified herein.

Roadway excavation will consist of excavation of the roadway prism within the limits for road reconstruction, as shown on the Project Plans, and disposal of excess material, as specified herein. Any additional excavation in terms of horizontal and/or vertical extent performed by you beyond the limits of the road reconstruction shown on the Project Plans will be filled with aggregate base of the various types at your expense in accordance with Section 39 of these Special Provisions.

Contaminated site: Special Provisions for handling and disposal of contaminated soil and water are included in Section 14-11, Hazardous Waste and Contamination, and Section 13-8, Temporary Active Treatment System, respectively, of the Standard Specifications, in addition to these Special Provisions.

19-1.03B Unsuitable Material:
Remove and dispose of all unsuitable material from the site at your expense.

You will remove and relocate or dispose of any boulders that are encountered that conflict with the improvements in order to proceed with specified work.

19-1.03B(1) Subgrade Stabilization/ Digout : Any area of the subgrade determined by the Engineer to be unsuitable will be stabilized. Processing of unsuitable subgrade material is not allowed. The areas to be stabilized will be marked in the field by the Engineer after roadway excavation of the area is complete. Use of a pavement grinder will be considered an acceptable method of excavation of areas requiring subgrade stabilization.

For areas of unsuitable subgrade beneath proposed RCC paving, excavate 0.5' & replace with Class 2 AB compacted to 95%. No additional compensation will be made for excavation and stabilization beyond the limits of the areas marked by the Engineer or for excavation and stabilization of locations other than those marked by the Engineer. Any excavation for subgrade stabilization done by you to accommodate equipment width beyond the limits of the areas marked by the Engineer will be at your expense.

Included in the Subgrade Stabilization/ Digout work a test hole to verify that subgrade conditions are sufficiently dry to proceed with subgrade stabilization will be required.

HMA areas: The cost for the asphalt concrete base will be included with the contract unit price for subgrade stabilization.

HMA Stabilization/Digout: For areas of unsuitable subgrade beneath proposed HMA paving, excavate 0.5' & replace with HMA compacted to 93%. No additional compensation will be made for excavation and stabilization beyond the limits of the areas marked by the Engineer in the field or for excavation and stabilization of locations other than those marked by the Engineer. Any excavation for subgrade stabilization done by you to accommodate equipment width beyond the limits of the areas marked by the Engineer will be at your expense.

The estimated quantity for subgrade stabilization/dig-out is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer, and no adjustment in the contract bid price or other contract items will be made therefor.

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

19-2 ROADWAY EXCAVATION

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

For roadway reconstruction, Roadway Excavation will be performed with a pavement grinder. No other construction equipment, including rubber-tired equipment, will be allowed on the subgrade. Striping and pavement marking removal is included in roadway excavation except as noted in Section 15.

Roadway excavation and paving will be completed for "half" the street width before beginning excavation of the remaining "half" street width.

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

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

19-2.03B Surplus Material: Excess materials from the excavation operations will become your property and will be disposed of at no additional cost to the City and will be immediately removed from the jobsite. Dumping and/or stockpiling material onsite will not be allowed.

Prior to disposal of any excavated material, you will submit to the Engineer written authorization for such disposal of material and entry permission signed by the owners of the disposal site. You will also comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required. You will dispose of all removed concrete and AC at a recycler.

You will furnish a surplus material handling and disposal plan which will include the following:

1. Disposal site for spoils
2. Type of trucks and equipment to be used
3. Haul routes

19-2.04 Payment: **Roadway Excavation** will be a final pay quantity (F) paid for at the contract price, for all work as specified herein.

Work included in roadway excavation will include removal of existing bituminous pavement, base and subgrade materials, excavation and disposal as required of materials for foundations and structures and grading and embankments as shown on the project plans to establish the lines

and grades shown on the Plans for the construction of the project. Payment for Earthwork will conform to Section 9 of the Standard Specifications.

Embankment material will be Class 4 Aggregate Subbase per Section 25 of the Standard Specifications. Payment for Class 4 Aggregate Subbase will be per the contract item in the bid schedule.

19-5 COMPACTION

19-5.03B Relative Compaction: Relative compaction of not less than 95 percent will be obtained for a minimum depth of 0.5-foot below the grading plane for the full width between the outer edges of the shoulders, and 2.5' below the finished grade for the width of the travel way plus an additional 3' on each side, whether in excavation or embankment.

Relative compaction of not less than 95 percent will be obtained for embankment under retaining wall footings without pile foundations within the limits established by inclined planes sloping 1.5:1 out and down from lines one foot outside the bottom edges of the footing.

19-10 SUBGRADE ENHANCEMENT GEOSYNTHETIC

19-10.02 Materials: Subgrade enhancement geotextile (aka soil stabilization fabric) will be installed per manufacturer's recommendations and will meet or exceed the following specifications:

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

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

Prior to placement of soil stabilization fabric, you will remove all loose dirt left from excavation operations.

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

[Version: 04/16/19 RY STD2018]

20 LANDSCAPE

20-1.03C(3) Weed Control: You will control weeds by using Organic Review Institute(OMRI)-approved products, hand-pulling, or sheet mulching. No Synthetic or Glyphosate will be used.

20-1.03C(4)- Disposal of Removed Groundcover, Weeds and Mowed Material:
You will dispose of hand pulled weeds the same day they are pulled.

20-1.03D Cultivation: Cultivation must be by mechanical methods and performed until the soil is in a loose condition to a minimum depth of 6 inches. Soil clods will not be larger than 2 inches in maximum dimension after cultivation.

The areas to be cultivated will extend 12 inches beyond the outer limit of each planting area requiring cultivation.

After initial cultivation, you will place soil amendment and fertilizer at specified rates. Cultivate to thoroughly mix native soil and amendments. Do not drive on cultivated areas after cultivation.

Planting areas that have been cultivated and become compacted must be recultivated.
Rocks and debris encountered during soil preparation in planting areas must be brought to the ground surface.

Remove rocks and debris as required to complete the work, or as ordered by the Engineer.

20-1.04B Planting Materials:

A. Plants
   1. Nomenclature: See list of plant materials on Landscape Planting plans.
   2. Conditions: Plant will 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 will have healthy, normal root systems, well filling their containers, but not to the point of being root bound. Tree trunks will be sturdy and well hardened off. Plants will not be pruned prior to delivery except as authorized by the Landscape Architect. In no case will trees be topped or pruned before delivery. Plants will be grown in nurseries which have been inspected by the State Department of Agriculture and have complied with its regulations.
   3. Minimum Tree Sizes: In addition to the preceding specifications, all trees will conform to the following minimum specifications for height and caliper as identified in the contract documents:

Species	Size	Min. Ht. Measured from soil level in can	Min. Caliper Measured at a point four inches above soil level in can
All	15 gal	6’	1”
All	24” box	8’	1-3/4”

   You will inform the City of the source of all plant material allowing adequate time so that inspections of plant material may be made at the source prior to delivery to site.
   4. Identification: Plants will be of the variety and size shown on the plans, and will conform to the requirements herein. One of each bundle or lot will be tagged with plant name in accord with recommendations of the American Association of Nurserymen.

5. Substitutions: Substitutions for the indicated plant materials may be permitted, provided the substitute materials are approved in advance by the Landscape Architect 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 will conform to the requirements of the specifications of this section. 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 Landscape Architect 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. Tree stabilization
   1. Tree Stakes Poles will be peeled lodgepole pine logs, clean, smooth, new, and of size indicated. Poles will be preservative free. Install as detailed.
   2. Ties at tree stakes will be ¾-inch rubber hose sections with #12-gauge galvanized steel wire, or elastic webbing 1-inch wide, and minimum of ¼ inch thick.

C. Root Barrier
   1. Root Barrier will be Deeproot, 24inch Universal Barrier – UB 24-2. Available from Deep Root, 800-458-7668, or equal.

D. Erosion control
   1. Jute matting made of natural fibers with an open area of 70-75%, such as manufactured by GEI works or equal. Staple as directed by manufacturer.

E. Mulch
   1. For planting areas flatter than 3:1 slope: Planting areas will be covered with organic 'Arbor Mulch 'or 'Walk-on Bark', or approved equal. Mulch will be a recycled, soft natural wood, dark color product shredded into small pieces consisting of a mix of finely shredded wood and medium shredded wood processed through an industrial tub grinder. No colored, rounded wood chips will be accepted.
   2. For swale bottom: Planting areas will be covered with ¾" pea gravel, without fines.

20-1.04C Soil Amendments:

All areas to be planted and irrigated will receive soil amendments. The following soil amendments will be incorporated per 1,000 square feet of soil surface area (unless soils analysis recommends otherwise):

1. Three cubic-yards organic amendment. Material will be organic wood-based product consisting of redwood or fir only. Material will contain no manure of any kind, weed seeds, or any foreign substance. Maximum particle size will be ¼-inch. Product will contain a minimum of one percent available nitrogen.
2. 200 lbs. agricultural gypsum
3. A copy of delivery slips on all materials used on the project will be delivered to the City.
4. 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 Landscape Architect.

A. Bioretention Soil -Sandy Loam Soil Mix
   1. Sandy Loam Soil mix will be a commercially blended mix of: 50% Sand, 30% loam, 20% compost, as available from Stony Point Rock Quarry, Inc. 707-795-1775, or equal.
   2. Sandy Loam soil mix will meet the following requirements:
      - The percolation rate of the mix will be between 5" and 10" per minute.
      - The organic content will be 2.5% minimum by total weight
      - Fine gravel content to be between 5-8% total by weight.
      - Coarse sand content to be less than 2% total by weight
      - Ph and nutrients in a range preferable for plant growth.

B. Import topsoil

Additional imported topsoil, where required, will be screened, fertile, friable, from well-drained arable land, free of nutgrass, refuse, roots, heavy clay, noxious weeds, rocks, or any material toxic to plant growth. The texture of the imported topsoil will match the coarsest percentage of the site soil where additional soil will be added. A one (1) quart Sample and soil analysis documentation must be submitted to Landscape Architect for approval prior to delivery of material to the site.

Imported topsoils must fall within the ranges as follows:

Silt: 20-45%
Clay: 15-20%
Sand: 30-60%
Organic material (natural): 2% minimum
pH: 6.8 -8.1
Soluble salts: 1,500 ppm.
Boron – allowable at less than 1 ppm
Percolation rate will be between 3 to 4 inches per hour.

20-1.04D Agronomy Report: An agronomy report will be prepared analyzing (2) samples of soils, samples will be taken after completion of rough grading. The samples will be taken – one from the East side and one from the west side of Fulton Ave. You are to submit samples to

Environmental Technical Services (ETS)
975 Transport Way, Suite 2
Petaluma, CA 94954 707-778-9605
or
Waypoint Analytical.
4741 E Hunter Ave, Suite A
Anaheim, CA 92807 714-282-8777

Report will include basic and minor nutrients, % organic matter, infiltration rate as well as a textural analysis of each sample. Report will make specific recommendations for initial amendments for each sample area, and preliminary recommendations for post-planting/maintenance fertilization.

20-1.05 Construction:

A. Scheduling

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

B. Soil Preparation

1. Rip in two directions all areas to be planted or seeded to a depth of at least 12 inches. Broadcast soil amendments evenly over surface and cultivate thoroughly by rototilling to depth of at least 6 inches.
2. You will not use insecticides, rodenticides, fungicides or pre-emergent herbicides. You will not use products containing Glyphosate to control weeds on the project. Acceptable weed control includes hand pulling, tilling or organic pesticides. Submit weed removal plan to City for review.
3. At time of planting, all areas to be planted or seeded will be free of weeds, stones, stumps, roots, or other deleterious matter 1 inch in diameter or larger and will be free from all wire, plaster, or similar objections that would be a hindrance to planting or maintenance.

C. Spacing
When plant material is spaced in rows, the total dimension will be verified, and the plants equally spaced within the designated area. Where plant material is shown in loose pattern, you will space the material as shown on plans or as directed by the Landscape Architect and/or the City. Ground cover material will be triangularly spaced per dimensions indicated on plans (where applicable).

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

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

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

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

H. Pit Backfill
Backfill material around plants will be free from rocks or foreign material and will consist of the following ratio:

50%, 1% Nitrogen-Stabilized Organic Amendment
50%, On-Site Topsoil
10 Lbs. Agricultural Gypsum per Cubic Yard of Mix
2 Lbs. Iron Sulfate per Cubic Yard of Mix

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

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

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

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

K. Hydroseeding
1. After preparation of soil has been completed, the areas to be seeded will be brought to finish grade, with the finish surface being smooth and even, and reasonably well firmed. It will be the responsibility of you to make the entire area smooth and even, to ensure that finish grades will be generally 1 inch below the surface of walks, curbs, and paved areas, and in all cases without abrupt changes in gradient.

2. The ground surface will be inspected by the Landscape Architect and/or the City prior to seeding to determine suitability for planting. You will obtain such approval before seeding.
3. All seed will be new crop certified seed labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed will be furnished in sealed, standard containers. Seed which has become wet, moldy, or otherwise damaged will not be acceptable.
4. Hydroseed Mixes: The following material will be applied in the amounts indicated per acre:

Hydroseeded Meadow (where indicated on plans)	Rate
Conwed Fiber	1,800 lbs./acre
Ecology Controls "M-Binder"	60 lbs./acre
18-6-8 Commercial Fertilizer	400 lbs./acre
Festuca Rubra (Creeping Red Fescue)	125 lbs./acre
Trifolium Fragifern (Strawberry Clover)	10 lbs./acre
Coreopsis Lanceolate (Perennial Coreopsis	10 lbs./acre
Lipunus Succulentes (Lupine)	3 lbs./acre
Eschscholzia Californica (California Poppy)	3 lbs./acre

5. Equipment and Application: Hydraulic equipment used for the application of slurry will have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogenously mix the above slurry. Distribution lines will be large enough to prevent stoppage and to provide even distribution of the slurry over the ground. The pump will be capable of exerting at least 150 psi at the nozzle or sufficient additional pressure for proper coverage. The slurry tank will have a minimum capacity of 1,500 gallons and will be mounted on a traveling unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be seeded so as to provide uniform distribution without waste and will be thoroughly clean and free of seed species that are not specified.
   With the engine at half throttle, water will be added to the tank. When the water level has reached the height of the agitator shaft, good recirculation will be established and at this time the seed will be added. Fertilizer will then be added to the mixture followed by wood pulp mulch. The wood pulp mulch will only be added to the mixture after the seed and when the tank is at least one third filled with water. The engine throttle will be opened to full speed when the tank is half filled with water. All the wood pulp mulch will be added by the time the tank is two-thirds to three-fourths full. Spraying will commence when the tank is full.
6. Application: The operator will spray the surfaces with a uniform, visible coat by using the green color of the wood pulp as a guide. The slurry will be applied in a sweeping motion, in an arched stream so as to fall like rain allowing the wood fibers to build on each other until a good coat is achieved and the material is spread at the required rate per acre.
7. Time Limit: All slurry mixture which has not been applied to the surfaces within four hours after mixing will be rejected and removed from the project at your expense.
8. Watering will be as follows:
   a. Prior to hydroseeding, the area will be irrigated in order to provide a moist seed bed for the hydroseed application.
   b. Hydroseed areas will receive several consecutive watering's the day of the hydroseeding to thoroughly saturate the soil.
   c. After initial irrigation, water will be applied as often and in sufficient amounts as conditions may require keeping the soil wet above, around, and below the root systems of the plants (until germination is complete).

20-1.05A(1) Quantities: In all cases, quantities of plant material will be furnished as needed to complete work as indicated on plans, including reseeding, redressing, and maintenance (replacements) during the contract period.

20-1.05A(2) Protection: You will 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.

20-1.05H Cleanup: After all planting operations are completed you will remove all trash, excess soil, empty plant containers, or other accumulated debris from the site at no extra cost to City. You will repair all scars, ruts, or mars in area caused by work operations. Areas will be left in a neat and orderly condition.

20-1.05I Inspections:

A. You will give forty-eight (48) hour notice and set appointment for all inspections by the Landscape Architect and/or City.
B. Inspections and/or field supervision by Landscape Architect and/or City will 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 and hydroseed lines PRIOR to planting.
    4. Final inspection.
C. Inspection will be called for at the end of all planting operations for the purpose of determining compliance with plans and specifications, intent, workmanship, and cleanup. You will 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 will be made at the end of the maintenance period for full approval of the work area.
E. In the event you request inspection of work, and said work is substantially incomplete, you will be responsible for inspection costs.

20-1.05J Guarantee:

A. All shrubs, ground covers, and lawn areas will be guaranteed as to growth and health for a period of ninety (90) days after final acceptance by the City; all trees will be guaranteed for a period of one (1) year. Final Acceptance will be at the end of the two year establishment period as detailed in 20-4 Plant Establishment.
B. Plants which die or lose more than 30 percent of their original leaves will be replaced under this section.
C. Within fourteen (14) days of written notification by the City, you will remove and replace all guaranteed plant materials which for any reason fail to meet the requirements of the guarantee. All plant material replaced will be guaranteed for the original period, starting from the date of replacement.

(STD2018)

20-2 IRRIGATION

20-2.01B Materials:

A. Main lines (constant pressure) 2 inches and larger will be polyvinyl chloride PVC Class 315: Type 1, Grade 1 (Impact Modified), designated as 12454, PVC 1120, conforming to Commercial Standards CS256-63 and ASTM D2241. All 1-1/2" pipe and smaller will be Schedule 40: Type 1, Grade 1 (Impact Modified), designated as 12454, PVC 1120, conforming to Commercial Standards CS256-63 and ASTM D17851.
B. Lateral lines (non-pressure) will be 1120-200 psi PVC plastic pipe with schedule 40 Type 1. Grade 1 PVC solvent weld fittings.
C. For sub-surface drip irrigation: For sub-surface drip piping downstream of remote-control valves, all pipe will be per plan and sub-surface dripline product Manufacturer's specifications, including for supply and exhaust headers.
D. Quick coupler valves (QCV) will be per plan.
E. Controllers
    1. Controller will be per plan.
    2. Provide and install automatic irrigation controller in approximate location shown on the plans. The exact location will be determined on the site by the Engineer. Provide conduit, wire, and connection to 120 volt switch accessible to controller for ease of maintenance.
F. Two Wire Control wire will be Polyethylene double jacketed or UF-B-UL PVC double jacketed two conductor solid core designed for direct burial with insulation o3/16" thick. Toro, model number TW-CAB-14 copper with UL approval for direct burial. Common ground wire will have white insulating jacket; control wire will have jacket of color other than white. Splices will be made with 14-gauge water-tight connectors Toro model TW-SPLICE, per manufacturers requirement.
G. Lighting arrestor will be Toro model TW-LA-1 installed every 600' per plan.
H. Control wire for temporary irrigation will be copper with UL-approval for direct burial in ground, size #14-1 AWG-UF. Common ground wire will have white insulating jacket; control wire will have jacket of color other than white. Splices will be made with 3-M #3576 Scotchlok seal packs.
I. Remote control valves (RCV)
    1. Will be per plan.
    2. Will be grounded per manufacturer requirements.
J. Two Wire Decoders
    1. Will be per plan.
    2. Will be installed in one station, 2 station or 4 station configurations dependent on valve locations.
K. Boxes for remote control valves will be per plans.
L. Ball valves, per plans.
M. Bubblers will be per plans.
N. 120-volt service and connections will be provided by the irrigation contractor. Install in conduit with Brooks 3½ pull boxes as required. Concrete pull boxes will have locking covers marked "electrical".
O. Gate valves will be per plan. Locate in Brooks 1RB concrete valve box with concrete lid. Use concrete extensions as required.

P. Miscellaneous Installation Materials
   1. Solvent cement for solvent weld joints will be of make and type approved by manufacturer(s) of pipe and fittings. Cement will be maintained at proper consistency throughout use.
Q. Miscellaneous Equipment
   1. Provide all equipment called for by the plans.
   2. Provide to the City, at completion of the irrigation installation, three (3) each of all operating and servicing keys and wrenches required for complete maintenance and operation of all heads and valves. Include all wrenches necessary for complete disassembly of all heads and valves.

20-2.01B(4) Location Markers: You will stake out the irrigation system as shown on the plans, using a different color flagging for bubblers, valves, tie-in point and trench. These areas will be checked by you and Engineer before construction is started. Any changes, deletions or additions will be determined at this check. Trenching will be started only after layout check by you and approval by the Engineer.

20-2.01C Construction:

A. Preparation. Schedule and coordinate placement of materials and equipment in a manner to effect earliest completion of work in conformance with construction and progress schedule.
B. Protect work and materials from damage during construction and storage.
C. Layout:
   1. Layout work as accurately as possible in accordance with diagrammatic plans.
   2. Where site conditions do not permit locating piping, valves and heads where shown, notify the Engineer immediately and determine relocation in joint conference.
   3. Run pipe lines and automatic control wiring in common trenches wherever practical.
D. Install water lines in 1120-Schedule 40 PVC plastic sleeves at street crossings.
E. Excavation and Trenching
   1. Excavation will be in all cases ample in size to permit the pipes to be laid at the elevations intended and to permit ample space for joining.
   2. Make trenches for pipe lines deep enough to provide minimum cover from finish grade as follows:
      a. 24-inch minimum cover over main lines to control valves and quick coupling valves.
      b. 24-inch minimum cover over control wires from controller to valves.
      c. 16-inch minimum cover over RCV-controlled lines to sprinkler heads.
      d. 48-inch minimum cover over all lines inside street right of way.
   3. Restore surfaces, existing underground installations, etc., damaged or cut as result of excavations to original conditions in manner approved by Engineer.
   4. Where drainage line interferes with irrigation trenching and pipe work, adjust the trench depth as instructed by the Engineer.
F. Assembling Pipe Lines
   1. All pipe will be assembled free from dirt and pipe scale. Field cut ends will be reamed only to full pipe diameter with rough edges and burrs removed.
G. Solvent weld joint:
   1. Pipe ends and fittings will be wiped with MEK, or equal, before welding solvent is applied. Welded joints will be given an adequate time to set before moving or handling, per manufacturer's specifications. All field cuts will be beveled to remove burrs and excess before fitting and gluing together. Assemble per Manufacturer's recommendations.

2. Plastic to Plastic Joints: Solvent-weld, using solvent recommended by pipe Manufacturer only.
3. 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.
4. Where pipes or control wires pass through sleeves, provide removable non-decaying plugs at ends of sleeve to prevent entrance of earth.

H. Remote control valves:
1. Install where shown and group together where practical.

I. Automatic control wiring:
1. Run lines along mains wherever practical. Tie wires in bundles at ten (10) foot intervals. Run wires along the underside of mains and allow slack for expansion and contraction of wire.
2. Loop a minimum of three (3) feet of extra wire in each valve box; both control wire and ground wire.
3. Connections will be made by crimping bare wires with brass connectors and sealing with epoxy resin sealer packs.
4. No splices will be permitted between controllers and remote-control valves.
5. Where control lines pass under paving, they will pass through schedule 40 electrical PVC conduit.
6. Where control lines do not parallel mains, wires will be protected by being strapped at ten (10) foot intervals to the underside of 2- by 6-inch redwood boards.

J. Automatic controller:
1. Locate controllers in general locations shown with exact placement to be determined by the Engineer.
2. Connect control lines to controller in sequential arrangement according to assigned identification number of valve. Control lines will be labeled at controller with permanent non-fading labels indicating identification number of valve controlled.

K. Testing: Perform test as specified. Remake any faulty joints with all new materials. Use of cement or caulking to seal leaks will not be permitted.

L. Backfilling:
1. Backfill only after pipe has been inspected and approved.
2. Main line and lateral line backfill to be a 4-inch minimum sand bed on all sides of the pipe. The remaining backfill material will be native soil excavated from the trenches.
3. Place backfill materials in 6-inch layers and compact by jetting or tamping to a relative compaction of 90 percent.
4. Dress off areas to finish grades and remove excess soil, rocks or debris remaining after backfill is completed.
5. If settlement occurs along trenches, and adjustments in pipes, valves and sprinkler heads, soil, sod, or paving are necessary to bring the system, soil, sod, or paving to the proper level of the permanent grade, you, as part of the work under this Contract, will make all adjustments without extra cost to the City.

M. Bubblers and quick coupler valves.
1. Thoroughly flush lines before installing heads and QCV's.
2. Locate heads and QCV's as shown in the Drawings and details.

N. Drip Irrigation. Drip emitters, inline emitter tubing and micro spray nozzles will be as shown on plans.

For drip irrigation, include:

- Staples, Netafim TLS6
- Supply and exhaust headers
- Flush Valve, per plan
- Fittings and Connections, per plan

O. On-surface drip irrigation installation:
    1. Clear finish grade surface of debris such as rocks and pebbles.
    2. Lay down grid per plan, specifications, and Manufacturer's instructions.
    3. Check and document pressure reading on each zone.
    4. Install (1) staple for every 3' of dripline in sand, every 4' in loam, and every 5' in clay.
    5. Plant specified plant material per plan and directly adjacent to emitters. Confirm delivery of irrigation water to each root ball. Notify Landscape Architect of any insufficient coverage prior to backfilling.
    6. Cover with mulch per planting specifications and plans.

20-2.06A(4) Quality Assurance: It will be the responsibility of the Irrigation Contractor to fill and repair all depressions and replace all necessary lawn and planting-loss due to the settlement of irrigation trenches for one year following completion and acceptance of the job.

You will also guarantee all materials, equipment, and workmanship furnished by him to be free of all defects of workmanship and materials, and will agree to replace at his expense, at any time within one year after installation is accepted, any and all defective parts that may be found.

20-2.12 Irrigation Audit: You will provide the services of a third party irrigation auditor to prepare an audit as Irrigation audit, as required by the State of California for compliance with AB1881. You are to provide audit report to owner prior to project closeout.

20-2.13A(1)(d)(iii) Quality Control:
You will:
1. Notify the Engineer at least three (3) days in advance of testing.
2. Perform testing at their own expense.
3. Center load piping with small amount of backfill to prevent arching or slipping under pressure. No fitting will be covered.
4. Apply the following tests after welded plastic pipe joints have cured at least 24 hours.
    a. Test live (constant pressure) and QCV lines hydrostatically at 125 psi minimum. Lines will be approved if test pressure is maintained for six (6) hours. The lines will be restored to the original test pressure and the amount of water required to do so will be measured. Approved tables of allowable loss (Johns-Manville Installation Guide for ring-tite PVC pipe, pages 25 and 26) will be consulted, and the lines will be approved or not approved as such results may indicate. You will make tests and repairs as necessary until test conditions are met.
    b. Test RCV-controller lines with water at line pressure and visually inspect for leaks. Retest after correcting defects.

20-2.13B(1)c) Submittals:
A. You will maintain in good order in the field office one complete set of black line print record plans of all sprinkler plans which form a part of this Contract, showing all water lines, sprinklers, valves, controllers and stub-outs. In the event that any work is not installed as indicated on the plans, such work will be corrected and dimensioned accurately from the building walls on these record plans.
B. All underground stub-outs for future connections will be located and dimensioned accurately from building walls on all record plans.
C. Upon completion of the work, obtain reproducible prints from the Engineering Department and neatly correct the prints to show the as-built conditions and return to the Engineering Department.

20-4 PLANT ESTABLISHMENT WORK

20-4.01 General will include:

A. Maintenance Service: Provide landscape maintenance service by skilled employees of the Installer. Plants will be kept in a healthy, growing condition and in a visually pleasing appearance by watering, pruning, trimming, re-setting to proper grades, edging, fertilizing, re-staking, pest and disease controlling, spraying, weeding, cleaning up and any other necessary operation of maintenance. Landscape areas will be kept free of weeds, noxious grass, and all other undesired vegetative growth and debris.

B. Please refer to Section 20-3.02C for appropriate weed control methods. All plants found to be dead or in an impaired condition will be replaced immediately with same plant of original size as indicated on plan. Begin maintenance service immediately after plants are installed and continue for the duration of the Maintenance Period.

1. The Maintenance Period begins on the day the Landscape Architect has authorized the beginning of the maintenance period and will continue thereafter for no less than **730** continuous calendar days.

2. Phased Maintenance Periods, if required, will be negotiated prior to construction.

3. If phased Maintenance Periods are not negotiated prior to construction, the Maintenance Period for all areas will begin after the entire project is 100% complete per contract documents. Portions completed earlier will be maintained up to and including the specified Maintenance Period without additional compensation.

4. The completion date of the Maintenance Period will be extended, when in the opinion of the Landscape Architect, improper maintenance and/or possible poor or unhealthy condition of planted material are evident at the end of the scheduled Maintenance Period. You will be responsible for additional maintenance of the work at no change in Contract price until all of the work is completed and acceptable.

5. Minimum Landscape Maintenance performance requirements will conform to Landscape Maintenance per 'California Landscape Standards', Section VII, CLCA, First Edition.

C. You will continuously protect and maintain all involved areas of the Contract during the progress of the work and during the Maintenance Period until the Final Acceptance of the work.

D. All paving, mulch or other areas installed by you will be maintained continuously. Weeds, clippings, trash, leaf litter or other debris will be removed from the site and disposed of properly.

E. All mulch will be maintained at the specified depth, continuously, for the duration of the Maintenance Period.

20-4.04 PAYMENT: Plant Establishment will be paid for at the contract **lump sum** price for Plant Establishment.

Retention payments for all accepted contract work within the notice of completion (NOC), other than retention payments for planting costs, as determined by the Engineer, will be released no sooner than 35 days after filing the notice of completion with the County Clerk. However, upon completion of the maintenance period and acceptance of all plantings by the Engineer, an additional notice of completion (NOC) will be submitted to the County Clerk and no sooner than 35 days after the second filing, all remaining retention will be released.

[Revised: 8/26/2019-Quadriga]

20-11 BIORETENTION

20-11 GENERAL

20-11.01A General:

A. This work will consist of constructing bioretention areas, to the lines, grades, and dimensions shown on the plans in accordance with these special provisions. Bioretention areas will include excavation, grading, "structural soil", a top layer of mulch, underdrains, permeable material, fabric, moisture barriers, conforming to the City Standards, the Standard Specifications, and these Special Provisions.
B. Refer to related special provisions for concrete structures (e.g. drop inlets), concrete pipe, stormwater inlet trash protector units, and other appurtenances to the bioretention areas.
C. All work will be performed in compliance with the City of Santa Rosa and County of Sonoma Low Impact Development Technical Design Manual. Your attention is directed to Reference Document E regarding Structural Soil:

http://srcity.org/doclib/Documents/LID_ManualFinalRefDoc2012.pdf

D. Reference the City of Santa Rosa and County of Sonoma Low Impact Development Technical Design Manual, most current edition.

20-11.01B Submittals:

A. Submit Product Data for the following:
   1. CU-Soil ("structural soil") or City approved equivalent
   2. Moisture barrier (PVC geomembrane)
   3. Perforated pipe
   4. Underdrain filter fabric
   5. Waterproof Tape

20-11.01C Quality Assurance: Conform to the quality control requirements of the product manufacturer, the City Standards, the Standard Specifications, the established reference documents, and these Special Provisions.

20-11.02 Materials:

A. Structural soil will be CU-Structural Soil ("CU-Soil") or an equivalent material approved in writing and in advance by the City. CU-soil is a patented material and must be purchased from a licensed supplier.
B. Plastic pipe underdrain for the bioretention areas will be smooth-wall polyvinyl chloride (PVC) perforated plastic pipe underdrain and will conform to AASHTO Designation M278, the provisions in Section 68, "Subsurface Drains," of the Standard Specifications, all Amendments.
C. Permeable material for use with underdrains will be Class 1, Type A, permeable material and will conform to the provisions in Section 68, "Subsurface Drains," of the Standard Specifications, all Amendments.
D. Filter fabric for use with underdrains will conform to the provisions in Section 68-2 "Underdrains" of the Standard Specifications, all Amendments.

E. Moisture barrier within the bioretention areas will be a 20-mil minimum thickness non-reinforced polyvinyl chloride (PVC) geomembrane for use in buried applications and will conform to ASTM Standard D7176, the Standard Specifications, all Amendments, and these special provisions.
F. PVC geomembrane sampling frequency will be in accordance with ASTM D4354, or as approved by the Engineer. The geomembrane subgrade will have a smooth, finished surface, free form pockets, ruts, sharp objects or other discontinuities that, in the judgment of the Engineer, may contribute to puncture or bridging of the material. You and the Engineer will inspect the subgrade surface immediately prior to the deployment of each geomembrane panel.
G. Joints in the geomembrane will be minimized. Panels will be joined utilizing approved seaming methods. Dual-track fusion welding will be required where feasible. Chemical welds will be made only where approved by the Engineer. Any damaged caused to the geomembrane by you will be repaired or replaced, as approved by the Engineer, at the expense of you.
H. Finish surfacing of bioretention areas will be mulch in conformance with Section 20 Landscape and Section 21 “Erosion Control” of the Standard Specifications, all Amendments and these Special Provisions.

20-11.03 Construction:

A. Bioretention areas will not be constructed until all contributing drainage areas are stabilized as shown on the Contract Plans and to the satisfaction of the Engineer. Bioretention areas will not be used as sediment control facilities. No heavy equipment will operate within the perimeter of a bioretention facility during excavation, underdrain and moisture barrier placement, backfilling, or mulching of the bioretention areas.
B. The bioretention areas will be excavated to the dimensions, side slopes, and depths shown on the plans. The method of excavation will minimize the compaction of the bottom of the bioretention areas. Excavators and backhoes, operating on the ground adjacent to the bioretention areas, will be used to excavate the areas if possible. Low ground-contact pressure equipment may also be used for excavation. No heavy equipment will be allowed on the bottom of the bioretention facility.
C. Excavated materials will be removed from the bioretention areas. Excavated materials will be used or disposed of in conformance with the Standard Specifications and these Special Provisions.
D. Prior to placing the underdrain and the structural soil, the bottom of the excavation will be scarified to a minimum depth of 6 inches to alleviate any compaction of the areas bottom. Any substitute method for scarifying must be approved by the Engineer prior to use. Any ponded water will be removed from the bottom of the areas and the soil will be friable before scarifying.
E. The structural soil will be placed and graded using low ground contact pressure equipment or by excavators and/or backhoes operating on the ground adjacent to the bioretention areas. No heavy equipment will be used within the perimeter of the bioretention areas before, during, or after the placement of the structural soil. The structural soil will be placed in horizontal layers not to exceed 12 inches for the entire area of the bioretention areas. The structural soil will be compacted by saturating the entire bioretention areas after each lift of structural soil is placed. Water for saturation will be applied by spraying or sprinkling. Saturation of each lift will be performed in the presence of the Engineer. An appropriate sediment control device will be used to treat any sediment-laden water discharged from the underdrain. If the structural soil becomes contaminated during the construction of the areas, the contaminated material will be removed and replaced with uncontaminated material at no additional cost to the City. Final grading of the bioretention area will be

performed after a 24-hour settling period.

F. The final grade of the bioretention area will be inspected by the Engineer prior to placement of topsoil lift and will be within 1” of the lines and grades identified on the plan.
G. Additional execution guidelines from Reference Document E from City of Santa Rosa and County of Sonoma LID Technical Design Manual regarding Structural Soil will be applied and adhered to during the construction of the bioretention area.

25 AGGREGATE SUBBASE

25-1 GENERAL

25-1.02 Materials

25-1.02C Class 4 Aggregate Subbase: Aggregate subbase will be Class 4 conforming to and placed in accordance with the requirements of Section 25 of the Standard Specifications, with the following modifications and additional requirements.

Aggregate subbase will be Class 4 with a minimum sand equivalent value of 21, a minimum R-value of 50 and will conform to the following gradings:

Sieve Size	Percent Passing
3"	100
1-1/2"	90-100
3/4"	50-90
#4	25-55
#200	2-11

The material contained on the #4 screen will consist of 100 percent crushed particles.

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

25-1.03 Construction

25-1.03E Compacting: Compact each Aggregate subbase layer to at least 90 percent relative compaction. The surface of the finished aggregate subbase will be firm and unyielding. Any visible movement vertically or horizontally of the aggregate subbase under the action of construction equipment or other maximum legal axle loads will be considered as evidence that the aggregate subbase does not meet this requirement.

25-1.03F Grade Tolerance: The subgrade to receive aggregate subbase, immediately prior to spreading, will not vary more than 0.05-foot above or 0.1-foot below the grade established by the Engineer.

[Version: 09/18/19 CDA STD2018]

26 AGGREGATE BASE

26-1 GENERAL

26-1.01A Summary: Aggregate base will be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the Standard Specifications and City Specifications.

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

26-1.02 Materials

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

26-1.03 Construction

26-1.03E Compacting: The surface of the finished aggregate base will 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 will be considered as evidence that the aggregate base does not meet this requirement.

[Version: 09/18/19 CDA STD2018]

39 HOT MIX ASPHALT

39-2.02 TYPE A HOT MIX ASPHALT

39-2.02 GENERAL

39-2.02A(1) Summary: Section 39 includes specifications for producing and placing Hot Mix Asphalt (HMA) by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

Asphalt concrete will be placed in separate lifts as shown on the Project Plans.
Roadway excavation and asphalt concrete base paving will be completed for half the street width before beginning excavation of the remaining street.

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

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

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

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

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

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

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

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

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

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

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

You will furnish an excavation and paving plan which will include the following:

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

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

A tack coat of SS-1h or SS-1 emulsified asphalt will be applied to all asphalt concrete and concrete surfaces and allowed to break immediately in advance of placing all lifts of asphalt concrete. Unless otherwise shown on the Plans, tack coat will also be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints, and allowed to break immediately in advance of placing all lifts of asphalt concrete. The tack coat will be reapplied 1) where it becomes contaminated, and 2) where it is significantly tracked (removed) from the surface.

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

At the end of each working day you will place retro reflectorized signs and delineators, as required for night-time use in accordance with the Standard Specifications and Section 12 of these Special Provisions to warn the public of the existing conditions.

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

Edge Grind will be in accordance with City STD-209, the modified detail on the Plans or as specified herein. Longitudinal edge grinds will be 6' in width. Conform Grind will be in accordance with City STD-207 for side streets and City STD-208 for beginning or ending of overlay.

39-2.02A(2) Definitions: For these Special Provisions, HMA and asphalt concrete will be the same.

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

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

39-2.02B Materials

39-2.02B(3) Asphalt Binder: Asphalt binder in HMA must comply with the specifications for asphalts.

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

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

Liquid anti-stripping agent (LAS) will be added to the asphalt binder at a rate of 0.4 to 1.0% by weight of asphalt binder as specified by the Engineer at the time of paving. The LAS will be AD-here LOF 65-00 or equivalent, and will be stored, measured, and blended with the asphalt binder in accordance with the anti-stripping agent manufacture's recommended practice. The LAS can be added at the asphalt plant or at the refinery. When added at the asphalt plant, the equipment will indicate and record the amount of LAS added. If added at the refinery, the shipping ticket from the refinery will certify the type and amount of LAS added.

39-2.02B(4) Aggregates

39-2.02B(4)(a) General: The aggregate grading of the various types of asphalt concrete will conform to one of the following as directed by the Engineer:

Surface or Leveling Course	½-inch Coarse HMA, Type A
Base Course	¾-inch HMA Type A

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

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

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

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

[a] Reported value must be the average of 3 tests from a single sample.
[b] Minimum Sand Equivalent of 45 for asphalt concrete base.

39-2.02B(4)(b) Aggregate Gradations: The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

Aggregate Gradation
(Percentage Passing)
HMA Types A
3/4-inch HMA Type A (BASE)

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
3/4"	95–100	TV ± 5
3/8"	65–80	TV ± 5
No. 4	49–54	TV ± 5
No. 8	36–40	TV ± 5
No. 30	18–21	TV ±5
No. 200	2.0–8.0	--

1/2-inch Coarse HMA Type A (SURFACE / LEVELING)

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	—
1/2"	94–100	--
3/8"	70–90	--
No. 4	55–61	TV ± 5
No. 8	40–45	TV ± 5
No. 30	20–25	TV ± 5
No. 200	2.0–8.0	--

39-2.02B(5) Reclaimed Asphalt Pavement: Reclaimed Asphalt Pavement (RAP) may be used at your option. If RAP is used, you will provide the proposed mix design and the quality control for all HMA that includes RAP, in accordance with the following requirements:

1. You will provide City with a mix design per California Test 384 for the proposed RAP HMA.
2. As part of City's evaluation of RAP HMA, you and City will perform bitumen ratio tests on at least six split samples of your RAP to establish correlation between respective binder ignition ovens.
3. RAP will be processed from reclaimed Asphalt Concrete pavement only.
4. RAP pile(s) will be separate from the stacker pile, not intermingled with other materials, and stored on smooth surfaces free from debris and organic material.
5. The project RAP pile will be processed and mixed, identified, and of adequate quantity for the proposed project. "Live" piles will not be permitted.
6. Sample the RAP pile and determine the bitumen ratio (using same binder ignition oven used in #2 above) and provide the test results to the City at least one week prior to producing RAP HMA.
7. A minimum of three samples will be tested for bitumen ratio for RAP pile of 1500 tons, or portion thereof.
8. RAP pile will be mixed such that individual bitumen ratio test results of RAP pile so not vary more than +/- 0.5%.
9. During RAP HMA production, RAP will be sampled by you off of the belt (into the batch plant), per method established by the City, and samples provided to the City.
10. Bitumen ratio of RAP sampled off of the belt will be 4.0% minimum, as determined by City binder ignition oven. City will select binder content for RAP HMA mix per required specifications.
11. RAP content will be no more than 20% by dry aggregate mass in the HMA. If proposing a change in the RAP content, you will notify the Engineer. If the content changes more than 5%, you will submit a new mix design.
12. Moisture content of RAP pile will be 4.0% maximum and will be tested the day prior to the day of paving and tested/monitored during each day of HMA production.
13. RAP pile(s) will be protected from exposure to moisture.
14. RAP HMA will comply with all the specifications for HMA.
15. If batch mixing is used, RAP will be kept separate from the virgin aggregate until both ingredients enter the weigh hopper or pugmill. After introduction to the pugmill and before asphalt binder is added, the mixing time for the virgin aggregate and RAP will not be less than five seconds. After asphalt binder is added, the mixing time will not be less than 30 seconds.
16. If continuous mixing is used, the RAP will be protected from direct contact with the burner flame with a device such as a shield, separator, or second drum.
17. If any of the above criteria are not satisfied, or if the RAP HMA test result determined by the City are inconsistent, RAP HMA production will stop for City projects until the issue(s) are corrected.

39-2.02B(6) Smoothness: Determine HMA smoothness with a straightedge or a profilograph. The completed surfacing will be thoroughly compacted, smooth and free from ruts, humps, depressions or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment will be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations or other objectionable marks in the asphalt concrete will be discontinued, and acceptable equipment will be furnished by you.

39-2.02B(6)(a) Straightedge: The HMA pavement top layer will not vary from the lower edge of a 12-foot long straightedge:

1. More than 0.01 foot when the straight edge is laid parallel with the centerline
2. More than 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. More than 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

39-2.02B(6)(b) Profilograph: Under California Test 526, determine the zero (null) blanking band Profile Index (PI0) and must-grinds on the top layer of HMA Type A pavement. Take 2 profiles within each traffic lane, 3 feet from and parallel with the edge of each lane. A must-grind is a deviation of 0.3 inch or more in a length of 25 feet. You must correct must-grinds. Profile pavement in the Engineer's presence. Choose the time of profiling. On tangents and horizontal curves with a centerline radius of curvature 2,000 feet or more, the PI0 will be at most 3 inches per 0.1-mile section. On horizontal curves with a centerline radius of curvature between 1,000 feet and 2,000 feet including pavement within the super elevation transitions, the PI0 will be at most 6 inches per 0.1-mile section. Before the Engineer accepts HMA pavement for smoothness, submit written final profilograms. Submit 1 electronic copy of profile information in Microsoft Excel and 1 electronic copy of longitudinal pavement profiles in "erd" format or other ProVAL compatible format to the Engineer.

39-2.02B(6)(c) Smoothness Correction: If the top layer of HMA Type A pavement does not comply with the smoothness specifications, grind the pavement to within tolerances, remove and replace it, or place a layer of HMA. The Engineer must authorize your choice of correction before the work begins.

Corrected HMA pavement areas will be uniform rectangles with edges:

1. Parallel to the nearest HMA pavement edge or lane line
2. Perpendicular to the pavement centerline

Measure the corrected HMA pavement surface with a profilograph or a 12-foot straightedge and correct the pavement to within specified tolerances. If a must-grind area or straight edged pavement cannot be corrected to within specified tolerances, remove and replace the pavement. On all ground areas, apply fog seal coat per the Standard Specifications Section 37-1, "Seal Coats."

39-2.02B(7) Acceptance Criteria Testing: The acceptance testing requirement for Sand Equivalent will be 50 (minimum) for asphalt concrete surface and 45 (minimum) for asphalt concrete base. HMA will meet the following requirements.

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

[1] Asphalt concrete with an aggregate Micro-Deval loss greater than 21.0% will be removed and replaced at your expense. In addition, no single source of asphalt concrete aggregate will have a Micro-Deval loss greater than 21.0%.

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

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

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

Asphalt concrete not meeting the above requirements will be removed and replaced at your expense.

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

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

[Version: 09/25/2019 CDA STD2018]

39A ASPHALT CONCRETE TRENCH PAVING

39A-1 GENERAL

39A-1.01 Description: Hot mix asphalt concrete (HMA) trench paving will be per City STD-215. Trench surface will be per the Trench AC Paving Table on sheet 1 of City STD-215. Trench base will be 6" of HMA per note 1 on sheet 1 of City STD-215. 12" aggregate base may be used with a no cost change order and written approval from the Engineer. Trench paving will be placed in areas outside of reconstruction and overlay limits, or as shown on the Plans. HMA base paving and surface will be included in the prices paid for various contract items and no additional allowance will be made therefor.

Temporary paving on all utility trenches and any other excavated areas will be ½-inch maximum, medium grade aggregate hot mix asphalt concrete installed a minimum of two inches thick placed each day over the work. Temporary Paving is included in the prices paid for various contract items and no additional allowance will be made therefor.

Temporary paving around edges of steel plates will be a hot mix ½-inch maximum, medium graded aggregate and PG 64-16 asphalt binder for use over a one week period. Temporary Paving is included in the prices paid for various contract items and no additional allowance will be made therefor.

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

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

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

39A-6.01 General Requirements: You will provide compaction of backfill and base material as the job progresses. Temporary paving, as specified in Section 39A-2.01, will be placed over the work each day, leaving not more than 25 feet unpaved. This temporary paving will be removed for final street reconstruction and/or trench paving. The 25 feet of unpaved trench will be covered with skid resistant steel plates (with a coefficient of friction of 0.35 or greater per CTM342), capable of sustaining normal (H20) traffic loads without shifting or bouncing and will be secured per Caltrans requirements. Plates that have areas where the skid resistant material is missing will not be used and must be removed from the job site. Hot mix asphalt concrete will be placed and compacted around all edges of steel plates with a sufficient width and gradual slope in order to provide a smooth transition to existing pavement. You will only be allowed to plate one lateral trench at a time.

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

You will monitor and maintain all temporary paving to the satisfaction of the Engineer.

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

Any existing manholes or valves that are encountered within the trench paving limits must be adjusted to grade per the requirements of Section 15 of these Special Provisions. You are responsible for all coordination with the various utility company owners and their representatives, as well as the cost to adjust the various utilities to grade.

39A-6.03 Compacting:

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

[Revised: 11/25/19 CDASTD2018]

42 GROOVE AND GRIND PAVEMENT

42-2 GROOVING

42-2.01 GENERAL

42-2.01A Summary: Grind concrete pavements will consist of grinding existing portland cement concrete (newly-placed RCC or PCC pavement) as shown on the plans, as specified in Section 42-2, "Grooving," of the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Grinding equipment for grinding concrete pavements will use diamond blades mounted on a self-propelled machine designed for grinding and texturing concrete pavements. Grinding equipment that causes raveling, aggregate fracturing, or spalling, or that damages the transverse or longitudinal joints will not be used.

Grinding will be performed in the longitudinal direction of the traveled way and will be done full lane width so that the grinding begins and ends at lines perpendicular to the pavement centerline.

Grinding will be performed at the locations shown on the plans.

Grinding concrete pavement will result in a parallel corduroy texture consisting of grooves 0.08-inch to 0.12-inch wide with 55 grooves to 60 grooves per foot width of grinding. Tops of ridges will be between 0.06-inch and 0.08-inch from the bottom of the blade grooves.

Prior to diamond grinding, the pavement will be profiled per Section 40-1.01D "Quality Control and Assurance," to ensure the requirement of section 43-4.05F of these special provisions have been met. The profilograph created will highlight areas of localized roughness in conformance with Section 43-4.05F. All grinding to bring the pavement into compliance with Section 43-4.05F will be completed prior to the finish diamond grinding as shown on the plans.

The ground surface will be tested with a 12-foot ±2-1/2 inches long straightedge laid on the pavement parallel with the centerline with its midpoint at the joint or crack. The surface will not vary by more than 0.01-foot from the lower edge of the straightedge.

Cross-slope uniformity and positive drainage will be maintained across the entire traveled way and shoulder. The cross-slope will be uniform so that when tested with a 12-foot ±2-1/2 inches long straightedge placed perpendicular to the centerline, the ground pavement surface will not vary more than 1/4 inch from the lower edge of the straightedge.

After grinding has been completed, the pavement surface will be profiled in conformance with the requirements of Section 40-1.03, "Quality Control and Assurance," of the Standard Specifications. Two profiles will be obtained in each lane approximately 3 feet from the lane lines. The average profile index will be determined by averaging the two profiles in each lane. Additional grinding will be performed, where necessary, to bring the ground pavement surface within the Profile Index requirements specified in Section 40-1.03, "Quality Control and Assurance," of the Standard Specifications.

42-2.01B Payment: Profiling the ground pavement surface with an inertial profilograph, or equivalent, and any necessary additional grinding to bring the finished surface within the specified tolerances and for furnishing final profilograms to the Engineer will be considered as included in the contract price paid for grind existing concrete pavement.

42-2.02A Disposal:

Disposal of portland cement concrete (PCC) pavement grooving and grinding residues will be in conformance with the provisions in Section 42, "Groove and Grind Pavement," of the Standard Specifications and these Special Provisions.

You will include water pollution control measures to address the handling of the grinding pavement residue within the Storm Water Pollution Prevention Plan or Water Pollution Control Program, as specified in "Water Pollution Control" of these special provisions. At a minimum, the roadway will be swept at the end of each day of grinding operations.

Temporary storage of PCC pavement grooving and grinding residues will not be allowed within the City right of way or Project site. You may transport liquid PCC pavement grooving and grinding residues to an offsite drying location if the Engineer provides written approval. The offsite drying location will be identified and protected in conformance with "Water Pollution Control" of these special provisions.

You will dispose of PCC pavement grooving and grinding residues in conformance with the provisions of the Standard Specifications. The facilities listed below were permitted by Regional Water Quality Control Board (RWQCB) or other agencies that may accept PCC pavement grinding and grooving residues as of July 1, 2004. If you are planning to use one of these sites, determine if the facility has a current permit to accept PCC pavement grooving and grinding residues and if the facility can accept the waste at the time of generation.

Site Name	Location	Telephone	Waste Types/Restrictions
Clean Harbors Environmental Services Buttonwillow	2500 West Lokern Road Buttonwillow, CA	(562) 432-5445	Hazardous Solids and Non-Hazardous Liquids and Solids
Clean Harbors Environmental Services San Jose	1021 Berryessa San Jose, CA	(408) 451-5000	Hazardous and Non-Hazardous Liquids
Crosby & Overton, Inc.	1610 W. 17th Street Long Beach, CA	(562) 432-5445	Hazardous and Non-Hazardous Liquids
D/K Environmental	3650 East 26th Street Vernon, CA	(323) 268-5056	Hazardous and Non-Hazardous Liquids and Solids
DeMenno-Kerdoon	200 N. Alameda Street Compton, CA	(323) 268-5057 (310) 537-7100	Hazardous and Non-Hazardous Liquids and Solids
Filter Recycling Services, Inc.	180 West Monte Avenue Rialto, CA	(909) 424-1630	Hazardous and Non-Hazardous Liquids
K-Pure Water Works	8910 Rochester Ave Rancho Cucamonga, CA	(909) 476-2308	Non-Hazardous Liquids
Liquid Waste Management McKittrick	56533 Highway 58 McKittrick, CA	(559) 386-6104	Non-Hazardous Liquids and Solids
Onyx Environmental Services LLC	1704 W. First Street Azusa, CA	(626) 334-5117	Hazardous and Non-Hazardous Liquids and Solids
Phibro-Tech, Inc.	8851 Dice Road Santa Fe Springs, CA	(562) 698-8036	Hazardous and Non-Hazardous Liquids and Solids
Romic Environmental Technologies Corporation	2081 Bay Road East Palo Alto, CA	(650) 324-1638	Hazardous and Non-Hazardous Liquids
Seaport Environmental	700 Seaport Boulevard Redwood City, CA	(650) 364-8154	Non-Hazardous Liquids
Southwest Treatment Systems, Inc.	4120 Bandini Boulevard Los Angeles, CA	(800) 900-3366	Non-Hazardous Liquids
US Filter Recovery Services, Inc.	5375 S. Boyle Avenue Vernon, CA	(323) 277-1495	Hazardous and Non-Hazardous Liquids and Solids
Waste Management Kettleman City	35251 Old Skyline Road Kettleman City, CA	(559) 386-6104	Hazardous and Non-Hazardous Liquids and Solids

If you dispose of PCC pavement grooving and grinding residues at locations not listed above, the disposal will be in conformance with the provisions of the Standard Specifications, and the following:

A. If the disposal facility is located within the State of California, the facility must be permitted by the RWQCB or other applicable agency, or you must obtain written approval from the RWQCB or other applicable agency.
B. If located outside of the State of California, the facility must be permitted by the applicable local, state, or federal agencies, or you must obtain written approval from the applicable local, state, or federal agencies.

The following will be delivered to the Engineer at least 5 days before disposal of PCC pavement grooving and grinding residues:

A. The name, address, and telephone number of the disposal facility.
B. If the facility is not listed above:
    1. Copy of the facility's RWQCB or other applicable agency permit, or
    2. RWQCB's or other applicable agency's approval, or
    3. Copy of the applicable agency permit if the final disposal location is located outside of the State of California.

You will deliver landfill receipts and weight ticket of disposal of residues from PCC pavement grooving and grinding to the Engineer within 1 business day of disposal.

You will make all arrangements and agreements for the disposal at the time of bidding. Costs related to obtaining approval for disposal within the State of California from the RWQCB or other applicable agency, or the applicable agency if the disposal location is located outside of the State of California, will be borne by you.

42-2.02B Payment: All costs involved in disposing of PCC pavement grooving or grinding residues, will be considered as included in the price paid for the contract item of work.

43 ROLLER COMPACTED CONCRETE PAVEMENT

43-1 GENERAL

43-1.01 Summary: The scope of work will consist of furnishing all materials, tools, equipment, and batching, or batching and mixing plant for producing roller compacted concrete (also referred to as RCC); and performing all labor for producing, transporting, forming, placing, compacting, curing, finishing and testing of RCC. The constructed RCC pavement will conform to lines, grades, thickness, and cross section, as shown on the plans, or otherwise established by these Special Provisions. PCC pavement can also be used in lieu of RCC pavement in various locations upon Engineer's approval and at no extra cost to the City.

43-1.02 Definition:
Roller-compacted concrete will consist of Portland cement, possibly supplementary cementing materials (for example fly ash or ground granulated blast furnace slag), aggregates, water, and chemical admixtures proportioned to produce the required formability (adequate to the method of consolidation by vibratory rollers) and strength.

43-1.03 Referenced Specifications, Codes, Standards and Geotechnical Reports

43-1.03.1 American Society for Testing and Materials (ASTM)

1. ASTM C31, Practice for Making and Curing Concrete Test Specimens in the Field
2. ASTM C33, Specification for Concrete Aggregates
3. ASTM C39, Test Method for Compressive Strength of Cylindrical Concrete Specimens
4. ASTM C40, Test Method for Organic Impurities in Fine Aggregates for Concrete
5. ASTM C42, Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
6. ASTM C78, Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
7. ASTM C88, Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate of Magnesium Sulfate
8. ASTM C94, Specification for Ready-Mixed Concrete
9. ASTM C127 Test Method for Specific Gravity Absorption of Coarse Aggregate
10. ASTM C128 Test Method for Specific Gravity Absorption of Fine Aggregate
11. ASTM C131, Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
12. ASTM C138, Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete
13. ASTM C143, Test Method for Slump of Hydraulic Cement Concrete
14. ASTM C150, Standard Specification for Portland Cement
15. ASTM C156, Test Method for Water Retention by Concrete Curing Materials
16. ASTM C172, Practice for Sampling Freshly Mixed Concrete
17. ASTM C173, Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
18. ASTM C174, Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Core
19. ASTM C192, Practice for Making and Curing Concrete Test Specimens in the Laboratory
20. ASTM C231, Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
21. ASTM C260, Specification for Air-Entraining Admixtures for Concrete
22. ASTM C295, Guide for Petrographic Examination of Aggregates for Concrete

23. ASTM C 309 – Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
24. ASTM C470, Specification for Molds for Forming Concrete Test Cylinders Vertically
25. ASTM C494, Specification for Chemical Admixtures for Concrete
26. ASTM C535, Test Method for Resistance to Degradation of Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
27. ASTM C566, Test Method for Evaporable Moisture Content of Aggregate by Drying
28. ASTM C595, Standard Specification for Blended Hydraulic Cements
29. ASTM C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete
30. ASTM C 685 Specification for Concrete Made by Volumetric Batching and Continuous Mixing
31. ASTM D698, Standard Test Method for Laboratory Compaction Characteristic of Soil Using Standard Effort
32. ASTM D9771998, Standard Specification for Emulsified Asphalt.
33. ASTM C989, Standard Specification for Slag Cement for Use in Concrete and Mortars
34. ASTM C1040, Test Methods for Density of Unhardened and Hardened Concrete in Place by Nuclear Methods
35. ASTM C1157, Standard Performance Specification for Hydraulic Cement
36. ASTM C1170, Test Methods for Determining Consistency and Density of Roller-Compacted Concrete Using a Vibrating Table
37. ASTMC1176, Standard Practice for making Roller-Compacted Concrete in Cylinder Molds Using a Vibrating Table
38. ASTM C1260, Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar-Method)
39. ASTM C1293, Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction
40. ASTM C 1435, Molding Roller-Compacted Concrete in Cylinder Molds Using a Vibrating Hammer
41. ASTM D1557, Standard Test Method for Laboratory Compaction Characteristic of Soil Using Modified Effort
42. ASTM C1567, Standard Test Method for Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar-Method) ASTM C1602, Standard Specification for Mixing Water Used for the Production of Hydraulic Cement Concrete
43. ASTM D3042, Test Method for Insoluble Residue in Carbonate Aggregates
44. ASTM D4318, Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

43-1.04 Definitions

Full-depth crack: Crack other than a working crack that runs from one edge of a slab to the opposite or adjacent side of the slab.

Working crack: Crack that extends through the full depth of a slab and is parallel to and within 0.5 foot of a planned construction joint.

43-1.04 Submittals

Submit the following to the Engineer at least 20 working days before the start of production and construction of RCC pavement:

1. Construction schedule for all RCC related operations.
2. RCC production procedures, description of batching or batching and mixing plant used, and RCC delivery methods. List of all equipment proposed for the use to perform the placement of RCC including paving equipment and compaction equipment. The make,

model, and equipment specification sheet for each piece of equipment will be included. The paver and mixing equipment must match that listed on the submittal, unless a substitution is made, which meets the required specifications and is approved by the Engineer. This will include manufacturer's data and specifications for mixing plant, hauling, placing, spreading, and compaction equipment. Layout of plant showing location of each aggregate storage bin, each cementitious material bin, water supply, and mixing plant will be provided no less than 15 working days prior to the beginning of paving operations.

3. Outline of procedures for calibrating the mixing plant and monitoring materials during construction will also be submitted.
4. Complete paving procedures including, but not limited to, line and grade control, direction of paving operations, paving widths, planned longitudinal and transverse construction joints, and curing method.
5. Quality management plan, addressing, at least:
    a. Quality management organization chart.
    b. Qualifications of the general contractor and subcontractors in producing RCC and constructing RCC pavement.
    c. Qualifications of the independent testing firm.
    d. Control of materials.
    e. Control of RCC.
    f. Design and preconstruction evaluation of the production RCC mix.
    g. Storage of materials for RCC.
    h. Production of RCC.
    i. Delivery of RCC.
    j. Line and grade control.
    k. Control of subbase prior to RCC placement.
    l. Paving operations.
    m. Post-pavement inspection.
    n. Corrective actions.
6. Certification of aggregate source.
7. Certification of Portland cement and supplementary cementing materials.
8. Certification of mixing water for RCC.
9. Certification of chemical admixtures for RCC.
10. Certification of curing compound.
11. Contingency plan, including but not limited to backup paving equipment and backup batching facility.
12. Proposed mix design, including data of preconstruction mix design studies, or backup data demonstrating the performance of the mix during the previous pavement projects constructed within 12 months of the date of submittal. You must certify that the mix design will meet the requirements for strength, schedule, and road opening.
13. Plan for placement of concrete in hot weather if placement conditions and ambient temperature could result in concrete temperatures exceeding **100 degrees Fahrenheit.** Outline of procedures and methods for curing and weather protection for cold [less than 40°F], hot [more than 100°F] and rainy conditions.
14. Methods of handling, storing, delivering, and mixing of materials.
15. Operating procedures for corrective action(s) necessary to assure a tight, smooth surface on the RCC pavement, free of tears larger than 1/4" width and 1/4" depth and other surface imperfections, including surface pitting.

43-2.01 MATERIALS

43-2.01A General
All materials to be used for RCC pavement construction will be approved by the Engineer based on laboratory tests or certifications of representative materials which will be used in the actual construction.

43-2.01B Portland Cement
Portland cement will conform to the requirements of ASTM C150 for Type II/V, or Type II(MH)/Type V. In addition, Portland cement will meet optional requirements of ASTM C150 for low alkali content.

43-2.01C Blended Hydraulic Cement
Blended hydraulic cements will comply with standard specifications ASTM C595 and 1157.

43-2.01D Supplementary Cementing Materials
RCC may contain: up to 25% by the total weight of cementing materials of fly ash meeting requirements of ASTM C618 for Class F, or up to 50% of ground granulated blast furnace slag meeting requirements of ASTM C989 for Grade 100 or 120, or up to 50% of a blend of fly ash Class F and ground granulated blast furnace slag.

43-2.01E Minimum Content of Cementing Materials
Content of total cementing material (Portland cement plus supplementary cementing material) will be established by preconstruction mix design studies, as further provided, but will not be less than 450 pounds per one cubic yard of RCC.

43-2.01F Aggregates
Unless otherwise approved in writing by the Engineer, the quality of aggregates will conform to ASTM C33. The aggregate portion passing the No. 40 sieve will have a liquid limit of not more than 20, and the plasticity index of the aggregate will not exceed five. Fines will be non-plastic. Fines will not be manmade sand. Coarse aggregates must be washed, prior to delivery to the job site, to remove silt and fines. Aggregates may be obtained from a single source or borrow pit, however the coarse and fine aggregate will not be blended prior to entering mixing plant. The combined aggregate will be well-graded without gaps and conform to the following gradations as per Table 1, unless otherwise approved by the Engineer:

Table 1: Sieve Size Percent passing by weight

Sieve Size	Lower & Upper Specification Limits ½ in Maximum	Lower & Upper Specification Limits ¾ in Maximum
1”		100
3/4”	100	93-100
½”	81-100	70-95
3/8”	71-91	60-85
No. 4	49-70	40-60
No. 8	33-54	30-50
No. 16	24-40	20-40
No. 30	15-30	15-30
No. 50	10-25	10-25
No. 100	2-16	2-16
No. 200	0-8	0-8

Aggregates will be innocuous, not causing deleterious expansion of RCC. Test individual concrete aggregates in accordance with ASTM C1260. Maximum expansion after 14 days of exposure to the solution of NaOH will not exceed 0.10%.

If any of individual concrete aggregates do not meet the limit specified in the above paragraph, the aggregates can be tested with the production cementing material (Portland cement and supplementary cementing material proportioned according to the mix design) per ASTM C1567.

You can test either individual aggregates or their blended proportioned according to the mix design. In either case the expansion in 14 days of exposure to the solution of NaOH will not exceed 0.10%

43-2.01G Chemical Admixtures

Chemical admixtures will conform to ASTM C 494. You can use proprietary chemical admixtures improving the formability of RCC, provided the record of the previous experience certifying the beneficial use of admixtures is included with the submittal.

Moisture Control

One of the following admixtures, or an approved equal, is allowed, but not required by the City. Please refer to the manufacturer's recommendations for dosage rates.

- ACEiT Plus Manufactured by ACEiT Industries
- V-MAR VSC500 Manufactured by Grace Concrete Products

Troweling

The following admixture, or approved equal, is allowed by the City. Please refer to the manufacture's recommendations for dosage rates.

- ACEiT Blue Manufactured by ACEiT Industries

43-2.01H Water

Water will conform to the requirements of ASTM C1602. It will be clean, clear, and free of acids, salts, alkalis or organic materials that may be detrimental to the quality of the concrete. Non-potable water may be considered as a source for part or all of the water, providing the mix design indicates proof that the use of such water will not have any deleterious effect on the strength and durability properties of the RCC.

43-2.01I Curing Compound

Concrete curing compounds will conform to ASTM C 309 Type 2 (white pigment).

43-2.01J Joint Sealants and Fillers

Not used.

43-4 EXECUTION

43-4.01 Requirements for RCC and Development of Production RCC Mix

43-4.01A Requirements for RCC

Proposed mix design(s) will meet the following minimum strength requirements based on test results of cylinders prepared according to ASTM C1435. RCC will have minimum compressive strength of 4,000 psi at 28-days. In addition, the RCC will have a minimum compressive strength of 2,500 psi at 3-days. Consistency and formability of RCC will be adequate to the methods of its production, delivery, placement and consolidation. The objective consists of proportioning RCC

that contains sufficient volume of paste to coat the aggregates and fill voids between them, is able to produce the required strength and durability, constructs roads that can be open to traffic within 3 days or sooner should the RCC reach the required strength before 3 days and makes it easy to achieve the maximum density. You will submit to the Engineer along with the statement of the proposed mix design data justifying the selected consistency and formability of the mix and method of its control.

43-4.01B Preconstruction Laboratory Mix Design Studies

Your independent testing laboratory will proportion RCC to meet the specified requirements for strength and your requirements for consistency and formability. The laboratory will demonstrate its compliance with the requirements of ASTM C1077. The mix design backup information will show the moisture-density curve with associated maximum dry density, wet density and optimum moisture content, details of cementitious materials, 1-day, 2-day, 3-day, 7-day and 28-day, or 42-day compressive strengths, including strength gain curve for the proposed mix. The mix design will identify the quantity and gradation of aggregates, the optimum moisture content, and the amount of Portland cement, other cementitious material(s) and the total cementitious materials required per cubic yard of the concrete. The mix design will specify the proportions of each material (aggregate, cement, water, and admixtures) in the mix in terms of pounds per cubic yard based on saturated surface dry weights. Any changes to the mix design will be approved by the Engineer. Should a change in material source be proposed, the Engineer must approve a new mix design. Proportioning of RCC will be performed in general compliance and in the sequence recommended by ACI 327R-16, Chapter 6 “Mixture Proportioning.”

43-4.01C Field Evaluation of Production Mix

The proposed production mix will be evaluated by field testing using the production equipment, batching and mixing procedures. RCC will be sampled and tested for compressive strength at 1, 2, 3, 7, 28, and 42 days, 3 cylinders per each age of testing. To be qualified, the mix will demonstrate the average compressive strength at the final specification age exceeding the minimum required one by at least 750 psi and no individual cylinder will demonstrate strength exceeding the minimum specified one by less than 650 psi. Aggregates will be tested for content of free moisture by direct moisture evaporation. Batch weights of materials will meet the tolerances specified in ASTM C94 or C685, depending on the method of production. Aggregates will be also sampled and tested for compliance with gradation and cleanliness requirements of the specifications of this section.

43-4.02 RCC PRODUCTION AND DELIVERY

43-4.02A Storage of Materials

Portland cement and supplementary cementing materials will be stored in weather tight bins or silos that protect them from dampness and contamination and provide easy access for inspection and identification of each shipment. RCC supplier will assure that properties of materials will not change during storage and handling operations.

The supplier is required to have separate stockpiles (bunkers) for different aggregate sizes, which should be arranged in a manner preventing intermixing of different aggregate sizes, and their contamination by foreign materials. If stockpiles are located immediately next to each other, they will be physically separated. Stockpiles will be arranged on hardened surfaces.

Procedure for forming stockpiles will preclude segregation of aggregates (Reference: Recommendations for forming stockpiles, excluding segregation of aggregates, are provided in ACI 304).

For temperature adjustment during hot weather periods of time, stockpiles for coarse aggregates are recommended to be shaded and provided with water sprinklers.

Silos for hydraulic cements and supplementary cementitious materials will be completely weather-tight.

Chemical admixtures will be stored and handled in a manner protecting them from contamination.

43-4.02B Batching, Mixing and Transporting of RCC

The Engineer will approve the mixing plant before you begin producing RCC. The mixing plant will follow ACI 327R-14.

The plant will be capable of producing an RCC mixture in the proportions defined by the final approved mix design and within the specified tolerances. The capacity of the plant will be sufficient to produce a uniform mixture at a rate compatible with the placement equipment. The minimum homogeneous production rate of any acceptable plant will be 300 tons per hour. For batch mixers, the volume of RCC material in the mixing chamber will not be more than the rated capacity for dry concrete mixtures. Multiple plants will not be used to supply RCC material to the paver. The Engineer can halt operations if the plant is unable to produce the RCC mixture sufficiently in quality or quantity, until a plant meeting all requirements is obtained.

A pugmill plant is required and will match that listed during the prequalification process unless a substitution is made which meets the specifications of this section and is approved by the Engineer. It will be a central plant with a twin shaft pugmill mixer, capable of batch or continuous mixing, equipped with synchronized metering devices and feeders to maintain the correct proportions of aggregate, cement, mineral admixture, and water. Other pugmill plant requirements are as follows:

1. Aggregate Storage. The aggregate and sand will be furnished in 2 or more stockpiles. If previously blended aggregate is furnished, storage may be in a stockpile from which it is fed directly to a conveyor feeding the mixer. If aggregate is furnished in two or more size groups, aggregate separation will be provided at the stockpiles.
2. Aggregate Bin. Aggregate bins will have a feed rate controlled by a variable speed belt, or an operable gate calibrated to accurately deliver any specified quantity of material. If two or more aggregate size stockpile sources are used, the feed rate from each bin will be readily adjustable to change aggregate proportions, when required. Feed rate controls will maintain the established proportions of aggregate from each stockpile bin when the combined aggregate delivery is increased or decreased.
3. Plant Scales. Plant scales for any weigh box or hopper will be either of beam or springless-dial type, and be sensitive to 0.5 percent of the maximum load required. Beam-type scales will have a separate beam for each aggregate size, with a single telltale actuated for each beam, and a tare beam for balancing hopper. Belt scales will be of an approved design. Standard test weights accurate to plus or minus 0.1 percent will be provided for checking plant scales.
4. Cement and Mineral Admixture Material Storage. Separate and independent storage silos will be used for Portland cement and mineral admixture. Each silo will be clearly identified to avoid confusion during silo loadings. If you choose to preblend the cementations material you must employ blending equipment acceptable to the Engineer and demonstrate, with a testing plan, the ability to successfully produce a uniform blended material meeting the mix design requirements. Testing of the preblended cementations material will be done daily to assure both uniformity and proper quantities.

5. Cement and Mineral Admixture Feed Unit. Satisfactory means of dispensing Portland cement and mineral admixture, volumetrically or by weight, will be provided to assure a uniform and accurate quantity of cementations material enters the mixer.
6. Water Control Unit. The required amount of water for the approved mix will be measured by weight or volume. The unit will be equipped with an accurate metering device. The water flow will be controlled by a meter, valve, or other approved regulating device to maintain uniform moisture content in the mixture.
7. Surge Hopper. For continuous operating pugmills, a surge hopper attached to the end of the final discharge belt will be provided to temporarily hold the RCC discharge to allow the plant to operate continuously. No other stockpiling will be permitted. For batch mixers, discharge all material in the mixing chamber before recharging.

Alternative Mixing Equipment. Other types of batching and mixing equipment and configurations other than twin shaft pugmill mixers will not be used. This includes but is not limited to dry batch plants, central mix tilt drum plants, ready mix truck mixers, volumetric concrete trucks and trailers.

The mixing time will be pre-established by uniformity studies conducted, as provided in ACI 327R-14, Section 8.2 “Roller-compacted concrete mixing plants.”

Locate the mixing plant within 30 minutes hauling time from the construction site, when non-agitating vehicles are used for delivery. The supplier may request a longer hauling time not exceeding 60 minutes, provided the documentation is submitted evidencing that properties of fresh RCC are suitable and allow for convenient and proper placement and consolidation.

Prior to commencement of RCC production, you will carry out a complete and comprehensive calibration of the plant in accordance with the manufacturer's recommended practice. All scales, containers, and other items necessary to complete the calibration will be provided by you. After completion of the initial calibration, the plant will be recalibrated as directed by the Engineer.

The transportation of the RCC to the areas to be paved, except for concrete mixed in truck mixers, will be in dump trucks fitted and equipped, when necessary, with retractable protective covers for protection from rain or excessive evaporation. The trucks will be dumped clean with no buildup or hanging of RCC material. The dump trucks will deposit the RCC material directly into the hopper of the paver or into a secondary material distribution system which deposits the material into the paver hopper. Dump truck delivery must be scheduled so that RCC material is spread and compacted within the specified time limits. Access routes will be clearly marked over the area to be constructed. Haul time will not exceed 20 minutes without addition of admixtures which have proven to successfully maintain moisture content levels in RCC.

43-4.02C General Requirements

Method of production of RCC will assure that concrete proportions comply with the design quantities of ingredients, as provided by the approved statement of concrete mix design, and that concrete is mixed uniformly. For central batch plants mixing time will be established by uniformity testing per the procedure provided in ASTM C94.

43-4.02D Accuracy of Batching, Tolerances

Accuracy of batching (namely weights of cementing materials and aggregates, weight or volume of water, and volumes of liquid chemical admixtures) comply with tolerances specified in ASTM C94 or C685, as applicable. You will supply daily plant records of production and quantities of materials used that day to the Engineer.

43-4.02E Change of Material Source

If the type or source of cementing materials, or aggregates, or type of chemical admixtures changes, the production of RCC will be suspended, and a new mix design will be developed, tested, and submitted for approval.

43-4.02F Pavement Test Section

1. Construct a 150-foot long test section prior to starting construction. Construct the test section using the proposed mixture design, the staff that will be completing the work, and the materials and equipment that are listed in the pavement construction plan and approved by the Engineer. If the pavement placement requires more than one pass of the paver, construct the test section a minimum of two paver widths wide. If the pavement placement requires more than one lift, construct the test section to the required number of lifts. If the pavement placement requires more than one day of paving or longitudinal cold joints, construct the test section over two days and begin paving from a longitudinal cold joint on the second day. Place the test section in a location approved by the Engineer. The test section will not be incorporated into the final project.
   The Engineer will evaluate the following criteria from the test section:
   - Adequacy of the production method and equipment to meet productivity requirements and produce uniform RCC.
   - Maximum density directly behind the paver prior to roller compaction.
   - Suitability of the proposed lift thickness.
   - Sequence of primary/secondary roller passes (with and without vibration).
   - Maximum density following roller compaction.
   - Texture and surface finish acceptability.
   - Integrity of both fresh and cold joints (vertical and horizontal).
   - Compressive strength of RCC based on molded cylinders and extracted cores tested at 1-day, 2-days, 3-days, 7-days, and 28-days.
   - Procedures for troweling and finishing RCC surface to meet specification
   - Process for applying curing compound at appropriate rate and coverage
   - Process for installing saw cuts in pavement
2. Construction (Cold) Joint Edges. You will establish the maximum angle for edges to be used in joint faces of construction (cold) joints.
3. If the test area does not meet acceptance requirements, you will remove and reconstruct a new test section with corrected procedures at no additional cost to the City. You will be required to provide new test sections, for which no additional compensation will be allowed, until an acceptable, reproducible test section is achieved.

43-4.02G Placement

1. Condition of the Subgrade/Subbase. Prior to RCC placement, the surface of the subgrade/subbase will be clean and free of foreign material, ponded water, and frost prior to the placement of the RCC pavement mixture. The subgrade/subbase must be uniformly moist at the time of RCC placement. If sprinkling of water is required to remoisten certain areas, the method of sprinkling will not be such that it forms mud or pools of free-standing water. Prior to placement of RCC, the subgrade/subbase will be checked for proper density and soft or yielding areas and these areas will be corrected with a dig out repair.

2. Jointing Plan. Prior to placement of the RCC, joint locations will be marked by you in the field to ensure cold joints will align with the jointing plan**.** Following RCC placement, and

before sawcutting the joints, the jointing plan will be marked on the RCC by you with a temporary marking material to demonstrate to the engineer that the sawcuts are being placed per the plan.

3. Paver Requirements. RCC will be placed with an approved paver as noted in the specifications of this section and will meet the following requirements:
   a. The quantity of RCC material in the paver will not be allowed to approach empty between loads. The material will always be maintained above the auger shaft during paving.
   b. The paver will operate in a manner that will prevent segregation and produce a smooth continuous surface without tearing, pulling, or shoving. The spread of the RCC will be limited to a length that can be compacted and finished within the appropriate time limit under the prevailing air temperature, wind, and climatic conditions.
   c. The paver will proceed in a steady, continuous manner. Paver speed during placement operations will not exceed the speed necessary to ensure that minimum density requirements are met and surface distress is minimized.
   d. The surface of the RCC pavement once it leaves the paver will be smooth, uniform, and continuous without excessive tears, ridges or aggregate segregation.
   e. Lift Thickness. Place RCC in lifts between 4 inches and 9 inches thick. Multiple lifts are not allowed for pavements less than 9 inches thick. For multiple lift placements, compact the bottom layer to the minimum specified wet density before placing the next lift. No lift will be less than 4 inches.
   f. Adjacent Lane Placement. All longitudinal joints must be considered a cold joint and will be prepared in accordance with “Cold Vertical Joints” section found elsewhere in these Special Provisions. Fresh joints will only be allowed under special circumstances at the Engineer's discretion. In that case, the adjacent paving lane will be placed within 30 minutes and additional precautions may be necessary to avoid excessive moisture loss at the joint such as the use of set retarding admixtures, water misting, and blankets.
   g. Hand Spreading. Broadcasting or fanning the RCC material across areas being compacted will not be permitted. Additions of material may only be done immediately behind the paver and before any compaction has taken place. Any segregated coarse aggregate will be removed from the surface before rolling.
   h. Segregation. If segregation occurs in the RCC during paving, operations will cease until the cause is determined and corrected.
   i. Placement. RCC placement will be done in a pattern so that the curing water from the previous placements will not pose a runoff problem on the fresh RCC surface or on the subbase layer.
   j. Paving Inaccessible Areas. Areas inaccessible to either paver or roller will be placed with cast-in-place concrete with a minimum compressive strength of 4,000 psi or as specified by the Engineer. Your attention is directed to the “Portland Cement Concrete (PCC) Pavement” or “Rapid Set Concrete (RSC) Pavement” section found elsewhere in these Special Provisions for details in furnishing and placing cast-in-place concrete pavement. In areas that may be subjected to high load transfer, the Engineer may require the cast-in-place concrete to be doweled into the RCC.
   k. Expansion Joints. Expansion Joints will be placed at all transverse cold joints, where concrete pavements abut asphalt concrete pavements, and at intersections of concrete pavement streets.

43-4.02H Compaction

1. Compaction will begin immediately behind the placement process and will be completed within 60 minutes of the start of mixing cementing materials with water. The time may be increased or decreased at the discretion of the Engineer depending on use of set controlling admixtures, initial concrete temperature, and/or ambient weather conditions (temperature, wind velocity and humidity).
2. Rolling. Apply the sequence and number of passes by vibratory and non-vibratory rolling to obtain the specified density proposed in the paving construction plan and verified during construction of the test section. Do not run rollers on adjacent RCC that was placed less than 7-days prior. Do not operate rollers in the vibratory mode while stopped. Use steel drum rollers in static mode and/or rubber-tire rollers for final compaction.
3. Rolling Longitudinal and Transverse Joints. If a cold joint is planned, the complete lane will be rolled and cold joint procedures will be followed per the specifications of this section. If the Engineer approves fresh joint construction, the roller will not operate within 24 in. of the edge of a freshly placed lane until the adjacent lane is placed. Then both edges of the two lanes will be rolled together within the allowable time.
4. Longitudinal joints will be given additional rolling as necessary to produce the specified density for the full depth of the lift to achieve a tight smooth transition across the joint. Any uneven marks left by vibrating rolling will be smoothed out by non-vibrating or rubber tire rolling. The surface will be rolled until a relatively smooth, flat surface, reasonably free of tearing and cracking is obtained. For freshly placed RCC next to an existing cold joint, roll the complete lane, taking extreme care not to bridge the roller drum between the new unconsolidated fresh material and a previous cold joint edge. Such bridging of roller drum over cold joint edges, especially in vibratory mode, can significantly degrade the cold joint edge.
5. Speed of the rollers will always be slow enough to avoid displacement of the RCC pavement. Displacement of the surface resulting from reversing or turning action of the roller will be corrected immediately.
6. Compact areas inaccessible to large rollers with small drum rollers, walk-behind vibratory rollers or plate tampers. Cast-in-place, conventional concrete meeting the same strength requirements as specified for RCC may be used in these areas as a replacement for RCC.

43-4.02J Formation of Joints

1. Fresh Vertical Joints. Fresh longitudinal joints will not be allowed on this project without approval by the Engineer. A vertical joint will be considered a fresh joint when an adjacent RCC lane is placed within 30 minutes of the batch time of the previous lane. This time may be reduced depending on ambient conditions, as well additional precautions may be necessary to avoid excessive moisture loss at the joint such as the use of evaporation retarders, fogging, and curing mats.
    a. Fresh longitudinal joints will be constructed prior to placement of an adjacent lane by leaving the outer 24 inches of the freshly placed lane uncompacted during rolling. Then both edges of the two lanes will be rolled together within the allowable time.
    b. Adjacent lanes will be placed such that the new lane abuts tightly against the incomplete edge of the prior lane.
    c. The joint formed by both lanes will be compacted by centering the roller drum over the joint and compacting both edges simultaneously.
    d. Extra passes of the roller may be required at the joint to achieve the required density.

2. Cold Vertical Joints. Any planned or unplanned construction joints that do not qualify as fresh joints will be considered cold joints and will be treated as follows:

a. Longitudinal and Transverse Cold Joints. Formed joints that do not meet the minimum density requirements and all unformed joints will be cut vertically for the full depth or produced using an edging shoe. The vertical cut will be at least 6 inches from the exposed edge and located on a joint identified on the jointing plan. Do not perform this operation any sooner than 2 hours after final compaction. Demonstrate to the Engineer that saw cutting will not cause significant edge raveling and remove all slurry and excess material from the cutting operation.

   If you demonstrate you can construct a cold vertical joint that can meet the minimum joint density requirements using an "edge shoe," then the use of the edge shoe in lieu of cutting a cold vertical joint is allowed. The edge shoe will be as close to vertical as possible with the maximum allowable positive edge angle being of 10 degrees from vertical.

   Cold joints cut after two hours of placement will be saw-cut 1/4 to 1/3 depth of the RCC pavement with the rest removed by hand or mechanical equipment. Any modification or substitution of the saw cutting procedure must be demonstrated to and accepted by the Engineer. All excess material from the joint cutting will be removed.

b. Prior to placing fresh RCC mixture against a compacted cold vertical joint, the joint will be thoroughly cleaned of any loose or foreign material. The vertical joint face will be wetted and in a moist condition immediately prior to placement of the adjacent lane.

c. Uneven surfaces or slopes greater than as determined for "Cold Joint Edges" will be cut vertically for the full depth of the RCC.

d. The rollers will pass over the end of the freshly placed RCC mixture when a vertical cold joint is to be made. Unless the RCC cold joint has been formed by an edging shoe, the edge of the previously placed RCC pavement will be cut back to expose an even vertical surface for the full thickness of the course without disturbance of the RCC that is to remain in place. Uneven areas and raveling will be corrected.

e. The top layer will be placed so that longitudinal joints in that layer will coincide with joints in the lower layers of the pavement. Transverse joints in the top layer will be offset with transverse joints in the lower layers of the pavement.

f. Place expansion joint at all transverse cold joints.

3. RCC Pavement Joints at Structures. The joints between RCC pavement and concrete structures will be treated as isolation vertical joints.

4. Control Joints. Control joints will be constructed in the RCC pavement to induce cracking at pre-selected locations. Joint locations will be as shown on the Plans or as directed by the Engineer. Early entry saws will be utilized as soon as possible behind the rolling operation and set to manufacturer's recommendations. Saw crack control joints to the interval specified on the plans. The depth of the crack control joints will be equal to 1/3 of the thickness of RCC pavement. The width of the crack control joints will be 1/8". Extend all crack control joints the entire width of paving. When sawing crack control joints, begin as soon as the RCC cuts without excessive raveling along the saw cut and finish before conditions induce uncontrolled cracking, regardless of the time or weather. Control joints will be sprayed with curing compound or water depending on the curing method.

5. Isolation Joints. Line the perimeter of fixed structures such as manholes, valves, trench drains, and with strips of fiberboard or other approved isolation joint material, as noted in

the plan details, prior to paving. Joint filler for isolation joints will be preformed expansion joint filler for concrete (bituminous type) in compliance with ASTM D 994.

6. Expansion Joints**.** Install expansion joints to the details, dimensions and locations shown on the Plans. If the plans do not include details and conditions warrant expansion joints, propose a plan and install expansion joints in the pavement, with approval of the Engineer. Include width, filler, sealing material, location and/or spacing recommendations in the expansion joint plan, considering thermal effects, regional climatic conditions, RCC coefficient of thermal expansion and expected daily temperature ranges at the time of placement.

43-4.02K Finishing

Final RCC pavement surface will be diamond ground finished per Section 42 “GROOVE AND GRIND PAVEMENT”.

If an intermittent troweled and broom finish is applied use, self-propelled machine trowels.

You will determine the number of machine trowels required to perform the work at a rate equal to the concrete delivery rate. When the time from concrete placement to machine trowels finishing exceeds 30 minutes, you will stop concrete delivery. When machine trowels are in proper position, you may resume concrete delivery and paving.

Trowels will be equipped with devices that adjust the underside to a true flat surface.

43-4-.03 CURING

1. General. Immediately after final rolling, compaction testing, and finishing you will use an approved curing method outlined below. Water cure or curing compound will be applied vertically from above the pavement. Application will not be allowed from the side of the pavement. During this work you will control the work such that it does not result in visible water or curing compound particulate migration. Reapply curing compound to sawcuts and disturbed areas
2. Water Cure. Water cure will be applied by water trucks equipped with misting spray nozzles, soaking hoses, sprinkler system or other means that will assure a uniform moist condition to the RCC. Application of this moisture will create fog or mist immediately above concrete surface and must be done in a manner that will not wash out or damage the surface of the finished RCC pavement. The surface of the RCC pavement will be kept continuously moist for three (3) days.
3. Curing Compound. A clear with sacrificial red dye membrane forming curing compound conforming to ASTM C 309 Type ID Class B will be applied at a rate of 150 sf / gallon no later than one hour after completion of finishing operations on the surface and edges of RCC. This application will ensure a uniform continuous (free of uncured areas) membrane across the entire RCC pavement. If the application rate is found to be insufficient, you, with approval of the Engineer, may increase the application rate to a level which achieves a void-free surface without ponding. In case the minimum rate of application is specified otherwise by manufacturer’s recommendations, the highest application rate will govern.
4. Sheet Materials. Curing paper, plastic and other sheet materials for curing RCC will conform to ASTM C 171. The coverings will be held securely in place and weighted to maintain a close contact with the RCC surface throughout the entire curing period. The edges of adjoining sheets will be overlapped and held in place with sandbags, planking, pressure adhesive tape, or other City-approved method. Sheet material will be provided and kept readily available to cover pavement less than 12 hours old if rainfall occurs.

43-4.04 CONTRACTOR'S QUALITY CONTROL

43-4.04A Quality Control

You will provide all quality control (QC) inspection and testing that the Engineer deems necessary to properly control the quality, consistency, and uniformity of the RCC produced and placed. Frequency of quality control tests is specified in Table 2. You will make available to the Engineer any information and data collected by quality control inspection and testing. Before the paving work starts, you will employ an independent testing laboratory for controlling RCC materials, thickness of pavement, and strength of the RCC. The independent testing laboratory will demonstrate compliance with ASTM C1077 and be CCRL audited and AMRL accredited for the scope of testing to be performed. Experience and qualifications of testing laboratory will be provided to City for approval of testing laboratory prior to start of work.

Lots will be 250 cubic yards.

Should compressive strength of RCC pavement established by testing of formed cylinders be below the minimum specified compressive strength, You are allowed to obtain condition and test cores according to ASTM C42 and C39. The cores will be tested at the specification age per Section 43-4.05E Strength Requirements.

You will be responsible for developing the RCC mix required by these Special Provisions. You will allow the City to inspect the mixing plant for verification of weights or proportions and character of material in the preparation of RCC mix.

Inspection or testing by the City will not augment or replace your quality control nor relieve him of his contractual responsibility.

You will conduct quality control testing during placing operations to ensure the RCC material is placed, compacted, finished, and cured in accordance with the requirements in Table 2.

Table 2: Quality Control Requirements at Placement Site

Item	Method	Frequency or Lot Size	Acceptance
RCC Moisture Content	ASTM C566	Sample at mixing plant or point of placement from initial truck load and as required	±1.0% of optimum moisture content per ASTM D1557
In-place Wet Mat Density	ASTM C1040 direct transmission mode	At beginning of placement immediately behind the paver and within 30 minutes of final compaction; One Test per lot	At least 98% of the maximum laboratory wet density by ASTM D1557 based on an average of four consecutive tests with no test below 96%
In-place Wet Joint Density	ASTM C1040 direct transmission mode	One Test per lot and within 30 minutes after final compaction	At least 96% of the maximum laboratory wet density by ASTM D1557 based on an average of four consecutive tests with no test below 94%

Item	Method	Frequency or Lot Size	Acceptance
Cylinders for Compressive Strength	ASTM C1435 for molding cylinders17; ASTM C31 for curing and handling cylinders; and ASTM C39 for testing cylinders	One set of three cylinders minimum for every lot of paving, or one day of production, whichever is less.	Average strength equal to 100% of the specified strength per these Special Provisions, no single result below 90%.
Surface Smoothness	Straightedge measurement in field or inertial profiler	One Test per lot	Surface must be within 0.02' of straightedge lower edge
Thickness	ASTM C42, ASTM C174	One core for per lot, or one day of production, whichever is less.	Average thickness must not be deficient by more than 0.02' with no individual thickness deficient by more than 0.05'

43-4.04B Testing Plan

You are responsible for determining and submitting quality control testing plan as a part of QC Plan.

43-4.04 QUALITY ASSURANCE AND ACCEPTANCE CRITERIA

43-4.05A General

1. You will provide safe and convenient access, acceptable to the Engineer, for inspection and sampling of the RCC and will cooperate in the inspection and sampling process when requested to do so.
2. You will have major equipment items such as batch plant, rollers, pavers, trucks, and similar items, available for inspection by the City. Deficiencies in quality, quantity, or types of equipment will be corrected prior to starting Work. This inspection and approval will in no way relieve you from the obligation to provide the equipment required to perform the work.
3. RCC plant inspections will be conducted at random to check the settings, operation, materials, proportions, and uniformity of concrete produced. The Engineer will order the plant shut down if deficiencies are found, such as but not limited to deviation from approved job-mix formula, segregation in the mix, or inconsistent plant operation. You will generate computer printouts of batching and delivery tickets in compliance with ASTM C94, or C685 and provide them to the Engineer. You will provide to the satisfaction of the Engineer his corrective actions prior to re-starting production.

43-4.05B Thickness Requirements

Determine the pavement thickness from cores by average caliper measurements in accordance with ASTM C174. Extract one core for each lot of RCC pavement per Table 2. For pavement placement units consisting of less than one lot of RCC pavement, include the pavement with the previous or next placement unit.

As an option, use alternative or additional thickness determination methods to satisfy the requirements of Table 2, with the Engineer's approval. Such alternate thickness determination procedures can include surveying, GPS devices, and/or LIDAR.

43-4.05C Defective Area Correction for Pavement Thickness

A pay adjustment according to Table 3 will be assessed for RCC pavement that does not fully meet the specification for thickness and surface texture. Adjustments will be applied to each area of pavement where thickness or surface texture deficiencies are identified. Limits of area subject to pay factor to be determined by the Engineer. You will be responsible for taking additional samples to assist the Engineer in determination of limits of deficient area. If a core is found to be deficient in thickness, two additional cores will be taken at your expense to determine the extent of the deficiency. Limits of deficient areas are to be determined by the City.

Table 3: Pay Adjustment Table for Thickness

Inches	Percent Payment
0.00 to 0.24	100
0.25 to 0.49	90
0.50 or greater	Remove and replace

43-4.05D Density Requirements

1. In-place Wet Mat Density Determination. Determine the In-place Wet Mat Density on pavement that is at least 24 inches from any joint in accordance with ASTM C1040 Direct Transmission mode at 75% of total RCC pavement depth for each lot of RCC pavement per Table 2. For pavement placement units consisting of less than one lot of RCC pavement, include the pavement with the previous or next placement unit.
2. In-place Wet Joint Density Determination. Determine the In-place Wet Joint Density on joints at distance 12 inches or greater for free edge and 6 inches or greater for a confined edge accordance with ASTM C1040 Direct Transmission mode for each lot of RCC pavement per Table 2. For pavement placement units consisting of less than one lot of RCC pavement, include the pavement with the previous or next placement unit.
3. Defective Area Correction for Density. For In-place Wet Mat Density and In-place Wet Joint Density, full payment will be made for pavement based on the acceptance criteria in Table 2. Pavement lots that have density that is less than the required density are subject to further evaluation. Take an additional test within a 5 to 8 foot radius, of the original test (within the same placement unit). If this test is below the acceptance criteria in Table 2, additional roller passes will be made across the full lane width between the last testing location that produced an acceptable reading and the paver. If the additional roller passes does not correct the problem, or causes the density to decrease, the paving operation will be discontinued until corrections can be made to assure that the specified density can be achieved.

43-4.05E Strength Requirements

1. Strength Determination. Determine the Compressive Strength for cylinders prepared in accordance and for each lot of RCC pavement per Table 2. For pavement placement units consisting of less than one lot of RCC pavement, include the pavement with the previous or next placement unit.
2. Remedial Action for Deficient Strength. Full payment will be made for cylinders meeting the requirements of the mix design, whose average strength equal to 100% of the specified strength, with no single result below 90%.

3. Pavement lots that have strength that are less than the required strength is subject to further evaluation.
4. Extract three cores at random locations within the failed sublot after the RCC pavement is at least 28 days old. Remove, handle and test the compressive strength of the three cores according to ASTM C42.
5. Determine the average of the compressive strength of the three cores. If the average of the three cores does not meet the minimum specified compressive strength at 28 days per section 43-4.01A, the RCC is not acceptable and requires removal.
6. Removal and Replacement**.** Areas determined to have strength deficiencies that are not resolved through referee testing, as noted above, require removal and replacement. After the referee period or at least seven days, remove the hardened RCC material by full depth saw cutting the perimeter of the deficient area along joint lines. Repair the area using an air-entrained cast-in-place concrete meeting the strength requirements per these Special Provisions or as directed by the Engineer. The new concrete will be doweled into the existing RCC layer using dowel bars, then diamond ground to finish. Please refer to Caltrans Standard Plan P10 in Appendix G.

43-4.05F Surface Requirements

1. Smoothness for RCC Pavements. You will grind all surfaces to the tolerance by use of self-propelled diamond grinders, provided grinding does not create deviation from other tolerances.
   Surface Texture. The surface texture after rolling and curing will be smooth and uniform over the entire area of pavement and will reasonably match the surface condition of the test strip. The surface area will be free of rips, bird baths, areas of loose aggregate, surface pitting, voids or indentations, pockmarks, surface tears greater than 1/4" depth and 1/4" width, check cracking, segregation or rock pockets, pumped areas, aggregate drag marks, and areas where fines have been washed away during the curing process.
   Defective area Correction for Surface Texture. Correct surface texture deficiencies using an approved grinding device, or removal and replacement.
2. Areas with excessive smoothness and texture issues, as determined by the Engineer when compared to the approved test section, will be removed and replaced from joint to joint at your expense per 43-4.05E(6) above.

43-4.05G Correcting Noncompliant Pavement Work

In addition to removing pavement for other noncompliance, remove and replace JPCP slabs that have either full-depth cracks or working cracks, unless otherwise approved by the Engineer. Cracks that appear that are not full-depth are to be treated under Caltrans Highway Design Manual section 41-3.

43-4.05H Restoration After Quality Assurance Testing

You will fill the core holes with Portland cement concrete as directed by the Engineer. Concrete will meet the requirements of Section 40, "Concrete Pavement" of the Standard Specifications. Thickness will be as specified for RCC and core holes are to be filled to be flush with surrounding pavement surface.

43-5 SUPERINTENDENCE

In addition to the Standard Specifications, and requirements of these Special Provisions, the following will apply:

As part of the bid package and prior to Project award, the you must have under contract with, either a consultant or subcontractor that will provide a RCC Superintendent for the project and provide documentation of such agreement. The RCC Superintendent will be present at the job

site during all items relating to Roller Compacted Concrete. Additionally, you will submit, as part of the bid package, the RCC Superintendent's resume. At a minimum, the RCC Superintendent's resume will include the following:

- RCC Superintendent must have experience with the equipment required of the work including pugmills and high-density pavers.
- RCC Superintendent must have a minimum of 5 years RCC Pavement experience.
- RCC Superintendent must have completed at least 3 RCC pavement projects with a minimum of 2,000 CY each using the required equipment.
- Three (3) RCC project references, including photographs that are representative of the projects, must be included.
- You or RCC Superintendent must have completed at least 5 public roadway projects that included asphalt, PCC and/or RSC paving. Project references are required including photographs that are representative of the projects.

As part of their duties, the RCC Superintendent will be required to perform the following items:

- RCC Superintendent must submit and conduct a City approved pre-construction RCC training program agenda and trainer for the paving crew, and City staff involved with the RCC portion of the project. The training must be repeated if the contractor or paving crew staff changes.
- RCC Superintendent must oversee the prime contractor and subcontractor perform at least one (1) RCC paving test section specific to this project, prior to paving. This can be inclusive of the test sections required elsewhere in the this section.

The Engineer has sole discretion to approve or reject the RCC Superintendent. If the proposed RCC superintendent is rejected, you have three (3) business days to submit another RCC Superintendent for consideration by the Engineer.

43-6 MEASUREMENT AND PAYMENT

Measurement and payment for Roller Compacted Concrete will be as set forth in Section 9-1.02C, "Final Pay Item Quantities" of the Standard Specifications, and these Special Provisions. The quantity shown in the bid proposal will be the final quantity for which payment of such specific portion of the Work will be made, unless the dimensions of said portions of the Work shown on the plan are revised by the City. If such dimensions are revised and such revisions result in an increase or decrease in the quantities of such Work, the final quantities for payment will be revised in the amount represented by the changes in the dimensions. The estimated quantities for such specific portion of the Work will be considered as approximate only and no guarantee is made that the quantities shown on the plans will equal the estimated quantities. No allowance will be made if the quantities based on computations do not equal the estimated quantities.

The pavement test section work, as required by these Special Provisions will be considered as included in the contract price paid for the various items of work.

49 PILING

49-1 GENERAL

49-1.01 General: Section 49 includes specifications for construction of piling.

Section 49 is applicable to the retaining walls with Cast-In-Drilled-Hole (CIDH) pile foundation types. Piling work will be included in applicable retaining wall bid items, see Section 51 “Concrete Structures.”

49-3 CAST-IN-PLACE CONCRETE PILING

49-3.01 General: Cast-in-Place Concrete Piling: Retaining walls defined in the structural plans as utilizing “CIDH piling” will comply with the Standard Specification Section 49-3, for CIDH concrete piles.

[Version: 07/02/19 CDA STD2018]

51 CONCRETE STRUCTURES

51-1 GENERAL

51-1.01A Summary: Concrete structures including Structural Concrete – Retaining Wall, Structural Concrete - Box Culvert Transitions, and Precast Box Culvert, will conform to the provisions in Section 51, "Concrete Structures," and Section 51-7, "Minor Structures," of the Standard Specifications and these Special Provisions.

Concrete will be made using Type II portland cement and will conform to the provisions of Section 90 of the Standard Specifications. Concrete will be cured in accordance with Section 90-1.03B of the Standard Specifications.

Depth of Footings: The elevations of the bottoms of footings shown on the plans will be considered as approximately only, and the Engineer may order, in writing, such changes in elevations of footings as may be necessary to secure a satisfactory foundation.

You will be responsible for any additional costs incurred should you elect to fabricate materials or do other work prior to the final determination of footing elevations.

Reinforcement: Reinforcement will conform to the provisions of Section 52 of the Standard Specifications. You will furnish the Engineer with a certificate, per 52-1.01C(3) of the Standard Specifications, from the supplier of the reinforcing steel stating that the steel delivered complies with the requirements of Section 52-1.02 of the Standard Specifications.

Reinforcement will be included in the prices paid for concrete structures.

51-1.03D(3) Concrete Deposited Under Water: This section of the Standard Specifications does not apply. Placing of concrete under water will not be permitted.

Backfill: Structural Backfill will comply with the Standard Specifications Section 19-3 "Structure Excavation and Backfill".

Backfill material for concrete structures will be select material, as defined in the structural plans, or as approved by the Engineer in writing. Limits of select backfill will be, at a minimum, in compliance with the Standard Specifications Section 19-3 and the Structural Plans.

51-1.03E(7) Drains at Walls: All retaining wall subsurface drainage will be installed per Caltrans Standards. Perforated plastic pipe underdrain will conform to the provisions in Section 68, "Subsurface Drains," of the Standard Specifications, all Amendments, and these special provisions. Perforated plastic pipe underdrain will be smooth-wall (PVC) perforated pipe conforming to AASHTO Designation M278. All elbows, wyes and tees to be sweep type.

Permeable material for use with underdrains will be Class 1, Type A, permeable material and will conform to the provisions in Section 68, "Subsurface Drains," of the Standard Specifications, all Amendments.

Filter fabric for use with underdrains will conform to the provisions in Section 68, "Subsurface Drains" of the Standard Specifications, all Amendments.

51-4 PRECAST CONCRETE MEMBERS

51-4.01A Summary: Precast structural box culvert will comply with the Standard Specifications Section 51-4.

51-7 MINOR STRUCTURES

51-7.01A General: Minor concrete structures include pipe headwalls, end walls, storm drain manholes, storm drain drop inlets, catch basins, and minor foundations (e.g., relocated Piner High sign) and will be constructed per City Standards, the Standard Specifications, and these Special Provisions.

Storm drain manholes will be standard 48-inch and 72-inch diameter precast concrete manholes at the locations shown on the plans and in accordance with these Special Provisions and City Standard 400.

Concrete for manhole bases will be made using Type II portland cement concrete conforming to the applicable requirements of Section 90 of the Standard Specifications, July 1992 edition, and will be poured full thickness against the sides of the manhole excavation or will be formed.

Manhole barrels and taper sections will be precast concrete sections using Type II portland cement complying with ASTM Designation: C150. The barrel and taper sections will be constructed in accordance with the applicable provisions of ASTM Designation: C478.

Top of manhole frames and covers will be set accurately to the existing finished grade in paved streets and to the elevation shown in unimproved areas.

Concrete for catch basins will be made using Type II portland cement concrete conforming to the requirements of Section 90 of the Standard Specifications, July 1992 edition.

Bar reinforcing steel will conform to and be placed in accordance with the applicable provisions of Section 52 of the Standard Specifications with the following modifications:

In lieu of the inspection of reinforcing steel as provided under Section 52-1.04 of the Standard Specifications, you will furnish the Engineer with a certificate from the supplier of the reinforcing steel stating that the steel delivered complies with the requirements of Section 52-1.02 of the Standard Specifications.

Atrium (“Beehive”) grate for drop inlets located in swale areas will be Cast Iron ASTM A48 CL30, or an equivalent material approved in writing by the City.
Stormwater inlet trash protector units for catch basins will be Bio Clean Curb Guard, or an equivalent material approved in writing by the City.

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

Minor Concrete will conform to the provisions of Section 90-2 of the Standard Specifications. Placing of concrete under water will not be permitted.

51-7.01D Payment: Metal frames and covers, or frames and grates, including all ancillary connections, are included in the payment with minor structures.

52 REINFORCEMENT

52-1.01A Summary: This work will consist of furnishing and placing reinforcement of the shape and dimensions shown on the plans, and as specified in these Special Provisions. Bar reinforcing steel will conform to and be placed in accordance with the applicable provisions of Section 52 of the Standard Specifications with the following modifications: in lieu of the inspection of reinforcing steel as provided in the Standard Specifications, you will furnish the Engineer with a certificate from the supplier of the reinforcing steel stating that the steel delivered complies with the requirements of Section 52-1.02B of the Standard Specifications.

64 PLASTIC PIPE

64-1.01 Description: All plastic storm drain pipes and associated appurtenances shall be constructed in accordance with the 2018 Standard Specifications, the City of Santa Rosa Standard Plans, and these Special Provisions.

64-2.02 Materials: Plastic pipe for use in public storm drain systems shall be 18 inches through 36 inches in diameter, Type S, smooth interior wall, corrugated exterior wall, high density polyethylene pipe (HDPE) as specified in AASHTO designation M294. Where the storm drain pipe is greater than 36 inches, or when the cover is less than 12" to subgrade, reinforced concrete pipe shall be used.

The use of plastic storm drain pipe shall not be permitted in unpaved areas.

64-2.02E 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.

64-2.02B 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 you. Excavated material shall not be disposed of on the work site. Prior to disposal of any material, you 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:

Pipe Size, Inside Diameter	Trench Width (inches)*
15	30
18	36
24	48
30	54
36	60

* 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.

64-2.03C Laying Pipe Placement: 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.

64-2.03D Television Inspection of Plastic Storm Drain Pipe: You shall hire an independent television inspection service to perform a closed circuit television inspection of all newly constructed storm drain systems. The video camera shall be able to pan and tilt and shall be equipped with high intensity lights. The video camera shall be mounted on a transporter at a height equal to the radius of the pipe. A video tape of the television inspection shall be produced and delivered to the Engineer in color VHS format, together with a typed log of the inspection.

The video tape shall display the following information:

The camera's location via a continuously updated footage counter measuring the distance from point of entry. At the beginning of each run of storm drain pipe, between adjacent structures, the video shall display the project name, date, company performing the inspection and the structure's number (as labeled on the plans) at each end.

The following conditions shall exist prior to the television inspection:

All storm drain pipes shall be installed, grouted, backfilled and compacted;

All structures shall be in place and grouted;

Flow line wetted with clean water immediately before televising.

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

The following video tape observation shall be considered defects in the construction of the storm drain system and will require corrections prior to acceptance.

a. Off grade - 0.08 foot or more deviation from grade.
b. Joint separation - greater than one corrugation.
c. Cracked or damaged pipe or evidence of the presence of an external object bearing upon the pipe (rock, root, etc).
d. Pipe deflection of 7.5 percent or greater, measured inside the pipe.
e. Debris or other foreign objects;
f. Other obvious deficiencies when compared to approved Plans and Specifications, these Standards and Standard Drawings.

You shall be notified in writing of any deficiencies revealed by the television inspection that will require repair, following which you shall excavate and make the necessary repairs and request a television re-inspection. Television re-inspection shall be at your expense.

[Version: 7/03/19 CDA STD2018]

65 CONCRETE PIPE

65-2 REINFORCED CONCRETE PIPE

65-2.01A Summary: Reinforced concrete pipe will be installed on the alignment and grade as shown on the plans and in accordance with the applicable provisions of Section 65 of the City Specifications, the Standard Specifications, and these Special Provisions and as directed by the Engineer.

65-2.01D(6) Video Inspection of Reinforced Concrete Pipe: You will hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed reinforced concrete pipe systems per Section 79 of the City Standards. Compensation for Video Inspection of reinforced concrete pipe systems will be considered included in various contract items, which price will include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in recording the storm drain pipes per these Special Provisions, including production and delivery of a color VHS video tape or DVD to the Engineer and no additional compensation will be made therefor.

65-2.03B Earthwork: If, during excavation for any pipe, material is encountered which is unsuitable as a foundation for such culvert, such unsuitable material will be removed to a depth as required by the Engineer and the resulting space will be refilled with approved material.

65-2.03C Laying Pipe: Unless otherwise specifically permitted by the City Engineer, all pipe will be laid upgrade.

65-4 TRENCH BRACING AND SHORING

65-4.01 Summary: All bracing and shoring will conform to Section 7-1.02K(6)(b)(1) of the Standard Specifications and the current Division of Industrial Safety Construction Safety Orders.

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

[Version:12/10/19 CDA STD2018]

72-2 ROCK SLOPE PROTECTION

72-2.01 General: ROCK SLOPE PROTECTION

72-2.02B Rock: Rock Slope Protection will be Method B per the Standard Specifications.

72-2.02C Fabric: Fabric under RSP will be Class 8 RSP Fabric per the Standard Specifications.

[Version:12/11/19 CDA STD2018]

73 CONCRETE CURBS AND SIDEWALKS

73-1.01 General: This work will consist of Portland cement concrete (PCC) curbs, sidewalks, and their appurtenances, such as gutters, driveways, island paving, curb ramps, gutter depressions, and bus pads. Work also includes PCC retaining curb adjacent to sidewalk at bioretention swale and extended curbs between roadside gutter and bioretention swale.

73-1.02B Pedestrian Ramp Detectable Warning Surface: Pedestrian ramp detectable warning surface will consist of raised truncated domes constructed with pedestrian ramps in conformance with the details shown on the plans and these Special Provisions. The detectable warning surfaces will be Armor-Tile or approved equal cast-in-place detectable warning surface on the Authorized Material List. The detectable warning surface color must match yellow color no. 33538 of FED-STD-595.

The detectable warning surface tiles will be protected from concrete spatter while installing the cast-in-place detectable warning surface into the PCC sidewalk by temporary 4 mil plastic sheeting or approved equivalent. The finished surfaces of the detectable warning surface will be free from blemishes. Installation, cutting and grinding as required will be per the manufacturer's instructions or as directed by the Engineer.

The manufacturer will provide a written 5 year warranty for prefabricated warning surfaces, guaranteeing replacement when there is a defect in the dome surface, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty will begin upon acceptance of the contract.

73-1.02D Color: A colored pigment designed for the integral coloring of concrete will be added to the concrete mix for decorative flatwork (e.g., median concrete paving). The pigment will contain pure concentrated mineral pigments specifically processed for mixing into concrete and complying with ASTM C979. The colored pigment will be Davis Colors color #860, applied in a dosage of 1/3 pound per 94 pound sack of cement (approximately 2 pounds per cubic yard of concrete for a 6 sack mix), or L. M. Scofield color #SG860 applied in a dosage to produce an equivalent color, or an approved equal.

73-2 CURBS

73-2.03 Construction: Curb construction will be in accordance with Section 73-1.05 of the City Specifications and Section 73-2 of the Standard Specifications.

Curb and gutter will be constructed per City STD-241.

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

Median curb within the RCC pavement area will be constructed per City STD-242. Median curb within the HMA overlay area will include doweling into the existing pavement section (minimum 5' spacing O.C.) and will be constructed per City STD-242.

Curb and gutter and median curb will be cured in accordance with the requirements of Section 90-1.03B of the Standard Specifications except that you may substitute a pigmented sealer upon the approval in writing of such substituted sealer by the Engineer.

All oil, paint, tire marks, and other discoloring will be removed from the curb and gutter by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface will be removed. If it cannot be removed from the surface, then the vandalized concrete will be removed and replaced to the nearest scoremark.

Curb Ramps will be constructed in accordance with the details and at the locations shown on the plans per Caltrans Standard plans except the thickness will be 4" minimum. For purposes of payment coordination, curb ramps will be measured between the outside border of the ramp and landing, and exclude the curb and gutter.

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

73-3 SIDEWALKS, GUTTER DEPRESSIONS, MEDIAN PAVING, CURB RAMPS, COBBLE PAVING, DRIVEWAYS, AND BUS PADS

73-3.03 Construction: Sidewalk, gutter depression, median curb & flatwork, curb ramps, cobble paving, driveway, and bus pads will be constructed in accordance with Section 73-1.07 of the City Specifications and Section 73-3 of the Standard Specifications.

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

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

Sidewalks, gutter depression, median curb, curb ramps, cobble paving driveways, and bus pads will be cured in accordance with the requirements of Section 90-1.03B of the Standard Specifications except that you may substitute other than pigmented sealer upon approval in writing of such substituted sealer by the Engineer.

All oil, paint, tire marks, and other discoloring will be removed from the Sidewalks, gutter depression, median curb, curb ramps, and driveways by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface will be removed. If it cannot be removed from the surface, then the vandalized concrete will be removed and replaced to the nearest scoremark.

Gutter Depression will be constructed in accordance with City STD-243 Standard Valley Gutter.

Bus pad will be constructed in accordance with City STD 220, 221, and 222, as applicable.

Payment quantity for curb ramp includes detectable warning surface.

Payment for sidewalk, gutter depression, median curb and flatwork, curb ramp, and driveway curb ramp & concrete sidewalk will include Class II & sand base as shown per City Standard.

Payment for bus pads will include Class II base, as shown per City Standard.

Payment for cobble paving will include cobbles, concrete mortar, and class II aggregate subbase as shown per the Plans.

73-4 TEXTURED CONCRETE AND COLORED CONCRETE SURFACES

73-4.01A Summary: Color and pattern for Stamped Concrete at Median will be constructed in accordance with Section 73-4 of the Standard Specifications, per manufacturer requirements, and as shown on the plans.

73-4.01C Submittals: Prior to delivery of any materials of this section to the jobsite, submit to the Engineer:

1. The manufacturer's recommended methods of installation which, when approved by the City, will become the basis for inspecting and accepting or rejecting actual installation methods used on the work.
2. Provide manufacturer's recommended maintenance instructions and list addresses and phone numbers of source of supply.

73-11 PERVIOUS CONCRETE

73-11 GENERAL

73-11.01Summary This work will consist of constructing pervious concrete gutter, to the lines, grades, and dimensions shown on the plans in accordance with these special provisions. Pervious concrete will consist of a mixture of aggregate, cementitious material, water and chemical admixtures conforming to the provisions in these special provisions.

73-11.02 Scope
Ths section provides requirements for the construction of pervious concrete pavement.

If the requirements of thissection conflicts with the Contract Documents, the Contract Documents will govern.

Values in this section are stated in inch-pound units. A companion Specification in SI units is also available.

Plus (+) tolerance increases the amount or dimension to which it applies, or raises a deviation from level. Minus (–) tolerance decreases the amount or dimension to which it applies, or lowers a deviation from level. Where only one signed tolerance is specified (+ or –), there is no specified tolerance in the opposing direction.

73-11.03 DEFINITIONS

acceptable or **accepted**—determined to be satisfactory by engineer.

acceptance—acknowledgment by Engineer that submittal or completed Work is acceptable.

Contract Documents—a set of documents supplied by owner to bidders during bidding phase of a construction project, these documents include general requirements, contract forms, contract conditions, Special Provisions, drawings, and addenda.

construction joint—the surface where two successive placements of concrete meet, across which it may be desirable to achieve bond.

contraction joint—formed, sawed, or tooled groove in a concrete structure to create a weakened plane to regulate the location of cracking.

design void content—the percentage of voids of a unit volume of pervious concrete based on the theoretical mixture proportions and design density and where the unit volume includes the volume of the solids and the voids.

early-entry dry-cut saw—a tool designed to produce joints in concrete commencing 1 to 4 hours after finishing.

hardened density—the dry density of pervious concrete as determined by Paragraphs 8.3 and 9.3 of ASTM C140-12.

hydration-stabilizing admixtures—set-retarding admixtures, conforming to ASTM C494/C494M Type B or D, that can predictably reduce the hydration rate of cement for applications requiring the management of time of setting of returned concrete, reducing the hydration rate of cement fines in water from concrete production, or for applications requiring extended delivery time of ready mixed concrete.

isolation joint—a normally vertical interface allowing relative movement without transferring sufficient tension, compression, or traction forces to negatively affect the performance of a pavement structure.

Owner—the corporation, association, partnership, individual, public body, or authority for whom the Work is constructed.

panel—a concrete element that is relatively thin with respect to other dimensions and is bordered by joints or edges.

permitted—accepted by or acceptable to Engineer, usually pertaining to a request by Contractor, or when specified in Contract Documents.

pervious pavement—a pavement comprising material with sufficient continuous voids to allow water to pass from the surface to the underlying layers.

Project Drawings—graphic presentation of project requirements.

referenced standards—standardized mandatory language documents of a technical society, organization, or association, including codes of local or state authorities, which are incorporated by reference in Contract Documents.

Special Provisions—written document that details requirements for the Work in accordance with service parameters and other specific criteria.

73-11.04 REFERENCED STANDARDS

73-11.04A Standards of ACI and ASTM cited in this Specification are listed by name and designation, including year.

1. American Concrete Institute 306.1-90—Standard Specification for Cold Weather Concreting
2. ASTM International:

C42/C42M-13	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
C94/C94M-13	Standard Specification for Ready Mixed Concrete
C140-12	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
C150/C150M-12	Standard Specification for Portland Cement
C171-07	Standard Specification for Sheet Materials for Curing Concrete
C172/C172M-10	Standard Practice for Sampling Freshly Mixed Concrete
C174/C174M-12	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
C260/C260M-10	Standard Specification for Air-Entraining Admixtures for Concrete
C494/494M-12	Standard Specification for Chemical Admixtures for Concrete
C595/595M-13	Standard Specification for Blended Hydraulic Cements American Concrete Institute Copyrighted Material—www.concrete.org
C618-12	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
C979/C979M-10	Standard Specification for Pigments for Integrally Colored Concrete

C989/C989M-12a	Standard Specification for Slag Cement for Use in Concrete and Mortars
C1017/C1017M-07	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
C1077-13	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
C1116/C1116M-10	Standard Specification for Fiber-Reinforced Concrete
C1157/1157M-11	Standard Performance Specification for Hydraulic Cement
C1240-12	Standard Specification for Silica Fume Used in Cementitious Mixtures
C1688/C1688M-13	Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete
D994/D994M-11	Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)
D1751-04(2008)	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
D1752-04(2008)	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
D3385-09	Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer
D3665-12	Standard Practice for Random Sampling of Construction Materials
E329-11	Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

73-11.04B Submit drawings and documentation required in:

1. Obtain written acceptance of submittals by Engineer before the execution of the related portion of Work.
2. Qualifications of Contractor as specified in 73-1.05.A.1.
3. Proposed concrete mixture proportions with density and void content of freshly mixed pervious concrete per ASTM C1688/C1688M.
4. In-place pavement test results from previous work, completed in the last 24 months, including density and void content of freshly mixed pervious concrete, mixture proportions, thickness, density and void content of cores extracted from the pavement, if tested, when required by Engineer.
5. Reports covering the source and quality of concrete materials.
6. Two test panels, as described in 73-1.05.B.2, will be placed, jointed, and cured; each a minimum of 225 ft2 and being within tolerance of the required thickness defined by Contract Documents. The required information to be submitted from the test panels will be: density of the fresh concrete, length of cores, and density of cores.
7. Jointing plan and placing sequence, if proposed alternatively to the Contract Documents.
8. When hot weather is anticipated, submit detailed procedures for the production, transportation, placement, protection, curing, and temperature monitoring of concrete during hot weather.

9. In cold weather, submit detailed procedures for the production, transportation, placement, protection, curing, and temperature monitoring of concrete.
10. Qualifications of testing agency as specified in 73-1.05.A.2.

73-11.05 QUALITY CONTROL

73-11.05A General: Test and inspect concrete materials and operations as Work progresses as described in 73-1.05.C. Failure to detect defective Work or material at any time will not prevent rejection if a defect is discovered later, nor will it constitute final acceptance.

1. *You* - Employ no less than one National Ready Mixed Concrete Association (NRMCA) certified Pervious Concrete Craftsman who must be on site, overseeing each placement crew during all concrete placement, or employ no less than three NRMCA *Certified Pervious* C*oncrete Installers* - who must be on site working as members of each placement crew during all concrete placement, unless otherwise specified. The minimum number of certified individuals must be present on each pervious concrete placement, including the test panel placements, and a certified individual must be in charge of the placement crew and procedures.
2. *Testing agencies* - Agencies that perform testing services on concrete materials will meet the requirements of ASTM C1077. Agencies inspecting the Work will meet the requirements of ASTM E329. Testing agencies performing the testing will be accepted by Engineer before performing any Work.
3. *Field technicians* - Field tests of concrete required in 73-1.05.C will be performed by an individual certified as both an NRMCA Certified Pervious Concrete Technician, or equivalent, and an ACI Concrete Field Testing Technician— Grade I, or equivalent.

73-11.05B Responsibilities of Contractor

1. Advise Owner's testing agency at least 48 hours before concrete placement.
2. *Test panels*—Place two test panels on the project site, on a subgrade and subbase prepared as specified, using the material and construction requirements for pavement in these Special Provisions. Each panel must have an area of at least 225 ft2, and a width and thickness as specified for the pavement in the Contract Documents.

73-11.05C Responsibilities of testing agency

1. Complete at least one density test on a sample of freshly mixed pervious concrete for each day of concrete placement and for each test panel in accordance with ASTM C1688/C1688M. Sample freshly mixed concrete in accordance with ASTM C172/C172M. Size of sample will be at least 1 ft^3. American Concrete Institute www.concrete.org
2. Remove three cores from each lot of 5000 ft^2 and each test panel in accordance with ASTM C42/C42M, not less than 7 days after placement of the pervious concrete.
   a. Cores will be a nominal 4 in. diameter.
   b. Select three core locations in accordance with
   c. ASTM D3665.
   d. Measure the core length in accordance ASTM C174/C174M.
   e. After thickness determination, trim the cores and measure the hardened density of the core in accordance with Paragraphs 8.3 and 9.3 of ASTM C140. Trim core bottoms to remove only the material necessary to produce a flat end. Trimmed core ends will be perpendicular to the longitudinal axis and meet the requirements of ASTM C42/C42M, 7.4.1 and 7.4.2.
3. Record the length and density of each individual core and the average length and density of the three cores. Test results will be submitted to the you, concrete producer, and Engineer within 24 hours of completing the tests.
4. Core holes will be filled with conventional concrete or preblended grout.

73-11.05D Acceptance of test panels

1. The fresh density from a test panel will be within ±5 lb/ft^3 of the accepted fresh density from the submitted mixture proportion in 41-1.04.A.2.
2. Tolerances from specified thickness of pavement will comply with 73-1.05.D.2.a and 73-1.05D.2.b.
   a. Average length of three cores.... –3/8 in., +1.5 in.
   b. Length of an individual core..... –3/4 in.
3. If the test panel does not comply with 73-1.05.D.1 and 73-1.05.D.2, the test panel will be rejected, removed, and replaced at your expense, unless otherwise permitted.
4. If the test panel complies with 73-1.05.D.1 and 73-1.05.D.2 and the Engineer accepts the test panel, the panel may be left in place and included in the completed Work. The average hardened densities from the two accepted test panels will be the hardened density used as the basis of acceptance for the remainder of the pavement in accordance with 73-1.05.E.3.

73-11.05E Acceptance of pavement

1. The fresh density from a lot must be within ±5 lb/ ft3 of the accepted fresh density from the submitted mixture proportion in 73-1.04.A.2.
2. Tolerance from specified thickness of pavement is listed in 73-1.05.E.2.a and 73-1.05.E.2.b.
   a. Average length of three cores.... –3/8 in., +1.5 in.
   b. Length of an individual core..... –3/4 in.
3. The average hardened density from a lot must be within ±5 percent of the accepted hardened density in 73-1.05.4.
4. When a lot is outside one or more of the limits of 73-1.05.E.1 through 73-1.05.E.3, the lot will be subject to rejection, removal, and replacement at your expense, unless accepted by Owner.

73-12 MATERIALS

73-12.01 Subbase: Coarse aggregates will meet the size, quality, and grading requirements of Contract Documents.

73-12.02 Pervious Concrete

Comply with ASTM C94/C94M (except sections: 4.2, 6.1.2, 6.1.3, 6.1.4, 6.1.5, 7, 8, 16, 17, 18, 19, and 20) and the requirements listed in 73-2.2.1 through 73-2.2.7. The volume of fresh concrete in a given batch will be determined from the total mass of the batch divided by the design density of the concrete. The total mass of the batch will be determined as the net mass of the concrete in the batch as delivered, including the total mixing water as defined in ASTM C94/C94M Paragraph 9.3.

Thickness—The thickness of pervious concrete pavement will be as specified in contract documents.

Aggregates—Nominal maximum aggregate size will not exceed 1 in., unless otherwise specified.

Cement—Cement will comply with ASTM C150/ C150M, C595/C595M, or C1157/C1157M.

Admixtures—Chemical admixtures will comply with ASTM C260/C260M, ASTM C494/C494M, or ASTM C1017/C1017M unless otherwise specified.

Fibers—Fibers will comply with ASTM C1116/ C1116M, 4.1.3 or 4.1.4. Fibers may be used in pervious concrete mixtures when permitted by the Engineer.

Pigments—Pigments will comply with ASTM C979/C979M.

Supplementary cementitious materials—Supplementary Cementitious Materials will comply with ASTM C618, C989/C989M, or C1240.

73-12.03 Isolation Joint Material
Isolation joint materials will comply with ASTM D994/D994M, D1751, or D1752.

73-12.04 Forms
Make forms with steel, wood, or other materials that are sufficiently rigid to maintain specified tolerances and capable of supporting concrete and mechanical concrete placing equipment.

Use forms clean and free of debris, non-adherent rust, and hardened concrete.

73-12.05 Polyethylene Curing Sheet
Polyethylene curing sheet will comply with ASTM C171.

73-13 CONSTRUCTION

73-13.01 Subgrade Preparation
Prepare subgrade as specified in Contract Documents.

Construct subgrade to ±3/4 in. of the specified elevation.

Provide physical barriers or direct traffic to minimize vehicular traffic on the subgrade during construction.

Regrade and recompact subgrade disturbed by construction traffic, as needed.

Protect all specified trees, vegetation, and root systems near the area to be paved with pervious concrete. If trees, vegetation, or root systems are damaged, you will replace materials.

Determine subgrade permeability in accordance with ASTM D3385 before subbase or concrete placement. If the subgrade permeability is less than specified, proceed as indicated in Contract Documents.

73-13.02 Subbase
Prepare subbase, where specified, in accordance with Contract Documents.

Construct subbase to ±3/4 in. of the specified elevation.

Provide physical barriers or direct traffic to minimize vehicular traffic on the subbase during construction. Regrade and recompact subbase disturbed by construction traffic, as needed.

73-13.03 Setting Formwork
Set, align, and brace forms so that the hardened pavement meets the tolerances specified in 3.09.

Apply form-release agent to the form face, which will be in contact with concrete, immediately before placing concrete.

The vertical face of previously placed concrete may be used as a form.
1. Protect previously placed pavement from damage.
2. Do not apply form release agent to previously placed concrete.

73-13.04 Batching, Mixing, And Delivery
Begin mixing immediately after cement has been added to aggregates. Batch and mix in compliance with ASTM C94/C94M, except that discharge will be completed within 60 minutes of

the introduction of mixture water or aggregate to the cement. Increase time to 120 minutes when using a hydration-stabilizing admixture. Additional water may be added on site, but the fresh density must still meet requirements of 73-1.05.E.1 after water addition.

73-13.05 Placing And Finishing Fixed-Form Pavement

Wet the subgrade or subbase with water before concrete placement such that the material is saturated but without any standing water on the prepared subbase immediately before concrete placement.

Deposit concrete either directly from the transporting equipment or by conveyor onto the subgrade or subbase, unless otherwise specified.

Do not place concrete on frozen subgrade or subbase.

Deposit concrete between the forms to an approximately uniform height.

Spread the concrete using mechanized equipment or hand tools, without segregation.

Strike off concrete between forms using a formriding paving machine, roller screed, or vibrating screed. Other strike-off devices may be used when accepted by Engineer.

Finish the pavement to the elevations and thickness specified in accordance with 73-3.09.

73-13.06 Placing And Finishing Slipform Pavement

Slipform equipment is permitted.

Deposit concrete in accordance with 73-3.05.A, 73-3.05.B, and 73-3.05.C.

73-13.07 Final Surface Texture

Compact concrete to a dense, open-textured surface to match the appearance of the test panel.

73-13.08 Edging

Edge top surface to a radius of not less than 1/4 in.

73-13.09 Tolerances

Construct pavement to comply with the tolerances in 1 through 3:

1. Elevation: +3/4 in., –3/4 in.
2. Thickness: +1-1/2 in., –3/8 in.
3. Contraction joint depth: 1/4 thickness of pavement +1/4 in., –1/4 in.
4. Smoothness: Similar to approved test panel with no abrupt offsets unless required by the contract drawings.

Mechanically sweep or vacuum pavement with clean equipment, or flush with water, before testing for compliance with tolerances.

73-13.10 Curing

Begin curing within 20 minutes of concrete discharge, unless otherwise specified or permitted.

Completely cover the pavement surface and all exposed edges with a polyethylene sheet, unless otherwise permitted.

Thoroughly secure a polyethylene sheet at all exterior edges and interior laps without using soil.

The method of securing the cover material will prevent wind from removing the sheet and from blowing under the sheet across the surface of the concrete.

Cure pavement for a minimum of 7 uninterrupted days, unless otherwise specified.

73-13.11 Cold-Weather Construction

Protect concrete from freezing and record concrete temperature no less than twice per 24-hour period in accordance with ACI 306.1.

73-13.12 Jointing

Construct joints at the locations, depths, and with horizontal dimensions indicated in Contract Documents, unless otherwise specified.

Create contraction joints by one of the methods listed in 1 or 2 below.

1. Tool contraction joints to the specified depth and width in fresh concrete immediately after the concrete is compacted. American Concrete Institute Copyrighted Material—www.concrete.org specification for pervious concrete pavement (ACI 522.1-13) 5
2. Sawcut concrete after concrete has hardened sufficiently to prevent aggregate from being dislodged and soon enough to control pavement cracking. To minimize drying, ensure that curing materials are removed only as needed to make cuts.

73-13.13 Opening To Traffic

Do not open the pavement to vehicular traffic until the concrete has cured for at least 7 uninterrupted days during which the ambient temperature has exceeded 55°F during any time of the day.

[Version: 12/12/2019 CDA STD2018]

78-2 SURVEY MONUMENTS

78-2 SURVEY MONUMENTS

78-2.01 General: All City monuments shown on the plans will be placed in accordance with the requirements of these Special Provisions and will conform to City Standards 280 to 282.

You will replace damaged monuments per City Standard. Existing components of the existing monument may not be used.

You are responsible for preservation and/or perpetuation of all existing survey monuments (chiseled crosses and/or slashes in concrete, tack in lead in concrete, washers and brass tags in concrete, iron pipes, railroad spikes, brass disks in centerline well monuments, brass disks in concrete, etc.) in accordance with Section 8771 of the California Business and Professions Code and Section 1810.5 of the California Streets and Highways Code.

If the work being conducted in an area may result in the disturbance of survey monuments, you will notify the City to utilize the services of a City approved surveyor to locate said monuments prior to disturbance, re-establish monuments which have been disturbed and/or destroyed as a result of construction. You will assist with the filing of a Corner Record or Record of Survey with the County Surveyor's Office.

You will establish and check all monuments upon installation completion.

Work performed on existing monuments will comply with Section 15.

78-2.04 Payment: Remove and Reset City Monuments will be paid for at the contract unit price **each,** which price will include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in constructing monuments complete in place, including removal of existing monuments disturbed during construction which will be replaced with new monuments, as shown on the plans, the City Standards, and these Special Provisions, and no additional allowance will be made therefor.

[Version: 07/18/2019 CDA STD2018]

78-4 MISCELLANEOUS COATINGS

78-4.06 ANTI GRAFFITI COATING

78-4.06.1 General: An Anti-Graffiti coating will be applied to exposed surfaces of concrete retaining walls per the 2018Standard Specifications and as shown on the Plans.

78-21 RESETTING AND RELOCATING MAILBOXES

78.21.01 General: Existing mailboxes will be removed and reset in accordance with the Plans, City Std 271, and these Special Provisions.

Existing posts that are not suitable will be replaced with temporary timber posts of good, sound material suitable for the purpose intended.

Concrete for the pedestals will be produced from commercial quality aggregates and cement will contain not less than 5 sacks of cement per cubic yard.

Redwood posts and planks will be constructed of construction clear redwood, free of heart center, rough.

Existing mailboxes will be removed and reset on portable mounts consisting of concrete pedestals formed in 5-gallon cans or buckets during construction.

Newspaper boxes attached to existing mailbox posts will be removed and fastened to the new mailbox posts and no separate payment will be made therefor.

During the construction operations, the mailboxes will be moved as necessary to clear the way for your operations, but at all times will be accessible for rural delivery.

When construction is complete, the posts and pedestals will be removed and disposed of as provided in the Standard Specifications and the mailboxes will be installed in final position on new redwood posts and planks.

Newspaper boxes on individual posts will be considered as mailboxes for measurement and payment.

Multiple mailboxes on a single or double post will be considered as one unit for measurement and payment purposes.

[Version: 4/14/09]

80 FENCES

80-1 GENERAL

80-1.01 General: All fence and bollards will 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.

Fences include black vinyl chain link, galvanized chain link, and wood split rail, located within the City rights of way or City property (e.g., Community Park). Private fences removed during the project will be reconstructed by the individual property owners.

You will install complete temporary fencing at all locations where existing fences are partially or fully removed during the project, to ensure security of the property and any livestock or animals.

Bollards will be removable locking Cal Pipe model IPP4040 or approved equal and will be constructed in accordance with manufacturer specifications, as shown on the plans, these Special Provisions and according to the requirements below:

1. Bollard Post will be ASTM A36 Steel
2. Removable receiver with chain will be galvanized steel (A36) with SAE 304 stainless steel chain.
3. Finish will be Safety Yellow

80-1.02 Materials:

Fabric: Chain link fence fabric will be galvanized steel fabric conforming to the specifications of AASHTO M-181, Type I with Class C coating. Black vinyl chain link fence fabric must comply with AASHTO M181 for Type IV fabric, with a black Class A coating. The fabric will be #9-gauge, 72 inches high, and woven into approximately a 2-inch mesh. All chain link fabric will be galvanized after weaving by the hot dip process with a minimum of 1.2 ounces of zinc retained per square foot of uncoated wire service.

Posts and Framework: All posts, gate frames, and top rails will be steel pipe galvanized according to the specifications of AASHTO M111 and will conform to the following dimensions and weights:

	O.D.	Min. Wt. Per L.F.
Line Posts	2"	2.72
Terminal and Corner Posts	2½"	3.65
Gate Posts	4"	9.11
Top Rails	1-5/8"	2.27
Gate Frames	1-5/8"	2.27

Line post spacing will not exceed ten foot centers. All line and corner posts will be a minimum of nine feet in length and gate posts a minimum of ten feet in length.

Braces: All terminal and corner posts will be truss braced from a first line post to the bottom of the terminal post with a 3/8-inch galvanized truss rod assembly.

80-1.03 Construction: Fencing will be installed by skilled and experienced fence contractor on lines and grades furnished by the Engineer. Line and corner posts will be set in concrete foundations a minimum of 36 inches deep and gate posts a minimum of 48 inches deep. Concrete foundations will be no less than three times the diameter of the posts. Fence foundation / connection to retaining walls will be per plans.

Removal of Existing Fence: Prior to erecting the chain link fence under this contract, dismantle and remove the existing fence as required to perform the necessary work involved to install the new chain link fence components.

The existing fence materials will become the property of you and will be disposed of away from the construction site to the satisfaction of the Engineer.

Connections: Existing cross fences will be connected to the new fences. Corner posts with braces for every direction of strain will be placed at the junction with existing fences. The wire in the new and existing fences will be fastened to the posts.

Construction:

The bollards will be installed by skilled and experienced contractor on lines and grades furnished by the Engineer and per Manufacturer Specifications.

Bollard post will be ASTM A36 Steel with a removable receiver of galvanized A36 steel with a SAE 304 stainless steel chain.

Bollard will be finished with a polyester powder coat in Safety Yellow.

80-14 WOOD SPLIT RAIL FENCE

Wood split rail fence will be constructed to match existing wood split rail fence to remain (south of park entrance along park frontage), including nominal height, post and rail spacing, wood size, and hardware.

80-14.02 Materials:

Posts and Rails: All posts and rails will be split cedar and will be free from loose knots, cracks and other imperfections.

80-14.03 Construction: The fence will be installed by skilled and experienced fence contractor on lines and grades furnished by the Engineer. Line and corner posts will be set in concrete foundations a minimum of 30 inches deep. Concrete foundations will be no less than double the diameter of the posts.

Removal of Existing Fence: Prior to erecting the wood split rail fence under this contract, dismantle and salvage the wood split rail existing fence. The existing wood split rail post and rail materials will be neatly stockpiled at the adjacent City Park site, at a location per the direction of the City.

Connections: Existing wood split rail fence to remain will be connected to the new wood split rail fence, utilizing the same hardware as the existing fence.

81 MISCELLANEOUS TRAFFIC CONTROL DEVICES

81-3 PAVEMENT MARKERS

81-3.01 General: All raised pavement markers will be placed at the locations shown on the Plans and in accordance with the applicable provisions of Section 81, Section 82, Section 84, Section 86 and Section 87 of the 2018 Standard Specifications, these Special Provisions, and the City of Santa Rosa Traffic Standards. Attention is directed to Section 15 “Existing Facilities” of these Special Provisions.

81-3.02B Nonreflective Pavement Markers: All non-reflective pavement markers will be ceramic.

81-3.02C Retroreflective Pavement Markers: Blue reflective raised pavement markers are to be placed per City STD-857 for each fire hydrant within the construction limits of the project. Where a hydrant, whether existing or new, is located at the corner of two streets, a blue RPM will be placed in each street.

81-3.03 Construction: Existing raised pavement markers to remain, which are damaged by you, will be replaced, at your expense. This includes areas outside the project limits.

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

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

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

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

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

Raised pavement markers will be installed the day following pavement overlay.

82 SIGNS AND MARKERS

82-1 GENERAL

82-1.01A Summary: This work will consist of fabrication and installation, removal, and relocation of roadside signs as shown on the plans, where directed by the Engineer, and will also conform to Section 56 of the Standard Specifications, these Special Provisions, and the City Specifications.

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

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

New signs and brackets to be mounted on traffic signal mastarms and poles will be provided and installed by the City.

Existing signs on traffic signal mast arms and poles will be relocated by the City.

Where signs are shown on the plans as relocated or removed, the signpost and foundation will be removed. Existing signposts removed from sidewalks will be ground below the existing sidewalk surface, and the void filled with grout.

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

[Updated: 12/19/2019 CDA STD2018]

83 RAILING AND BARRIERS

83-1.01A Railing: The work will consist of constructing tubular hand railing at the locations and in accordance with the details shown on the plans.

83-1.04 Payment Tubular Hand Railing will be paid for at the contract unit price per **linear foot**, measured along the face of the railing, including end and intermediate posts.

[Version: 4/14/09]

84 MARKINGS

84-2 TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-2.01A Summary: Attention is directed to Section 12 “Temporary Traffic Control” and Section 15 “Existing Facilities” of these Special Provisions. Traffic stripes and pavement markings will conform to the applicable provisions and will be placed at the locations shown on the Plans.

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

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

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

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

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

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

Existing stripes and pavement markings to remain, which are damaged by the work will be replaced at your expense. This includes areas outside the project limits.

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

[Updated: 12/19/2019 CDA STD2018]

86 ELECTRICAL SYSTEMS

86-1.01 Summary

This section references Caltrans 2018 specifications, but all Caltrans updates will comply. Furnish and install or modify traffic signal systems and modify the traffic signal interconnect system at the locations shown on the plans in conformance with the applicable provisions.

86-1.07 Scheduling of Work: Scheduling of work will conform to Section 8 “Prosecution and Progress” of the Standard Specifications except that no traffic signal system turn-on will be scheduled for Monday, Friday, or the day before or after a legal State holiday.

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

Native material will not be used as trench backfill.

Where conduit containing conductors of 100 volts or less is installed parallel and adjacent to the existing gutter lip, the trench will be approximately two inches wider than the outside diameter of the conduit and will not exceed six inches in width. Trench depth will not exceed conduit trade-diameter plus ten inches, except that at pull boxes the trench may be hand dug to required depth. The conduit under pavement will be placed in the bottom of the trench with the top of the conduit a minimum of 24 inches below finish grade.

When conduit containing conductors of 100 volts or less is installed under pavement but not installed adjacent to the lip of gutter it will be installed with a minimum of 24 inches of cover.

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

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

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

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

All concrete to be removed will be disposed of by you, 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 will 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 will be reconstructed in accordance with Section 73 of the City of Santa Rosa Construction Specifications.

86-2.03 Foundations: Construct foundations for traffic signal standards per 2018 Caltrans Standard Plans and Specifications.

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

86-2.04 Standards, Poles, Steel Pedestals, and Posts

86-2.04A General: Traffic signal standards, arms, and related appurtenances will be installed per Part IV of the City Traffic Standards.

Mast arms will be drilled out and a threaded fitting factory installed to accept 3/4- inch male threads ten feet from the end of the mast arm for installation of optical detectors at the locations shown on the plans.

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

Trenching depth will be per the City Standards.

86-2.06 Pull Boxes: Pull boxes will conform to STD 730 of the City Traffic Standards, these Special Provisions and the Standard Specifications. Pull boxes for fiber optic cable will be 17" x 30" as noted on the plans, of depth required to coil fiber optic cable.

All existing pull boxes to receive new conductors and/or conduits will 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.

86-2.07 Fabric Innerduct: Fabric Innerduct will be MaxCell Fabric Innerduct or approved equal.

After all conduits have been cleaned and cleared of debris, you will install a fabric innerduct. The innerduct will be a continuous installation throughout the scope of the project and will only be placed where the fiber optic backbone is planned for installation. You will arrange to have a manufacturer's representative on site to oversee the entire installation. If the manufacturer's representative must leave the project site, other than for normal breaks, then fabric innerduct work will cease until replaced by another representative. No additional compensation and/or working days will be provided for related delays.

The innerduct will be a three-cell configuration designed for 2-inch conduit or 3-inch conduit where applicable and be detectable. Each cell will have individual pull tapes pre-installed and color coded.

Upon completion of all pulls, innerduct or F/O cable, all pull tapes in unused innerduct must be visible, accessible, and tied off within the pull box. So that no pull tapes retract or pull into the conduit.

86-2.08 Conductors and Cables

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

86-2.08E Signal interconnect Cable (SIC): You will at your own expense, arrange to have a certified technician, qualified to work on the fiber optic cable.

Hybrid fiber optic cable (HFOC) for signal interconnect cable will be Superior Essex Telco Hybrid Cable PN 72012 33 6 1 or approved equal. The HFOC jacket will be black. Cables will be installed with no splices. Cables will be pulled by hand and the use of winches or other power actuated pulling equipment will not be permitted. Six feet of slack will be left in each pull box. Pull HFOC into controller cabinets and coil ten feet in the bottom of the controller cabinet. Copper cable termination will be completed by you. You will request termination details from the City a minimum of five working days in advance of termination work.

The existing interconnect system may be disconnected for no more than five consecutive calendar days. Every calendar day over those five days, a penalty of $500 per day will be assessed.

Upon receiving reel(s) of HFOC, you must arrange to deliver the fiber optic cable to the City of Santa Rosa, TPW, Electrical Shop at 55 Stony Point Road for testing. Passing tests will be recorded and a subsequent test will follow installation of the cable. You will be notified of completed testing for your pick up. HFOC will be installed in continuous lengths without intermediate splices or terminations throughout the project.

When ordering HFOC, you will exercise extreme caution to ensure that no additional splicing or terminations, will be required. Should you believe additional splices are required; this matter will be immediately brought to the attention of the Engineer for resolution.

You will install the HFOC in strict adherence to the manufacturer's recommended procedures. Care will be taken to avoid cable damage during handling and placing. HFOC is sensitive to excessive pulling, bending and crush forces.

The minimum bending and maximum tension requirements for installing the HFOC will be according to the manufacturer's specifications. You will submit the manufacturer's recommended procedures to Engineer for blowing or pushing central core HFOC to the Engineer for review and approval at least twenty (20) working days prior to installing cables.

HFOC installation personnel will be familiar with the cable manufacturer's recommended procedures including, but not limited to the following:

- Proper attachment to the cable for blowing or pushing during installation.
- Cable tensile limitations and tension monitoring procedures.
- Cable bending radius limitations.

To accommodate long continuous installation lengths, bi-directional installation of the HFOC is permissible and will generally be implemented as follows:

1. From the midpoint of a pull station, blow/push of central core fiber, the HFOC into the microduct/conduit from the shipping reel in accordance with the manufacturer's specifications.
2. When this portion of the blow/push of central core fiber, the remainder of the HFOC should be removed from the reel to make the inside end available for blowing/pulling in the opposite direction.
3. This is accomplished by hand pulling the cable from the reel and laying it into large "figure eight" loops on the ground. The purpose of the figure eight pattern is to avoid cable tangling and kinking.
4. The figure eight loops will be laid carefully one upon the other (to prevent subsequent tangling) and will be in a protected area.
5. The inside reel end of the cable should be available for testing.
6. The figure eight is then turned over to gain access to the free cable end. This can then be reinserted into the conduit system for installation into the next section.

Air blown mechanical aids may be used to assist cable installation. Air blown mechanical aids will be OFS approved for installation of fiber optic cable.

Your personnel will be stationed at each vault and pull box through which the cable is to be installed to prevent kinking or other damage to the cable.

You will submit detailed installation procedures (pull plan) for review ten
(10) working days prior to pulling in each optical fiber segment. The pull plan will state the exact operational procedures to be utilized and identifies the physical locations for equipment placement, proposed equipment setup at each location, location of the manpower, the installation methodology and the estimated pulling tensions for each pull section.

Where the HFOC is installed in existing conduit or utility ducts, at locations shown on plans, you will remove all existing cables and install all cables in same pull to minimize risk of damage to cables, unless otherwise approved by Engineer.

You will be responsible for replacing any cables damaged during removal and reinstallation at your cost and not the City.

Cable slack will be provided for each cable at each pull box, splice vault, or fiber optic splice location, as shown on the plans and as specified in these Special Provisions.

Cable slack will be divided equally on each side of a fiber splice closure. Sufficient slack will also be provided at all pull boxes to facilitate placing the optical fiber cable against the side of the pull box.

At all pull boxes and cable vaults, cable slack, as shown on the plans, will be left by you for all unspliced cable. Cable slack will be installed in microduct couplers and will be coiled and secured with tie wraps, coiled in pull boxes, and secured to the racking hardware in splice vaults. You will ensure that the minimum bending radius of the optical fiber cable is not compromised when preparing this stored cable slack.

Unless otherwise specified on plans, a minimum of 30 feet of slack will be coiled for each FIO cable inside each pull box and 60 feet inside each splice vault, controller, or communication

cabinet. Slacks within the cabinets will be neatly arranged individually, coiled, and tied by self-clinching nylon cable ties or other method approved by the Engineer.

Following the installation of the microduct and cables in conduit, all duct entrances in cabinets, pull boxes and vaults will be sealed with mechanical plugs; or at the discretion of the Engineer, duct sealing compound, to prevent the ingress of moisture, foreign materials, insects, and rodents.

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

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

86-2.14C Functional Testing: The functional test for each traffic signal, beacon system and lighting system will consist of not less than 48 hours of continuous, satisfactory operation. If unsatisfactory performance of the system develops, the conditions will be corrected and the test will be repeated until the 48 hour of continuous, satisfactory operation is obtained.

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

86-3.01 Controller Assemblies

86-3.01A General: At locations with existing traffic signal systems, remove and dispose of the existing Model 170 controller unit and conflict monitor. Furnish and install a McCain Model 2070LX solid state controller with McCain OMNI software, EDI Model conflict monitor, and ML684 Actellis Ethernet switch, ML604D Actellis extender, and copper termination panel.

At locations with new traffic signal systems, furnish and install a McCain Model 2070LX solid state controller with McCain OMNI intersection software, and fully wired and equipped controller assembly in Type 332L cabinet, capable of providing the operations shown on the plans.

Where a new controller foundation is to be installed according to the plans, you will construct the controller cabinet foundation (including furnishing and installing anchor bolts) and pad, install the controller cabinet on said foundation, and make all field wiring connections to terminal blocks in the controller cabinet. The foundation for the Type 332L cabinet will conform to State Standard Plan ES-3C and extended so the controller cabinet is mounted no closer than four feet from the service cabinet.

Battery backup systems have recently been installed at Fulton Road intersections with Guerneville Road, Appletree Drive, Piner High School Driveway and Piner Road, at the Jenes Lane intersection when the signal was installed. You will protect BBS systems in place and repair any damage to BBS caused by your operations at no cost to the City.

Controller units and cabinets will conform to Part IV-B and IV-C of the City Traffic Standards.

You will request signal timing a minimum of 10 working days before the controller unit is delivered to the City. For locations where the controller unit is being replaced in an existing cabinet, you will

deliver the controller unit with software installed and timing sheet to the City Electrical Shop. For locations where a new traffic signal controller assembly is being installed, you will deliver the assembly, software, and timing sheet to the City Electrical Shop. You will contact the City Electrical Shop at (707) 543-3888 at least 10 working days in advance of delivery to set up an appointment for controller testing.

You will determine the mounting data necessary for the cabinet base and when necessary pick up the controller, cabinet, and components from the City Corporation Yard and install them at the site of the work. The controller will be available for pick-up after the issuance of the Notice of Approval and Work Order.

Fiber optic termination brackets will be furnished and installed by City. To allow for proper testing of equipment and adjustment of work schedules, you will give a minimum of one week's notice to the Signal Section Supervisor prior to:

1. Controller cabinet pick up
2. Video detection alignment, program the controller, and certify the video detection system has been installed correctly.
3. Turning traffic signal ON.

You will be responsible for, and do all field wire hookup, including energizing the system and placing it in operation.

86-4 TRAFFIC SIGNALS AND FITTINGS

86-4.01 Vehicle Signal Faces: Vehicle signal faces will be 12-inch LEDs furnished and installed by the you. Circular modules will conform to Section 86-1.02R(4)(b) LED Signal Modules of the Standard Specifications.

86-4.01A Signal Sections: Each signal-section housing will be either die-cast or permanent mold-cast aluminum conforming to ANSI Standard D-10. 1 and will conform to the requirements of the Standard Specifications. Structural plastic will not be accepted.
86-4.01 C Visors: Visors will be full circle type, with a flat black finish.

86-4.03 Pedestrian Signal Faces: Pedestrian signal heads will be 16-inch by 18-inch countdown LED in accordance with Part IV-E.1 of the City of Santa Rosa Traffic Standards. Pedestrian modules will be GTX City LED Countdown Pedestrian Signals, PS7-CFF1-VLA, or approved equal.

86-4.04 Signal Mounting Assemblies: Terminal compartments will be cast bronze.

86-4.03H Audible Pedestrian Signals: The audible pedestrian signals will be Polara Navigator Accessible Pedestrian Signals, IN2 2-wire unit, with a rack mounted CCU. This equipment will be installed at the locations shown on the plans and in accordance with the manufacturers' recommendations.

APS units are required with a configurator to remain in the controller cabinet. APS will meet current standards in the California Manual on Uniform Traffic Control Devices.

http://www .polara.com/docs/IN2-0PERATION_r121023.pdf

The minimum volumes will be adjusted by the you as directed by the Engineer.

The body housing and button will be powder coated green.

The face plate for the pedestrian push button will be a R10-3e (MUTCD 2014 Edition) with the appropriate (left or right) arrow representing the direction of the pedestrian crossing that the push button serves. Size of the sign will be 5" x 7".

86-5 DETECTORS

86-5.01D Emergency Vehicle Detector System: Optical detectors (Global Traffic Technologies Model 721) will be mounted on the traffic signal mast arms at the locations shown on the plans.

Phase selectors (Global Traffic Technologies Model 764) will be provided by the you to interface between the optical detector and the controller unit. Deliver the phase selectors to 55 Stony Point Road, and the City will install them in the controller.

Provide and install optical detector cable (Global Traffic Technologies Model 138) at the locations shown on the plans and make the appropriate connections to the controller.

86-5.01E Video Detection System: Furnish and install a complete GridSmart video detection system as shown on the plans, as specified herein, and as directed by the Engineer.

The video detection system will be installed as recommended by the supplier and as documented in installation materials provided by the supplier.

The cameras will be mounted at the location shown on the plans as recommended by the manufacturer.

All cable for the video detection system will be per manufacturers' specifications and supplied by you. No splicing of cable will be allowed.

You will arrange for a representative from GridSmart to oversee the alignment of the camera, programing of the processor, and certify that the video detection system has been installed correctly and is fully operational a minimum of one working day before the scheduled turn-on of the traffic signal system. You will notify the Signal Section Supervisor at 707-543-3888 a minimum of 48 hours prior to scheduling the GridSmart representative's visit to the project site. The scheduled turn-on cannot proceed until the video detection system operation has been approved by the Signal Section Supervisor.

86-6 LIGHTING

86-6.02 Light Emitting Diode (LED) Luminaires: You will supply and install the type and wattage of LED luminaire noted on the plans or approved equal.

You will supply and install LED Luminaires and the LED fixtures Leotek GCM1-60J-MV-30K-3R-GY-120-FOC-PCR7-WL-RWG 80W or approved equal.

You will submit the proposed type of luminaire to the Engineer for approval before ordering.

86-6.11 Photoelectric Controls: The photoelectric unit will be installed on a traffic signal standard, the location of which is shown on the plans. A separate contactor will be located in the service cabinet.

86-6.11A Types: Photoelectric control will be Type II with a Ripley RD8645-5 .0 long life PEC.

86-8.01 PAYMENT:

Traffic Signal will be paid for at the contract **lump sum** prices for the various traffic signal installations and modifications.

HAWK Beacon will be paid for at the contract **lump sum** price for **HAWK Beason Installation**.

Relocate Type 17 Standard shall be paid for at the contract **lump sum** price for Relocate Type 17 Standard.

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

Intersection lighting will be considered as included in the contract lump sum prices paid for Traffic Signal or HAWK Beacon installation, which price will include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work including furnishing and installing lamps, ballasts, and photo cell control, and no additional allowance will be made therefor.

The full costs for Pull Box No. 5, Pull Box 17” x 30”, Pull Box 36" x 24" Composite, and Pull Box 30" x 48" as shown on each traffic signal plan sheet will be included in the lump sum prices paid for traffic signal work at each location, which price will 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.

The cost of the portions of HFOC shown on the traffic signal plan sheets, and costs of communications equipment in controller cabinets will be included in the lump sum prices paid for traffic signal or beacon work at each location, which price will 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.

Signal Interconnect will be paid for at the contract price per **linear** foot, which price will include full compensation for furnishing all labor, materials, tools and equipment to construct the interconnect conduit, cable, and pull tape as shown on plan sheets TS-109 to TS-111 complete in place, including but not limited to all excavation and backfill, conduit, cables, and electrical components, as shown on the plans, as specified , and no additional allowance will be made therefor.

The cost of Hybrid Fiber Optic Cable will be included in the contract price per linear foot for Signal Interconnect**,** which will include full compensation for furnishing all labor, materials, tools, equipment, and doing all work involved in abandoning existing interconnect conduit, installing new conduit, HFOC, and pull tape, cable installation, including furnishing and installing cable,

supplying and installing terminal strips, landing all pairs of copper wires, and no additional allowance will be made therefor. Cable will be measured along the street centerline to the limits shown on the signal interconnect plans. Vertical dimensions, turns to and from pull boxes, and length of cable coils in pull boxes will not be included in the measurement.

The full cost of Optical Detectors will be included in the lump sum price paid for traffic signal work at each location, which price will include full compensation for furnishing all labor, material, tools, equipment, and doing all work involved, including mounting units on the mast arms at the locations shown on the plans, installing threaded fittings, furnishing and installing detector cable, connecting to the traffic signal controller and testing, and no additional allowance will be made therefor.

The full cost of Phase Selectors will be included in the lump sum prices paid for traffic signal or Hybrid Beacon work at each location, which price will include full compensation for furnishing and delivering phase selectors to 55 Stony Point Road as specified herein and no additional allowance will be made therefor.

The full cost of Video Detection System will be included in the lump sum prices paid for traffic signal or Hybrid Beacon work at each location, which price will include full compensation for furnishing all labor, material, tools, equipment, and doing all work involved in installing video tracking and detection system complete in place, including but not limited to video cameras , processing unit, and extension modules, as specified herein, as shown on the plans, including furnishing and installing all cables, terminating ends, connecting to the traffic signal controller, testing, and warranty, and no additional allowance will be made therefor .

Street Lights will be paid for at the contract unit price **each**, which price will include full compensation for poles, luminaires, photocell controls, foundations, conduit, conductors, connecting to PG&E service points, excavation, and backfilling.

90 CONCRETE

90-1 GENERAL

90-1.01A Summary: Portland cement concrete (PCC) will conform to the City Specifications, the Standard Specifications, and these Special Provisions.
Refer to related Sections for Roller Compacted Concrete Pavement and Pervious Concrete.

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

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

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

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

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

100-1 ADJUST MANHOLES TO GRADE

100-1 General: Existing storm drain and sanitary sewer manhole frame and covers located within the project limit will be adjusted to in accordance with the applicable City Standard and these Special Provisions. All non-standard manhole frames and covers that are required to be adjusted to grade will be removed and delivered to the City Corporation Yard. At which time you will be furnished new frames and covers to be installed in the project. The City will furnish new frames and covers to you at no cost.

You will field verify and record the type and location of all manhole frame and covers to be raised to grade and will furnish the Engineer a copy of said record prior to starting construction. Bolt down sanitary sewer manhole frames and covers will be required on all trunk sewer mains. You will install bolts for bolt-down SSMH covers after final inspection.

You will be responsible to have the correct nomenclature on the respective storm drain and sanitary sewer manhole covers. Any non-standard storm drain and or sanitary sewer manhole frames and covers will be removed and delivered to the City of Santa Rosa Corporation Yard. At which time you will be furnished new frames and covers to be installed on the project.

Existing manhole frames and covers which are damaged by your operations will be replaced at the your sole expense.

Prior to removal of an existing manhole frame, a plywood platform will be constructed in the manhole above the top of the sewer pipe or storm drain pipe to prevent any dirt or debris from falling into the sewer and storm drain lines. The platform will remain in place until all work on the manhole has been completed and the asphalt concrete has been placed around the manhole. Prior to the required removal of the platforms from the manholes, you will remove all dirt and debris from inside.

Trimming of taper sections will not be permitted.

You will adjust to grade all sanitary sewer and storm drain manhole frame and covers within three (3) working days after placement of the finish surface course of pavement over that facility. The top of the completed manhole will contain at least one 3-inch grade adjustment ring.
All sections of the manhole grade rings will be set in cement mortar the same day that the grade rings are placed. If paving is asphalt concrete then permanent asphalt concrete paving (0.17') over cement mortar will be installed by the end of the following work day. If paving is roller compacted concrete (RCC), then Portland cement concrete (PCC) is to be used in lieu of asphalt. The 28 day compressive strength of concrete will be 5000 pounds per square inch (psi) or greater.

All new and existing grade adjustment joints extending down to and including the tapered cone to grade ring joint will be smoothly plastered inside and out and sealed with an approved water seal.

Existing grade adjustment rings removed in the adjustment of manhole frames and covers will become your property and if undamaged and thoroughly cleaned of mortar may be reused in the work as approved by the engineer. If not so used, they will be disposed of away from the work site of at your expense.

The manhole cover frame will be reinstalled to align with the opening in the grade adjustment rings. Any frames that are misaligned by more than ¼ inch will be removed and reinstalled at the your expense.

You will accurately locate and record the location of all manholes to be raised to grade and will furnish the Engineer a copy of said record prior to starting construction.

100-2 ADJUST EXISTING VALVE BOX, MAIN LINE CLEANOUT, AND MONUMENT TO GRADE

100-2.01 Description: New and existing valve boxes, mainline cleanouts and monuments will be adjusted after paving to conform to finished grades in accordance with the applicable City Standard and these Special Provisions.

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

All water valves and mainline cleanouts on active systems will be accessible at all times to City Personnel unless otherwise stated in these Special Provisions or approved of by the Engineer.

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

All new and existing valve boxes, mainline cleanouts and monuments will be adjusted to grade within 48 hours after placement of the finish course of pavement.

Final grade adjustments and installation of concrete as shown per the applicable City Standard will be done on the same working day. Final paving around valve boxes, mainline cleanouts and monuments will be completed the following working day.

All valve covers, mainline cleanouts, pull boxes, and monuments will be set in cement mortar the same day that the units are placed. Asphalt concrete paving over cement mortar will be installed by the end of the following work day. If paving is roller compacted concrete, then Portland cement concrete (PCC) is to be used in lieu of asphalt. PCC is to be used in lieu of asphalt. The 28 day compressive strength of concrete will be 5000 pounds per square inch (psi) or greater. All joints will be smoothly plastered inside and out.

All silt and debris will be removed from finished structures. This will include all existing silt and debris plus material caused by your operation.

If the existing riser pipe needs to be extended after paving to conform to City STD-877, you will use either a slip x slip glued PVC coupling or a transition coupling with sheer bands as directed by the Engineer. Upsizing the existing riser pipe to 8 inch will not be required unless otherwise directed by the Engineer.

If you encounter water valve boxes with round lids which must be adjusted to grade after paving, you are to provide a count of said boxes to the inspector a minimum of two days prior to paving to obtain replacement triangular valve boxes and lids. The City will provide replacements (Type G4) boxes, provided you are not required to replace them as part of the contract or due to you damaging them.

You will adjust to grade all water valve boxes and cleanout frames and covers within three (3) working days of being covered with the final surface pavement.

100-6 TRENCH BRACING AND SHORING

100-6 GENERAL

100-6.1 General: All bracing and shoring will conform to Section 7-1.02K(6) of the Standard Specifications and the Division of Industrial Safety Construction Safety Orders which are currently in use.

You will take all necessary precautions and implement measures to protect workers and adjacent areas and structures from the hazards of trenching or excavation operations.

100-6.2 Payment: Trench bracing and shoring will be considered as included in the contract prices paid for associated items of work.

104 BUS SHELTER

104-1 GENERAL

104-1.01A General: Bus Shelter will be Tolar Manufacturing Company Inc. Model 9NAD-PM 9974-01 with metal bench Model 12092-121, solar lighting panel TSSL-50 0301358 and pole mounted trash receptacle part number 1578-01.

You will provide all material, labor, equipment, and services necessary for furnishing and installation of Bus Shelter complete as shown on the plans and specified herein. Bus Shelter includes, but is not limited to bench, bus shelter enclosure, solar lighting panel and trash receptacle.

104-1.02B Submittals: You will submit the manufacturer's shop drawings for the products specified to the Engineer for review and acceptance. Include profiles, sizes, and connections; method of fabrication and erection, including connectors and welds.

Approval by the Engineer is required prior to ordering the bus shelter and commencement of work.

104-1.02 Materials: The bus shelter, panels, roof, frames, trash receptacle and seating will be made of 100% steel, powder-coated color RAL 5017 – Traffic Blue and will not require any chemical cleaners for maintenance.

The bench will be 48" long perforated metal bench with one anti-vagrant bar.

The bus shelter and bench will be surface mount with corrosion resistant anchors appropriate for the surface.

Pole mounted trash receptacle will be mounted on the side of the bus shelter as directed by the Engineer.

104-1.03 Construction: Bus Shelter and all component products will be delivered and unloaded at the job site in such a manner that no damage occurs to the products during hauling, handling, or unloading, storage, and installation.

104-12.03 Payment: Concrete flatwork within bus shelter area is included in Sidewalk bid item quantity.

112 TREE PROTECTION

112-1 GENERAL

112-1.01 General: The following requirements will apply to you and any other 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.

112-1.03 Construction: Before the start of any clearing, excavation, construction or other work on the site, every protected tree will be securely fenced off at the protected perimeter. Protected perimeter will be either the root zone or other limit as directed by the Engineer. Tree Protection Fencing will remain continuously in place for the duration of all work undertaken in connection with this project. The area so fenced off will 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 will 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, will be minimized and subject to such conditions as may be imposed by the Engineer. No significant change in existing ground level will 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 will occur near or within the protected perimeter. All brush, earth, and other debris will 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 will 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 will avoid major support and absorbing tree roots of protected trees. If avoidance is impracticable, tunnels will be made below the roots. Trenches will be consolidated to serve as many units as possible. Trenching within the drip line of the tree will be avoided and only be done with the approval and direction of the Engineer.

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

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

[Version: 11/6/14CDA STD2010]

121 NOTIFICATION

121-1 GENERAL

121-1.01 General: You will notify the Engineer of any work to be performed on any given workday either on the afternoon of the prior working day or before 8:30 a.m. on the given working day. Any work completed for which the Engineer has not received prior notification of its scheduling MAY NOT BE ACCEPTED FOR PAYMENT.

You will maintain a Supervisor at the work site at all times who will have the ability to communicate effectively with his crew, inspectors and City personnel, and who will have the authority to sign change orders, coordinate work and make decisions pertaining to the fulfillment of the contract.

You will provide a written notice of pending construction to all residents and businesses 7 calendar days prior to the start of work. A notice will be placed at each front door and attempts made at personal contact. You will inform each resident and business of the type of work, the scheduled date(s) and time of work, the potential impacts to the resident or business.

You will provide a written notice to all residents and businesses 14 working days prior to doing any work on private property. The notice will inform the resident or business of the type of work, the scheduled date and time of the work and the potential impacts to the resident or business, including time frame during which vehicle access may be interrupted. You will provide a reminder to all residents and businesses 24 hours prior to doing any work on private property. You will be aware that onsite construction activities may impact business and residents' accessibility. You will maintain pedestrian and vehicular access to businesses and residences at all times.

All written notices will be submitted to the City for approval prior to distribution. The City may take up to three (3) calendar days to review notices.

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

124 MATERIAL RECYCLING

124-1 GENERAL

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

All other excess materials from the Project will become your property and will be disposed of by you, at your expense.

[Version: 11/6/14CDA STD2010]

126 ENVIRONMENTAL PROTECTION PLAN

126-1 GENERAL

126-1.00 General: You are responsible for compliance with all applicable environmental protection requirements. The following section describes the requirements of the Environmental Protection Plan and guidelines for development of
the plan.

126-1.01 References: See A Fees and Permits for environmental special provisions and permit conditions.

126-1.02 Contractor Submittals: The following will be submitted in accordance with B, "Submittals and Working Drawings"

(1) Environmental Protection Plan: You will submit an Environmental Protection Plan within 15 days after receipt of the notice to proceed. Approval of the your plan will not relieve you of responsibility for implementation of environmental protection measures.

126-1.03 Environmental Protection Plan Requirements: You will provide environmental protective measures and procedures to prevent and control pollution, limit habitat disruption, and correct environmental damage that occurs during construction. These Special Provisions have been prepared to comply with the special conditions and mitigation measures of an environmental nature which were established during the planning and development of this project. You are advised that deviations from
the drawings or these Special Provisions (e.g., staging areas, alternate access routes, etc.) are not allowed without prior written approval from the City.

126-1.04 Environmental Protection Plan: You will submit an Environmental Protection Plan within 15 days after receipt of the notice to proceed which provides how you will execute the environmental requirements indicated in the contract documents. The Plan will be developed by a qualified individual and the Plan will be submitted to the City for review and approval. Approval of your Plan will not relieve you of responsibility for implementation of environmental
protection measures. Acceptance is conditional and is predicated upon satisfactory performance during construction. The City reserves the right to require you to make changes in the Environmental Protection Plan or operations if it determines that environmental protection requirements are not being met. No preconstruction surveys or physical work at the site will begin prior to acceptance of your plan covering the work to be performed.

The Environmental Protection Plan will include, but not be limited to, the following:

1. List of Federal, State and Local Laws and Regulations: You will provide as part of the Environmental Protection Plan a list of all Federal, State and local environmental laws and regulations which apply to the construction operations under the Contract.
2. California tiger salamander (CTS) Protection Measures: The Plan will include your methods to minimize adverse effects to the CTS or its habitat.
3. Nesting Passerines and Raptors Measures: The Plan will include your methods to minimize adverse effects to nesting birds and roosting bats.
4. Noise Control Measures: The Plan will include the details of noise control measures at the project site.

5. Cultural Resources Protection Measures: The Plan will include details of cultural resource protection measures.
6. Water Resources Measures: The Plan will include methods to avoid effects to jurisdictional wetlands, including wetland protection fencing. The Plan will also include reference to SWPPP.
7. Air Resource Measures: The Plan will include the details to control equipment exhaust, particulates, dust, rubbish, and debris at the site.
8. Environmental Monitoring: You will include the details of environmental monitoring requirements under the applicable laws and regulations and a description of how this monitoring will be accomplished.
9. Protective Fencing: As part of the Environmental Protection Plan, you will identify the limits and extents of protective fencing around potentially federally-listed species areas, delineated wetlands, and drainage features not to be affected by construction. Plan will also describe how the fencing will be installed and maintained. Refer to A Fees and Permits for additional information on protective fencing.

126-1.05 Inspection: If the City notifies you in writing of any observed noncompliance with contract requirements or Federal, State, or local laws, regulations, or permits, you will inform the City of proposed corrective action and take
such action to correct the noncompliance. If you fail to comply promptly, the City may issue an order stopping all or part of the work until satisfactory corrective action is taken. No costs, time extensions, or damages will be granted to you for any such suspension.

126-1.06 Payment: Full compensation for Environmental Protection Plan as specified herein will be considered as included in the contract prices paid for various items of work, and no additional compensation will be allowed therefor.

130 SANITARY SEWER SYSTEM

130-1 GENERAL

130-1 General: Sanitary sewer system components and related appurtenances will conform to the requirements as specified in the City of Santa Rosa Sanitary Sewer Construction Standard Specifications Section 130, the Project Plans, and modifications herein. Any proposed deviations must first be approved in writing by the Director of Santa Rosa Water.

You will provide continuous service to all existing customers during and after work hours, weekends, and holidays, including the installation of temporary lines and or temporary pumping equipment. Sewage will be controlled in a pipeline at all times and flows or leaks in the street or open ditches will not be allowed.

Permanent paving will not take place until all underground work is finished, except as otherwise noted, and the Engineer has given written notice of acceptance to you.

130-2 MATERIALS

130-1.02 Pipe: Sanitary Sewer pipe to be installed will be ductile iron pipe (DIP) with Protection 401 Epoxy Coating on the inside of the pipe, or SDR 26 polyvinyl chloride (PVC) pipe, as identified on the plans, and will conform to Section 130-1.02 of the City of Santa Rosa Sanitary Sewer Construction Standard Specifications.

130-1.07 Sewer Structures: All sewer manholes located within the street right of way will be adjusted to conform to finished pavement grades and will conform to section 130-1.07 of the City of Santa Rosa Sanitary Sewer Construction Standard Specifications.

130-1.07A Existing Manholes: All existing sewer manholes and cleanouts located within the street right of way will be adjusted to conform to finished pavement grades and will conform to section 130-1.07A of the City of Santa Rosa Sanitary Sewer Construction Standard Specifications.

130-1.12 Payment: The actual quantity of sewer main to be paid will be the length measured from center of manhole to center of manhole along the finished grade to the nearest foot. Excess pipe purchased by you will not be paid for by the City.

All potholing other than as specified in Section 15 to facilitate the progress of work will be considered included in the price paid for various items of work involved.

All cleaning and flushing and testing work will be considered included in the price paid for various contract items of work involved.

Television inspection will be considered as included in the prices paid for the various contract items of work involved.

Bypass pumping will be considered as included in the prices paid for the various contract items of work involved.

132 WATER DISTRIBUTION SYSTEM

132-1 GENERAL

132-1.01 General: Water Distribution System and related appurtenances will 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.

132-2 MATERIALS

132-1.02 Pipe: All water pipe will conform to Section 132-1.02 of the City Construction Standard Specifications.

132-1.04 Fittings: All fittings will conform to Section 132-1.04 of the City Construction Standard Specifications.

132-1.05 Gate Valves: All gate valves will conform to Section 132-1.05 of the City Construction Standard Specifications.

132-1.08 Locating and Adjusting Water Valve Boxes: All locating and adjusting water valve boxes will conform to Section 132-1.08 of the City Construction Standard Specifications.

132-1.09 Fire Hydrants and Lateral Assembly: All fire hydrant and lateral assembly work will conform to Section 132-1.09 of the City Construction Standard Specifications.

132-1.11 Excavation, Backfill, and Resurfacing: You will 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 will 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 you install 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 will be installed with a minimum horizontal clearance of 3 feet from gas laterals. Water services will be installed via ‘open trench’ construction methods only, unless otherwise specified herein. Water services will be HDPE.

132-1.15D Backflow Device Installation: All backflow prevention device relocations and adjustments will conform to Section 132-1.15D of the City Construction Standard Specifications.

132-1.16 Payment: Installation of fire hydrants will include all lateral piping, valves, cut-in tees, and all other necessary components to construct a complete fire hydrant assembly, as described in the City Standards, Special Provisions, and project plans.

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** 2261 ATHENS AVE. REDDING, CA 96001 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: 1/18/2022)

A - FEES AND PERMITS

You will obtain all necessary and required permits for the project.

You will coordinate, file, and submit all Pacific Gas and Electric Company (PG&E) applications for electricity and gas required by the Project for the City. Application(s) will be submitted on PG&E's online website by you. All electrical service charges or fees that may be required by PG&E will be paid for by an appropriate City Department.

You will obtain a Waste Discharger Identification number (WDID) to show compliance with the General Construction Permit from the State. All application fees required by the WDID application will be paid for by an appropriate City Department.

You will obtain the necessary irrevocable licenses from Sonoma County Water Agency (SCWA) to perform work in the area of the Forestview Creek. All application and permit fees required by SCWA will be paid by you.

All other required permits will be obtained at your expense.

All work will be performed in compliance with the following obtained regulatory permits:

- California Department of Fish and Wildlife - Lake and Streambed Alteration Agreement (LSAA)
- California Department of Fish and Wildlife - Incidental Take Permit
- California Regional Water Quality Control Board 401 Permit (Water Quality Certification)
- US Army Corps of Engineers Section 404 Permit

This section describes the permits obtained by the City, the permits to be obtained by the City, the California Environmental Quality Act (CEQA) mitigation measures, and other special provisions as required for construction of the project.

Permits
All permits will be procured before the commencement of any work requiring permitting.

Resource Agency Permits
The City has obtained the resource agency permits listed in Table A 1; each permit is attached in this section as a reference:

Table A1

Agency	**Permit**
California Department of Fish and Wildlife	Lake and Streambed Alteration Agreement (LSAA)
California Department of Fish and Wildlife	Incidental Take Permit
California Regional Water Quality Control Board	401 Permit (Water Quality Certification)
U.S. Army Corps of Engineers	Section 404 Nationwide Permit
City of Santa Rosa	Authorization to Discharge Permit[(1)]

Note: [(1)] Authorization to Discharge Permit addresses one-time groundwater discharge of project wastewater to the City sewer system (Santa Rosa Subregional Reclamation Facility).

You are responsible for compliance with all permit provisions. The following information is provided to clarify the City's role and communicate other expectations within the provisions of the permits noted in Table A 1, however it is your responsibility to review all acquired permits and implement all permit provisions.

- City will perform the role of "Designated Representative" and "Designated Biologist" within the context of the permit conditions.
- City will perform the "Education Program" as outlined in the LSAA and ITP.
- City will provide "Monitoring, Notification and Reporting" as outlined in the LSAA, Section 401, and ITP.
- City will provide "Revegetation Plan" as outlined in the LSAA and Section 401 Permits.
- Before starting construction, you will use orange silt fence adjacent to clearly delineate the boundaries of the Project Area. The City will restrict all Covered Activities to within the fenced area. Fencing will remain in place until completion of project construction as stated in the ITP.
- At no time will silt laden runoff be allowed to enter a river, stream, or lake or directed to where it may enter a river, stream, or lake. Erosion control measures will be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a river, stream, or lake. Erosion control measures, such as, silt fences, straw hay bales, gravel or rock lined ditches, water check bars, and broadcasted straw will be used wherever sediment has the potential to leave the work site and enter the river, stream, or lake.
- City will provide "Compensatory Measures" as outlined in the Lake or Streambed Alteration Agreement.
- City will provide "Reporting Measures" as outlined in the Streambed Alteration Agreement.

You will comply with all of the provisions stated in the permits obtained by the City, as well as the anticipated provisions identified below, and other applicable regulations. You will allow for adequate time to apply for and process all permits. This section consists of a list of provisions that are typical for construction projects within the Santa Rosa Plain that may have impacts to rare and endangered species and/or impacts to riparian habitat. The provisions below are anticipated conditions that may be material to the bid and are provided for your reference. The provisions are an estimation only and the approved permits will supersede them.

1) The City or Engineer will provide a pre-approved United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) biologist to oversee the implementation of these provisions.
2) Prior to construction, the City's approved biologist will acquire approval from the USFWS and CDFW to identify a suitable location for CTS relocation if individuals are found in the project area.
3) Initial ground disturbing activities with the Covered Species habitat are limited to the period from June 15 to October 15 (dry season). Once initial ground disturbing activities have been completed (excavation, grading and contouring), additional ground disturbance including excavation may occur in the same area as long as rain is not forecasted, as described in the ITP (Condition 7.2).
4) Before the start of work each morning, and after initial ground breaking, a qualified biologist will check for animals under any equipment such as vehicles and stored pipes. The inspector will check all excavated steep-walled holes of trenches greater than one

foot deep for any CTS. If CESA listed species are found, the all work will cease and CDFW must be notified.

5) Access routes and number and size of staging and work areas must be limited to the minimum of necessary to achieve the project goals. Routes and boundaries of the roadwork will be clearly marked prior to initiating construction/grading.
6) All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils or solvents.
7) Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 175 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment and staging areas must occur at least 175 feet away from any aquatic habitat.
8) The project will submit a dewatering and bypass plan prior to conducting any grading in the creek. This plan will adhere to the following conditions:
    a. Work within the riparian zone and/or creek will be confined to the dry season defined as the time from June 15 to October 15.
    b. Erosion control measures will be utilized throughout all phases of operation where sediment runoff form exposed slopes threatens to enter waters of the State of California/United States.
    c. Work will be performed in isolation from the flowing stream. To isolate the work area, a water tight coffer dam will be constructed as close as practicable upstream and downstream of the work area. The coffer dam will be constructed of non-erodible material which does not contain soil or fine sediment.
    d. Flow diversions will be done in a manner that will prevent pollution and/or siltation and which will provide flow to downstream reaches. Any pumps used will have appropriate screens to prevent aquatic life from being pulled into the pump. When pools are drained, you will coordinate with City's biologist onsite to rescue stranded aquatic life as the water level in the developing area drops. All reasonable efforts will be made to capture and move all stranded aquatic life observed in the dewatered areas. Captured aquatic life will be released immediately in the nearest body of water adjacent to the work site. The discharge pipe must flow through a sediment bag or similar device, to prevent fine sediments from being discharged downstream.
9) The Regional Water Quality Control Board (RWQCB) will be notified prior to the commencement of ground disturbing activities, with details regarding the construction schedule, in order to allow RWQCB staff to be present onsite during construction, and to answer any public inquiries that may arise regarding the project. The timeframe of this notification will be specified in the permit documents.
10) No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement, or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that specified in the project plan or these Special Provisions will be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S. and/or the State. When operations are completed, any excess material or debris will be removed from the work area. No rubbish will be deposited within 150 feet of the high water mark of any stream.
11) A copy of all of the environmental permits listed above will be provided to all contractors and subcontractors conducting the work, and will be in their possession at the work site.

12) If at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated project activities will cease immediately until adequate BMPs are implemented. The RWQCB will be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.
13) No project activities will occur from February 15 through August 31 unless nesting bird surveys have been completed. The City will conduct nesting bird surveys prior to construction activities. The surveys will occur within 500 feet of the project area. If nesting birds are found, you must cease work in the nesting area and implement a buffer around the nest as directed by the approved biologist. To prevent encroachment, the established buffers will be clearly marked by high visibility material. The established buffers will remain in effect until the young have fledged and no longer require parental care, or the nest has been abandoned as confirmed by the Qualified Biologist. If a lapse of seven days or more occurs in project activities, another survey will be conducted.
14) To protect burrowing owl, a Qualified Biologist will conduct surveys pursuant to the *Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012) survey methodology prior to project activities beginning during the burrowing owl non-breeding wintering season (September 1 to January 31), unless otherwise approved in writing by CDFW. Any deviations from the survey methodology must be approved in writing by CDFW. If burrowing owl is detected, a Qualified Biologist will establish suitable buffers to ensure the owl is not disturbed by the project. To prevent encroachment, the established buffers will be clearly marked by high visibility material. If non-nesting burrowing owl exclusion is necessary, Permittee will submit an exclusion plan to CDFW and receive approval in writing. CDFW reserves the right to add measures to this Agreement if burrowing owl is found.
15) A Qualified Biologist will conduct a preconstruction survey for the Western pond turtle within 48 hours of the commencement of project activities. If Western pond turtle is detected at any time CDFW will be notified immediately, and the Qualified Biologist will relocate the turtle to appropriate aquatic habitat within the stream it was found. CDFW reserves the right to add measures to this Agreement, such as a western pond turtle habitat improvement plan, if Western pond turtle or their nests are found.
16) Prior to any tree removal, a Qualified Biologist will conduct a habitat assessment for bats. The habitat assessment will be conducted a minimum of 30 to 90 days prior to tree removal and will include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, or exfoliating bark for colonial species, and suitable canopy for foliage roosting species). If suitable habitat trees are found, they will be flagged or otherwise clearly marked, CDFW will be notified immediately, and tree trimming or removal will not proceed without approval in writing from CDFW. Trees may be removed only if: a) presence of bats is presumed, or documented during the Surveys described below, in trees with suitable bat habitat, and removal using the two-step removal process detailed below occurs only during seasonal periods of bat activity from approximately March 1 through April 15 and September 1 through October 15, or b) after a qualified bat biologist, under prior written approval of the proposed survey methods by CDFW, conducts night emergence surveys or complete visual examination of roost features that establish absence of roosting bats. Two-step tree removal will be conducted over two consecutive days, as follows: 1) the first day (in the afternoon), under direct supervision and instruction by a qualified bat biologist with experience conducting two-step tree removal limbs and

branches will be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices or deep bark fissures will be avoided, and 2) the second day the entire tree will be removed. CDFW reserves the right to provide additional provisions to this Agreement in the event that roosting bats are found.

17) Qualified Biologist will conduct a pre-construction survey for the American badger and suitable dens within 48 hours of the commencement of project activities. The survey area will include the project area and a 50-foot buffer zone within suitable habitat. If badgers are found on or adjacent to the project site a 50-foot construction avoidance buffer will be established and CDFW will be immediately notified. CDFW reserves the right to provide additional provisions to this Agreement in the event that badgers are found.

CEQA MITIGATION MEASURES
You will adhere to the CEQA documentation prepared for the project by enacting and complying with all applicable Mitigation Measures provided in the permit.

Other Required Permits

You will obtain a Revocable License (permit) from the Sonoma County Water Agency (SCWA) and pay the fee prior to performing any work, including temporary access, in the SCWA rights-of-way (i.e., Forestview Creek). Additional Revocable License information is located on the SCWA website:

http://www.scwa.ca.gov/files/docs/projects/forms-applications/revlic.customer.instructions.pdf

The City will obtain right-of-entry permits from private property owners where required.

You will obtain a permit from the State of California Division of Industrial Safety. Attention is directed to Section 5-1.02A, "Trench Excavation Safety Plans" of these Special Provisions.

City Building Permits will be at no cost to you.

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

[PERMITS ATTACHED]

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
BAY DELTA REGION
2825 CORDELIA ROAD
FAIRFIELD, CA 94534

STREAMBED ALTERATION AGREEMENT
EPIMS-SON-14105-R3
SMALL UNNAMED DRAINAGE, FORESTVIEW CREEK, PETERSON CREEK,
UNNAMED TRIBUTARY TO PETERSON CREEK

CITY OF SANTA ROSA
FULTON ROAD WIDENING IMPROVEMENT PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and City of Santa Rosa (Permittee) as represented by Steve Brady.

RECITALS

WHEREAS, pursuant to Fish and Game Code section 1602, Permittee notified CDFW on October 21, 2020 and provided subsequent information that Permittee intends to complete the project described herein.

WHEREAS, pursuant to Fish and Game Code section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located at four locations: a small unnamed drainage, Forestview Creek, Peterson Creek, and an unnamed tributary to Peterson Creek, in the City of Santa Rosa, County of Sonoma, State of California. All locations are along Fulton Road between Guerneville and Piner Roads. Specific locations from south to north are described below.

Location 1: Small Unnamed Drainage

Location 1 is approximately 175 feet north of the Fulton Road and Guerneville Road intersection, located on the east side of Fulton Road at approximately 38.453188, -122.769485.

Location 2: Forestview Creek

Location 2 is approximately 930 feet north of the Fulton Road and Guerneville Road intersection, just north of Appletree Drive on the west side of Fulton Road at approximately 38.455179, -122.769787.

Location 3: Peterson Creek

Location 3 is approximately 1,560 feet south of the Fulton Road and Piner Roads intersection, and 360 feet south of Quail Hollow Drive, on the west side of Fulton Road at approximately 38.462743, -122.769777.

Location 4: Unnamed Tributary to Peterson Creek

Location 4 is approximately 560 feet south of the Fulton Road and Piner Road intersection, on the west side of Fulton Road at approximately 38.465508, -122.769849, and extends approximately 890 feet south to Peterson Creek.

PROJECT DESCRIPTION

The project is limited to filling the small unnamed drainage and unnamed tributary to Peterson Creek, and reconfiguring the culverts at Forestview Creek and Peterson Creek, as described below.

Location 1: Small Unnamed Drainage

Project activities at the small unnamed drainage are limited to partially filling it with a concrete pipe culvert to convey water to the existing catch basin. Approximately 18 linear feet (165 square feet) will be filled by the culvert.

Location 2: Forestview Creek

Project activities at Forestview creek are limited to removing the two existing 41-inch by 72-inch corrugated metal oval storm drainpipes that currently discharge to Forestview Creek with an 11-foot by 4-foot box culvert. A 30-inch diameter storm drainpipe which connects to one of the 41-inch by 72-inch storm drainpipes will be replaced and reinstalled to connect into the northern side of the new box culvert system. A 42-inch diameter storm drainpipe that also discharges to Forestview Creek will be replaced and realigned to connect into the southern side of the new box culvert system. The existing extension of storm drainpipes into the creek will be removed to match the extent of the improvements, which will be bounded by a new retaining wall. Existing rock slope protection (RSP) will be removed and replaced, and additional RSP will be placed, within the creek to approximately 10 feet beyond the end of the box culvert and pipes. Overall, the project will result in a net decrease of approximately 6 linear feet and 284 square feet of rip rap and permanent structures within the creek. Construction equipment will enter the project site via a temporary access route from the existing

paved path adjacent to the site. Temporary work areas including access routes will encompass 1,560 square feet within the creek.

Location 3: Peterson Creek

Project activities at Peterson Creek are limited to extending two existing 60-inch diameter storm water culverts in Peterson Creek by approximately five to ten feet, and replacing an existing roadside drainage to Peterson Creek with a new 36-inch storm drainpipe. Existing RSP will be removed and replaced, and additional RSP will be placed, within the channel to approximately 15 feet beyond the end of pipes. Improvements associated with widening Fulton Road will encompass 2,580 square feet within the creek's riparian habitat above the top of bank. Overall, the project will permanently impact 29 linear feet of Peterson Creek and result in a net increase of approximately 3,286 square feet (0.07 acres) of RSP and permanent structures within the creek and associated riparian habitat. Temporary work areas including access routes will encompass 1,600 square feet within the creek.

Location 4: Unnamed Tributary to Peterson Creek

Project activities at the unnamed tributary are limited to filling it with landscaping features and a sidewalk. The landscaping features will be permeable allowing them to continue conveying water to Peterson Creek. Approximately 890 linear feet (3,378 square feet or 0.08 acres) will be filled.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include:

- California tiger salamander (*Ambystoma californiense*); threatened under the California Endangered Species Act (CESA) and endangered (Sonoma County population) under the federal Endangered Species Act (ESA)
- steelhead (*Oncorhynchus mykiss*): threatened under ESA
- white-tailed kite (*Elanus leucurus*); California Fully Protected
- burrowing owl (*Athene cunicularia*); California Species of Special Concern (SSC)
- bats, including but not limited to pallid bat (*Antrozous pallid*), SSC
- American badger (Taxidea taxus); SSC
- Western pond turtle (*Actinemys marmorata*); SSC
- red-bellied newt (*Taricha rivularis*); SSC
- Sierran tree frog (*Pseudacris sierra*)
- waterfowl
- nesting birds
- raptors
- small mammals

- Aquatic organisms
- Riparian habitat and vegetation
- Aquatic habitat
- Water quality

The adverse effects the project could have on the fish or wildlife resources identified above include:

- loss of riparian and aquatic habitat
- change in contour of bed, bank, and channel
- change in flow depth, width, or velocity
- change in composition of channel materials
- increase of bank erosion during the project
- change in gradient of bed, channel, or bank
- loss of bank stability during the project
- soil compaction or other disturbance to soil layer
- colonization by exotic plant species
- disruption of nesting birds and other wildlife
- loss of aquatic and terrestrial wildlife species
- temporary impediment to migration of aquatic and terrestrial species
- increased turbidity
- disturbance from project activity
- short term release of contaminates
- restriction or increase in sediment transport

The project will result in temporary impacts to 3,160 square feet (0.07 acres) of stream habitat, and net permanent impacts to 931 linear feet and 6,545 square feet (0.15 acres).

The project will result in the removal of 20 oak trees (*Quercus* sp.) and two non-native trees.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily

available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with the Agreement.

1.5 No Trespass. To the extent that any provisions of this Agreement provide for activities that require the Permittee to traverse another owner's property, such provisions are agreed to with the understanding that the Permittee possesses the legal right to so traverse. In the absence of such right, any such provision is void.

1.6 Unauthorized Take. The Permittee is required to comply with all applicable State and Federal laws, including the California Endangered Species Act (CESA) and Federal Endangered Species Act. This Agreement does not authorize the take of any state or federal endangered or threatened species. Liability for any take or incidental take of such listed species remains the responsibility of the Permittee for the duration of the project. Any unauthorized take of such species may result in prosecution and nullification of the Agreement. The Permittee has State authorization for incidental take of California tiger salamander under Fish and Game Code section 2081, subdivision (b), *CESA Incidental Take Permit No 2081-2020-050-03, California Department of Fish and Wildlife, dated July 23, 2021.*

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

Work Period and Planning

2.1 Work Period. All work shall begin on or after June 15 and all work shall be completed by October 15. Revegetation work is not limited to this work window but must be completed within the same season as project activities. If more time is needed to complete project activities, the work period may be modified in writing on a week-by-week basis by a CDFW representative. Requests for a work period extension shall: 1) describe the extent of work already completed; 2)

detail the activities that remain to be completed; 3) detail the time required to complete each of the remaining activities; 4) provide photographs of both the current work completed and the proposed site for continued work; and 5) include an assessment of additional biological impacts as a result of the work extension.

2.2 No Work in Live Stream. No work shall occur in the portion of the streambed where flowing water is present or anticipated during the term of this Agreement. No equipment shall be operated within the live stream.

2.3 Seasonal Work Restricted to Periods of Dry Weather. The work period for completing the work within the project area as defined in the project description shall be restricted to periods of dry weather and no flowing water. The project area is defined as the bed, bank, channel, and associated riparian habitat. The Permittee shall monitor forecasted precipitation. When a ¼-inch or more of precipitation is forecasted to occur, the Permittee shall stop work before precipitation commences. No activity of the project may be started if its associated erosion control measures cannot be completed prior to the onset of precipitation. After any storm event, the Permittee shall inspect all sites currently under construction and all sites scheduled to begin construction within the next 72 hours for erosion and sediment problems and take corrective action as needed. Seventy-two hour weather forecasts from the National Weather Service shall be consulted and work shall not resume until runoff ceases and there is less than a 30 percent forecast for precipitation for the following 24-hour period.

2.4 Work According to Documents. Except as they are contradicted by measures required by this Agreement, all work shall be conducted in conformance with the project description above and the avoidance, minimization, and mitigation measures provided in the notification package.

2.5 Work According to Plans. Permittee shall complete all work according to the additional information and plans received by CDFW, including the *City of Santa Rosa Fulton Road Widening Project*, dated November 25, 2019, prepared by GHD, Inc. If the Permittee finds it necessary to update project plans prior to construction, the updated plans will be submitted to CDFW at least 30 days prior to beginning project activities to determine if an Amendment to this Agreement is required. Project activities shall not proceed until CDFW has accepted the updated plans in writing. At the discretion of CDFW, minor plan modifications may require an amendment to this Agreement. At the discretion of the CDFW, if substantial changes are made to the original plans this Agreement becomes void and the Permittee shall submit a new notification.

Wildlife Protection and Prevention - Biologist

2.6 Biologist Approval. No later than 30 days prior to project activities covered by this Agreement, the Permittee shall submit to CDFW, for review and approval, the qualifications for the biologist(s) that shall oversee the implementation of the conditions in this Agreement and conduct surveys or monitoring work. Project activities covered by this Agreement may not commence unless CDFW has approved the proposed biologist(s) in writing. At minimum the CDFW approved biologist(s) shall have a minimum of five years of academic training and professional experience in biological sciences and related resource management activities with a minimum of two years conducting surveys for each species that may be present within the project area, unless otherwise approved by CDFW.

2.7 CDFW Approved Qualified Biologist On-site. A Qualified Biologist shall be on site daily to monitor compliance with all conditions of this Agreement unless otherwise approved in writing by CDFW. The Qualified Biologist shall have the authority to halt project activities, through communication with the Project Manager or their on-site designee, in order to comply with the terms of this Agreement and otherwise avoid impacts to species and or habitats. If the on-site Qualified Biologist has requested a work stop due to failure to implement any of the conditions CDFW shall be contacted within 24 hours.

2.8 Daily Inspections. At the beginning of each workday, a Qualified Biologist shall inspect the project area unless otherwise approved in writing by CDFW. If CESA listed or special status species are encountered during project activities, all work shall cease and CDFW shall immediately be notified. Work shall not proceed without written approval from CDFW**.**

2.9 Training Session for Personnel. Permittee shall ensure that a CDFW-approved Qualified Biologist conducts an education program for all persons employed on the project prior to performing covered activities. Instruction shall consist of a presentation by the designated Qualified Biologist that includes a discussion of the biology and general behavior of any sensitive species which may be in the area, how they may be encountered within the work area, and procedures to follow when they are encountered. The status of CESA and ESA listed species including legal protection, penalties for violations and project-specific protective management measures provided in this Agreement shall be discussed. Interpretation shall be provided for non-English speaking workers, and the same instruction shall be provided for any new workers prior to on-site project activity. Copies of the Agreement for this project shall be maintained at the worksite with the project supervisor. The Permittee or Qualified Biologist shall prepare and distribute wallet-sized cards or a factsheet handout containing this information for workers to carry on-site. Upon completion of the program, employees shall sign an affidavit stating they attended the program and understand all protection measures. These forms shall be filed at the Permittee's office and be available to CDFW upon request.

Wildlife Protection and Prevention

2.10 Nesting Bird Surveys. To protect nesting birds, no project activities shall occur from February 15 through August 31 unless nesting bird surveys have been completed by a Qualified Biologist. To prevent nest abandonment, a Qualified Biologist shall survey within 500 feet of the project area for nesting birds. If a nest is found then the Qualified Biologist shall establish suitable buffers to ensure the nesting birds are not disturbed by the project prior to tree removal and/or ground-breaking activities. To prevent encroachment, the established buffers shall be clearly marked by high visibility material. The established buffers shall remain in effect until the young have fledged and no longer require parental care, or the nest has been abandoned as confirmed by the Qualified Biologist. If a lapse of seven days or more occurs in project activities, another survey shall be conducted.

2.11 Burrowing Owl Surveys. To protect burrowing owl, a Qualified Biologist shall conduct surveys pursuant to the *Department of Fish and Game Staff Report on Burrowing Owl Mitigation* (2012) survey methodology prior to project activities beginning during the burrowing owl non-breeding wintering season (September 1 to January 31), unless otherwise approved in writing by CDFW. Any deviations from the survey methodology must be approved in writing by CDFW. If burrowing owl is detected, a Qualified Biologist shall establish suitable buffers to ensure the owl is not disturbed by the project. To prevent encroachment, the established buffers shall be clearly marked by high visibility material. If non-nesting burrowing owl exclusion is necessary, Permittee shall submit an exclusion plan to CDFW and receive approval in writing. CDFW reserves the right to add measures to this Agreement if burrowing owl is found.

2.12 Western Pond Turtle Surveys. A Qualified Biologist shall conduct a pre-construction survey for the Western pond turtle within 48 hours of the commencement of project activities. If Western pond turtle is detected at any time CDFW shall be notified immediately, and the Qualified Biologist shall relocate the turtle to appropriate aquatic habitat within the stream it was found. CDFW reserves the right to add measures to this Agreement, such as a western pond turtle habitat improvement plan, if Western pond turtle or their nests are found.

2.13 Bat Habitat Assessment and Surveys. Prior to any tree removal, a Qualified Biologist shall conduct a habitat assessment for bats. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, or exfoliating bark for colonial species, and suitable canopy for foliage-roosting species). If suitable habitat trees are found, they shall be flagged or otherwise clearly marked, CDFW shall be notified immediately, and tree trimming or removal shall not proceed without approval in writing from CDFW. Trees may be removed only if: a) presence of bats is presumed, or documented during the surveys described below, in trees with suitable bat habitat, and removal using the two-step removal process detailed below occurs only during seasonal periods of

bat activity from approximately March 1 through April 15 and September 1 through October 15, or b) after a qualified bat biologist, under prior written approval of the proposed survey methods by CDFW, conducts night emergence surveys or complete visual examination of roost features that establish absence of roosting bats. Two-step tree removal shall be conducted over two consecutive days, as follows: 1) the first day (in the afternoon), under direct supervision and instruction by a qualified bat biologist with experience conducting two-step tree removal limbs and branches shall be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices or deep bark fissures shall be avoided, and 2) the second day the entire tree shall be removed. CDFW reserves the right to provide additional provisions to this Agreement in the event that roosting bats are found.

2.14 American Badger Surveys. A Qualified Biologist shall conduct a pre-construction survey for the American badger and suitable dens within 48 hours of the commencement of project activities. The survey area shall include the project area and a 50 foot buffer zone within suitable habitat. If badgers are found on or adjacent to the project site a 50-foot construction avoidance buffer shall be established and CDFW shall be immediately notified. CDFW reserves the right to provide additional provisions to this Agreement in the event that badgers are found.

2.15 Trenches and Holes. At the end of each work all trenches and holes greater than one foot deep shall be covered to prevent wildlife from entering. When trenches cannot be fully covered, an escape ramp shall be placed at each end of any constructed open trench or hole to allow any wildlife that may have become entrapped in the trench or hole to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees.

2.16 Pipes, Hoses, and Similar Structures. All pipes, hoses, or similar structures less than 12 inches in diameter shall be closed or covered to prevent animal entry. All construction pipes or similar structures greater than 12 inches in diameter stored at the project area overnight shall be inspected thoroughly for wildlife before the pipe or similar structure is buried, capped, used, or moved.

2.17 Wildlife Encounters. If any wildlife is encountered during the course of construction, all work in the immediate area shall cease and said wildlife shall be allowed to leave the construction area unharmed. If any listed fish and wildlife are encountered, the Permittee shall contact CDFW immediately.

2.18 Tree Drip Line. Construction materials, equipment storage, and parking areas shall be located outside the drip line of any preserved tree. Construction equipment shall not cause root compaction.

2.19 Refueling of Equipment. Refueling of construction equipment and vehicles may not occur within 175 feet of any water body, or anywhere that spilled fuel could

drain to a water body, unless otherwise approved in writing by CDFW. Tarps or similar material shall be placed underneath the construction equipment and vehicles, when refueling, to capture incidental spillage of fuels. Equipment and vehicles operating in the project area shall be checked and maintained daily to prevent leaks of fuels, lubricants, or other liquids.

Vegetation Protection, Prevention, and Restoration

2.20 Revegetation. The project area shall be revegetated in the same calendar year as the project following a restoration plan approved in writing by CDFW and include a combination of understory and overstory vegetation. If planting occurs in a later year, a higher replacement ratio may be required by CDFW to offset the temporal loss of habitat, and an amendment to this or another associated Agreement may be required. More than restoration one plan may be necessary for restoration activities in different locations.

Permittee shall submit the restoration plan(s) for CDFW review no later than 30 days prior to plan implementation. An amendment to this Agreement or a separate Agreement may be required by CDFW based on the restoration plan(s). To compensate for the removal of trees, the Permittee shall replace all removed vegetation at the below minimum ratios within the stream from which they are removed, unless otherwise approved by CDFW. The restoration plan(s) shall describe the number of each species removed, diameter breast height (dbh) of each removed tree, and from which creek or drainage the removal occurred. If the restoration plan(s) must be revised, the revised plan(s) shall be submitted to CDFW no later than 30 days prior to plan implementation and must be approved by CDFW in writing.

- 1:1 for removed non-native trees
- 3:1 for removed trees with a dbh of up to 6 inches
- 6:1 for removed trees with a dbh greater than 6 inches
- 10:1 for removed oak trees (if acorns are used, the minimum ratio shall be 15:1)

Replacement tree plantings shall consist of 5-gallon or greater saplings and locally-collected seeds, stakes, or other suitable nursery stock as appropriate, unless otherwise approved by CDFW, and shall be native species to the area adapted to the lighting, soil, and hydrological conditions at the replanting site. If acorns are used for oak tree replanting, each planting will include a minimum of three acorns planted at an approximately two-inch depth to minimize predation risk. Large acorns shall be selected for plantings. Replacement oaks shall come from nursery stock grown from locally-sourced acorns, or from acorns gathered locally, preferably from the

same watershed in which they are planted.

2.21 Revegetation Monitoring and Maintenance. Permittee shall monitor and maintain, as necessary, all plants for a minimum of five years. At the end of the five years of monitoring, with at least three years without supplemental irrigation, the plantings shall attain at least 80 percent site cover of the treatment area, 85 percent survival success (for non-tree species), 85 percent survival each for non-oak trees and oaks (55 percent for acorns), and shall not contain more than 5 percent relative cover of plants listed on Cal-IPC high or moderate lists.

If revegetation survival and/or cover requirements do not meet established goals as determined by CDFW, Permittee is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for five years after planting.

2.22 Tree Removal. No more than 22 trees shall be removed as part of this project. If the removal of more trees is required, the Permittee must receive approval from CDFW in writing before construction activities begin and the restoration plan(s) described above must be revised to account for the additional removed tree(s).

2.23 Phytophthora. Permittee shall implement measures to avoid using plant stock that may be infected with the plant pathogen Phytophthora sp. Measures to avoid contamination with *Phytophthora* sp. may include, but are not limited to, avoiding collection of propagules from: 1) known or likely infected areas; 2) during wet conditions; 3) when soil is muddy; or 4) from within 0.5 meters (1.64 feet) of the soil surface. Measures may also include implementing heat or chemical treatments to collected seeds prior to installation.

2.24 Exotic Plants. Permittee shall not plant, seed, or otherwise introduce invasive exotic plant species. Prohibited exotic plant species include those identified in the California Exotic Pest Plant Council's database, which is accessible at: http://www.cal-ipc.org/ip/inventory/index.php.

2.25 Irrigation. Supplemental watering shall be used as necessary to establish and maintain plant growth in order to meet success criteria of the restoration site. Irrigation shall be done in the most water-efficient manner possible, such as using hand-watering, drip/micro-irrigation, or through the use of a time-release system.

2.26 Control Invasive Species. Permittee is responsible for monitoring and if needed,

eradication of invasive exotic species that may occur within the project area for a minimum of two years following project completion. All revegetation efforts shall include local plant materials native to the project area.

2.27 Treat Exposed Areas. All exposed/disturbed areas and access points within the riparian zone left barren of vegetation as a result of project activities shall be restored by seeding with a blend of native erosion control grass seed. Seeded areas shall be mulched. Landscape fabric shall not be used. Revegetation shall be completed as soon as possible after restoration activities in those areas cease. Seeding placed after October 15 must be covered with broadcast straw, jute netting, coconut fiber blanket or similar erosion control blanket.

2.28 Habitat Protection. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete the project. Vegetation outside the construction corridor shall not be removed or damaged without prior consultation and approval of CDFW in writing.

2.29 Riparian Tree Protection. For each existing tree with a greater than four-inch diameter (at breast height) within or adjacent to the work area that will be retained following construction, a critical root zone shall be established by the Qualified Biologist. The critical root zone shall extend from the trunk to the drip-line (i.e., the outer extent of the tree canopy) of each tree within the project area and shall be flagged or fenced off from work. Protection and avoidance of the critical root zone shall be emphasized during the on-site education program to avoid impacts. If work will be conducted within the root protection zone of a tree, then that tree shall be considered an “impacted tree” and the Permittee or Qualified Biologist shall monitor the tree for signs of mortality as a result of project. If the tree becomes injured or shows signs of mortality, additional revegetation actions shall be required.

2.30 Vegetation Marked for Protection. Prior to project activities, the Permittee shall clearly mark all vegetation within the project area that shall be avoided during project activities.

2.31 Disposition of Vegetation and Debris. All removed vegetation and debris shall be moved outside the ordinary high-water mark prior to inundation by water. All removed vegetation and debris shall be disposed of according to state and local laws and ordinances.

2.32 Allowable Herbicide. If herbicide use is necessary, only herbicides registered with the California Department of Pesticide Regulation shall be used. All herbicides shall be applied in accordance with regulations set forth by the California Department of Pesticide Regulation and according to labeled instructions. Only herbicides approved for use in aquatic environments are permitted. Care shall be taken to avoid herbicide contact with native vegetation, and it shall only be applied

on calm days (wind speed less than 5 miles per hour) to prevent airborne transfer of herbicide. No herbicides shall be used where threatened or endangered species occur, unless otherwise approved by in writing by CDFW.

Culvert Design and Construction

2.33 Culvert Design. The culvert design shall be:

- Adequately sized to convey the 100-year storm flow, including debris and sediment loads; and
- Properly aligned within the channel and otherwise engineered, installed and maintained, to resist washout and erosion of the stream bed, stream banks and/or fill.

2.34 Culvert Backfill. Backfill material shall be free of rocks, limbs or other debris that could dent the pipe or allow water to seep around the pipe. The crossing backfill base and sidewall material shall be compacted before the pipe is placed in its bed. A minimum amount of fill material shall be used for the bed to reduce seepage into and along the fill.

2.35 Culverts shall be kept open. Permanent culverts shall be maintained and kept open year-round. The Permittee is responsible for such maintenance as long as the culvert remains in the stream. Substantial changes to the bed, channel or bank necessary for maintenance may require separate notification under Fish and Game Code section 1602, subdivision (a).

2.36 Concrete – Primary Containment. The Permittee shall install the necessary containment structures to control the placement of wet concrete and to prevent it from entering into the channel outside of those structures. No concrete shall be poured within the high flow line if the 15-day weather forecast indicates any chance of rain greater than 20 percent.

2.37 Cement Based Products. All cement-based products (concrete, mortar, etc.) poured or applied wet onsite shall be excluded from the wetted channel or areas where they may come into contact with water for a period of 30 days after application. During that time the product shall be kept moist and runoff from the product shall not be allowed to enter the stream. Commercial sealants may be applied to the product surface or mixture where difficulty in excluding flow for a long period may occur. If sealant is used, water shall be excluded from the site until the sealant is cured.

2.38 Concrete – Designated Monitor. At all times when the Permittee is pouring or working with wet concrete within CDFW jurisdictional area there shall be a designated monitor to inspect the containment structures and ensure that no concrete or other debris enters into the channel outside of those structures.

Stormwater Outfall and Rock Trench Design and Construction

2.39 Rock Slop Protection - Limitations. Rock slope protection (i.e., riprap) shall not be used for armoring/protecting the bank if any of the following criteria apply:

- Rock slope protection could transfer erosive forces to the opposite bank or another area downstream;
- Rock slope protection would narrow or otherwise constrain the stream channel, limiting passage of peak flows and debris; or
- Installation of the rock would require removal of woody vegetation and/or trees over a 4-inch DBH, unless otherwise permitted in this Agreement.

2.40 Rock Slope Protection and Rock Trenches. Permittee shall install angular, energy dissipating rock slope protection and rock trenches that are properly sized to withstand wash out during peak flows. Rock that is placed within the channel shall be installed below grade. Only clean material such as rock riprap that is free of trash, debris, and deleterious material shall be used. Asphalt shall not be used.

2.41 Fill Voids in Rock Slope Protection and Rock Trenches. Permittee shall ensure that all voids and spaces within the riprap are filled with smaller rock, gravels, and native soil material, and/or willow cuttings. Cementitious grouts shall not be used.

2.42 Geotextile Lining. Geotextile lining may only be used to ensure the engineered stability of the rock slope protection and the Permittee shall monitor it for the life of the project to ensure that it is never exposed to the stream. If the geotextile lining is exposed to the stream, CDFW must be notified, proper permits acquired, and the rock slope protection structure must be repaired immediately. This may require additional permits from CDFW. **No geotextile lining shall be placed where it may be exposed to stream flows.**

Erosion and Sediment Control

2.43 Erosion Control. At no time shall silt laden runoff be allowed to enter a river, stream, or lake or directed to where it may enter a river, stream, or lake. Erosion control measures shall be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a river, stream, or lake. Erosion control measures, such as, silt fences, straw hay bales, gravel or rock lined ditches, water check bars, and broadcasted straw shall be used wherever sediment has the potential to leave the work site and enter the river, stream, or lake.

2.44 Excavation. No spoil from the excavation shall be placed on the stream side. Excavated spoil shall be removed to an area where the sediment will not deliver to a watercourse.

2.45 Monofilament. Permittee shall not use erosion control materials containing plastic monofilament netting (erosion control matting) or similar material containing netting within the project area due to documented evidence of amphibians and reptiles becoming entangled or trapped in such material. Acceptable substitutes include coconut coir matting or similar.

2.46 Erosion Control Monitoring. Permittee shall monitor erosion control measures during and after each storm event and repair and/or replace ineffective measures immediately.

Material Handling, Debris, and Waste

2.47 Disposal and Removal of Materials. All removed spoils and construction debris shall be moved outside the work area prior to inundation by water. Spoil sites shall not be located within the stream channel or areas that may be subjected to stream flows, where spoil may be washed back into a stream, or where it may impact streambed habitat, aquatic or riparian vegetation. All removed material shall be disposed of according to State and local laws and ordinances.

2.48 Stockpiled Materials. Building materials and/or construction equipment shall not be stockpiled or stored where they may be washed into the water or cover aquatic or riparian vegetation. Stockpiles shall be covered when measurable rain is forecasted.

2.49 No Dumping. Permittee and all contractors, subcontractors, and employees shall not dump any litter or construction debris within the stream, or where it may pass into the stream.

2.50 Pick Up Debris. Permittee shall pick up all debris and waste daily.

2.51 Wash Water. Water containing mud, silt, or other pollutants from equipment washing or other activities shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.

Toxic and Hazardous Material

2.52 Toxic Materials. Any hazardous or toxic materials that could be deleterious to aquatic life that could be washed into the stream or its tributaries shall be contained in water tight containers or removed from the project area.

2.53 Hazardous Materials. Debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, wildlife, or riparian habitat resulting from the project related activities shall be prevented from contaminating the soil and/or entering the Waters of the State.

Spills and Emergencies

2.54 Spill Kits. Prior to entering the work site, all field personnel shall know the location of spill kits and trained in their appropriate use.

2.55 Spill of Material Deleterious to Fish and Wildlife. In the event of a hazardous materials spill into a stream (e.g., concrete or bentonite), Permittee shall immediately notify the California Office of Emergency Services State Warning Center by calling 1-800-852-7550 and immediately provide written notification to CDFW by email at AskBDR@wildlife.ca.gov. Permittee shall take all reasonable measures to document the extent of the impacts and affected areas including photographic documentation of affected areas, injured fish and wildlife. If dead fish or wildlife are found in the affected area, Permittee shall collect carcasses and immediately deliver them to CDFW. Permittee shall meet with CDFW within ten days of the reported spill in order to develop a resolution including: site clean-up, site remediation and compensatory mitigation for the harm caused to fish, wildlife and the habitats on which they depend as a result of the spill. The Permittee shall be responsible for all spill clean-up, site remediation and compensatory mitigation costs. Spill of materials to waters of the state that are deleterious to fish and wildlife are in violation of Fish and Game Code section 5650 et. seq. and are subject to civil penalties for each person responsible. CDFW reserves the right to refer the matter to the District Attorney's Office if a resolution cannot be agreed upon and achieved within a specified timeframe, generally six months from the date of the incident.

2.56 Spill Containment. All activities performed in or near a river, stream, or lake shall have absorbent materials designated for spill containment and cleanup activities on-site for use in an accidental spill. The Permittee shall immediately notify the California Emergency Management Agency at 1-800-852-7550 and immediately initiate the cleanup activities. CDFW shall be notified by the Permittee and consulted regarding clean-up procedures.

3. Compensatory Measures

To compensate for adverse impacts to fish and wildlife resources identified above that cannot be avoided or minimized, Permittee shall implement each measure listed below.

3.1 Wetland Credits. Prior to initiating project activities, to offset impacts to 525 linear feet (0.052 acres) of wetlands within the unnamed roadside tributary, Permittee shall: 1) purchase 0.20 acres of wetland creation credits from a CDFW-approved mitigation or conservation bank, 2) obtain written confirmation from CDFW that the aforementioned bank is in good standing prior to purchasing the credits, 3) provide copies of executed Bill(s) of Sale and Payment Receipt(s) to CDFW, and 4) obtain CDFW's written acceptance of the credits.

3.2 CTS Habitat Credits. To offset impacts to 100 linear feet (0.01 acres) of CTS breeding habitat, Permittee shall purchase CTS habitat credits pursuant to the requirements of the *CESA Incidental Take Permit No. 2081-2020-050-03* described in Measure 1.6.

3.3 Habitat Restoration. A restoration plan shall be submitted to CDFW for approval as described in Measure 2.20. The plan shall: (1) describe the on-site restoration and enhancement of 3,434 square feet (0.08) acres that will be temporarily impacted and subject to permanent structure removal; and (2) describe and identify, either on-site or within-watershed, the restoration and enhancement of a minimum of 12,452 square feet (0.29 acres) and 847 linear feet of aquatic and riparian habitat to provide compensatory mitigation for permanent impacts to 4,299 square feet (0.10) acres and 406 linear feet of such habitat.

4. Reporting Measures

Permittee shall meet each reporting requirement described below.

4.1 Restoration Plan. Permittee shall submit to CDFW a restoration plan(s) for review and written approval at least 30 days prior plan implementation. The plan(s) shall outline the number and size of trees removed (in diameter in breast height), a plant palette of species native to California and the planting site, total number and size of plants to be used, acreage and linear feet of mitigation, a planting design which has a layering effect of plant sizes, shapes and ages that promote diversity, and a monitoring and reporting program which includes photo monitoring (see Measure 2.20). The plans(s) shall not supersede conditions of this Agreement.

4.2 Survey Reports. Survey reports for nesting birds, bats, and special status species shall be submitted to CDFW prior to the start of project activities.

4.3 Annual Report. Permittee shall submit an annual status report on the restoration work to CDFW by January 31 of each year after the initial restoration work for the duration of the monitoring period. This report shall include the survival, percent cover, and height of both tree and shrub species. The number by species of plants replaced, an overview of the re-vegetation effort, and the method used to assess these parameters shall also be included. Photos from designated photo stations shall be included.

4.4 Photographic Documentation of Work. Prior to commencement of work a minimum of eight (8) vantage points that offer representative views of each of the four Project sites shall be identified. The Permittee shall photograph each Project site from each of the vantage points, noting the direction and magnification of each photo. Upon completion of work, the Permittee shall photograph post-Project conditions from the vantage points using the same direction and magnification as pre-Project photos. A reference key shall be submitted with the photos describing the location of the photo, the direction of the view, and whether the photo is pre- or

post-construction. All photos shall be submitted within 30 days of Project conclusion.

4.5 Notification to the California Natural Diversity Database. If any listed, rare, or special status species are detected during Project surveys or on or around the Project site during Project activities, the Permittee shall submit CNDDB Field Survey Forms to CDFW in the manner described at the CNDDB website (https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data) within five working days of the sightings. Copies of such submittals shall also be submitted to the CDFW regional office as specified below.

4.6 As-Built Plans. A Record of Construction (As-Built Plans) shall be submitted to CDFW within 60 days of completion of each phase of the Project.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be submitted through EPIMS as instructed by CDFW.

To Permittee:

City of Santa Rosa
Steve Brady
EPIMS-SON-14105-R3
Fulton Road Widening Project
sbrady@srcity.org

To CDFW:

Department of Fish and Wildlife
Bay Delta Region
EPIMS-SON-14105-R3
Fulton Road Widening Project
epims.r3@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with, or obtaining any other permits or authorizations that might be required under, other federal, state, or local laws or regulations before beginning the project or an activity related to it. For example, if the project causes take of a species listed as threatened or endangered under the Endangered Species Act (ESA), such take will be unlawful under the ESA absent a permit or other form of authorization from the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the Fish and Game Code including, but not limited to, Fish and Game Code sections 2050 *et seq*. (threatened and endangered species), section 3503 (bird nests and eggs), section 3503.5 (birds of prey), section 5650 (water pollution), section 5652 (refuse disposal into water), section 5901 (fish passage), section 5937 (sufficient water for fish), and section 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall log into EPIMS and submit to CDFW a completed CDFW "Amendment & Extension" form. Permittee shall include with the completed form, payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall log into EPIMS and submit to CDFW a completed CDFW "Amendment & Extension" form. Permittee shall include with the completed form, payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with Fish and Game Code section 1605, subdivision (b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall log into EPIMS and submit to CDFW a completed CDFW "Amendment & Extension' form. Permittee shall include with the completed form, payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with Fish and Game Code section 1605, subdivisions (b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable Fish and Game Code section 711.4 filing fee listed at https://www.wildlife.ca.gov/Conservation/CEQA/Fees.

TERM

This Agreement shall expire on December 31, 2025, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as Fish and Game Code section 1605, subdivision (a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with Fish and Game Code section 1602.

CONCURRENCE

Through the electronic signature by the permittee or permittee's representative as evidenced by the attached concurrence from CDFW's Environmental Permit Information Management System (EPIMS), the permittee accepts and agrees to comply with all provisions contained herein.

The EPIMS concurrence page containing electronic signatures must be attached to this agreement to be valid.

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

July 23, 2021

Mr. Jason Nutt, Assistant City Manager
City of Santa Rosa
69 Stony Point Circle
Santa Rosa, CA 95401
Jnutt@srcity.org

Subject: Incidental Take Permit Application for the Fulton Road Widening Improvement Project, 2081-2020-050-03, Sonoma County

Dear Mr. Nutt:

Enclosed you will find an electronic copy of the Incidental Take Permit for the above referenced Project, which has been digitally signed by the California Department of Fish and Wildlife (CDFW). Please read the permit carefully and sign the acknowledgement on the permit **no later than 30 days from CDFW signature** and prior to initiation of ground-disturbing activities. You may return an electronic copy of the permit with digital signature to CESA@wildlife.ca.gov. Digital signatures shall comply with Government Code section 16.5. Alternatively, you may return a hard copy of the permit via mail to:

California Department of Fish and Wildlife
Habitat Conservation Planning Branch, CESA Permitting
Post Office Box 944209
Sacramento, CA 94244-2090

You are advised to keep the permit in a secure location and distribute copies to appropriate project staff responsible for ensuring compliance with the conditions of approval of the permit. Note that you are required to comply with certain conditions of approval prior to initiation of ground-disturbing activities. Additionally, a copy of the permit must be maintained at the project work site and made available for inspection by CDFW staff when requested.

The permit will not take effect until the signed acknowledgement is received by CDFW. If you wish to discuss these instructions or have questions regarding the permit, please contact Ms. Melanie Day, Senior Environmental Scientist (Supervisory), at Melanie.Day@wildlife.ca.gov; or Mr. Craig Weightman, Environmental Program Manager, at Craig.Weightman@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Stacy Sherman
692D024D81CA4F7...

Stacy Sherman
Acting Regional Manager
Bay Delta Region

ec: Haley Cahill, GHD – Haley.Cahill@ghd.com

Conserving California's Wildlife Since 1870

California Department of Fish and Wildlife
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

California Endangered Species Act
Incidental Take Permit No. 2081-2020-050-03

FULTON ROAD WIDENING IMPROVEMENT PROJECT

Authority:

This California Endangered Species Act (CESA) Incidental Take Permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take[1] of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.[2] CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).

Permittee:	**City of Santa Rosa**
Principal Officer:	**Mr. Jason Nutt, Assistant City Manager**
Contact Person:	**Haley Cahill, (415) 296-2043, Haley.Cahill@ghd.com**
Mailing Address:	**69 Stony Point Circle, Santa Rosa, CA 95401**

Effective Date and Expiration Date of this ITP:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **December 31, 2025**.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 6.11 of this ITP.

[1]Pursuant to Fish and Game Code section 86, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 [for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "'take' … means to catch, capture or kill".])

[2]The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.

Rev. 2020.7.23.

Project Location:

The Fulton Road Widening Improvement Project (Project) is located on an approximately 1-mile-long section of Fulton Road between Guerneville Road and Piner Road, in the City of Santa Rosa, Sonoma County (Figure 1). The Project extends just past Piner Road to the north and Guerneville Road to the south, and crosses Forestview Creek and Peterson Creek. The Project is bounded by a mix of rural and urban development to the north and east, a mix of undeveloped land and rural and urban development to the west, and urban development to the south. Piner Highschool abuts a portion of the project to the east, and the City of Santa Rosa's Youth Community Park abuts a portion to the west. The Project footprint is 12.5 acres and is located within Township 7N, Range 8W, Sections 8 and 17 of the Sebastopol U.S. Geological Survey 7.5-minute quadrangle map, Mt. Diablo meridian. The Project's northern terminus is at approximately 38.467236°N, 122.769893°W, and the southern terminus is at approximately 38.452592°N, 122.769703°W (Figure 2).

Project Description:

The Project includes the development of 12.5 acres, of which 2.0 acres are undeveloped grassland and wetland habitat, to widen and rehabilitate Fulton Road into a four-lane regional/arterial street including bike lanes, sidewalks, bioretention areas, and landscaping. It also includes reconstructing driveways, filling roadside drainages, and culvert improvements at Forestview Creek and Peterson Creek. Roadway contouring and paving will primarily occur on the west side of Fulton Road. Project activities include grubbing and grading of the entire 2.0 acres of undeveloped grassland and wetland habitat, trench digging, road construction, tree removal, and other activities within the approximately 12.5-acre Project footprint. The Project will take approximately 26 months to complete.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

Name	CESA Status
California tiger salamander (*Ambystoma californiense*)	Threatened[3]

This species and only this species is the "Covered Species" for the purposes of this ITP.

Impacts of the Taking on Covered Species:

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above expected to result in incidental take of individuals of the Covered Species include preparing the construction work areas; grading and contouring; excavating; trenching; filling of a roadside drainage;

[3]See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(3)(G).

installation of subsurface improvements; stockpiling of soil and materials; spoils disposal; constructing temporary access routes; preparing staging areas; operating heavy equipment; removing trees and vegetation; constructing roads and structures; vehicular movement; installing and maintaining Covered Species barrier fencing; capturing, handling, and relocating the Covered Species; and surveying for the Covered Species (collectively, the Covered Activities).

Incidental take of individuals of the Covered Species in the form of mortality ("kill") may occur as a result of Covered Activities such as crushing and entombing of individuals during road construction; cut and fill grading; vehicular access; installing vegetation; collapsing of burrows; and entrapment in excavated pits, trenches, storm drains, or within construction materials. Incidental take of individuals of the Covered Species may also occur from the Covered Activities in the form of pursue, catch, capture, or attempt to do so of the Covered Species from surveying and relocating operations. The areas where authorized take of the Covered Species is expected to occur include: the entire 12.5-acre Project site (collectively, the Project Area).

The Project is expected to cause the permanent loss of 1.99 acres of upland habitat and 0.01 acres of breeding habitat for the Covered Species. Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, and the Project's incremental contribution to cumulative impacts (indirect impacts). These impacts include: stress resulting from noise and vibrations from tunneling and capture and relocation, and long-term effects due to increased pollution, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to predation, capture and relocation.

Incidental Take Authorization of Covered Species:

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for capture and relocation of Covered Species as authorized by this ITP.

Conditions of Approval:

Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for vehicular ingress and egress, staging and parking, and noise and vibration generating activities that may cause take. CDFW's issuance of this ITP

and Permittee's authorization to take the Covered Species are subject to Permittee's compliance with and implementation of the following Conditions of Approval:

1. **Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.

2. **ESA Compliance:** Permittee shall implement and adhere to the terms and conditions related to the Covered Species in the Fulton Road Widening Project Biological Opinion (No. 08ESMF00-2021-F-1199) for the Project pursuant to the Federal Endangered Species Act (ESA). For purposes of this ITP, where the terms and conditions for the Covered Species in the federal authorization are less protective of the Covered Species or otherwise conflict with this ITP, the conditions of approval set forth in this ITP shall control.

3. **LSA Agreement Compliance:** Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration (LSA) Agreement Notification No. EPIMS-SON-14105-R3 for the Project executed by CDFW pursuant to Fish and Game Code section 1600 et seq.

4. **ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.

5. **General Provisions:**

   5.1. Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.

   5.2. Designated Biologist. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, and collecting and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered

Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed.

5.3. Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.

5.4. Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.

5.5. Construction Monitoring Binder. The Designated Biologist shall maintain a construction-monitoring binder on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring binder is available for review at the Project site upon request by CDFW.

5.6. Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.

5.7. Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist. Permittee shall keep the amount of water used to the minimum amount needed, and shall not allow water to form puddles.

5.8. Erosion Control Materials. Permittee shall prohibit use of erosion control materials potentially harmful to Covered Species and other species, such as monofilament

netting (erosion control matting) or similar material, in potential Covered Species' habitat.

5.9. Delineation of Property Boundaries. Before starting Covered Activities, Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.

5.10. Delineation of Habitat. Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.

5.11. Project Access. Project-related personnel shall access the Project Area using existing routes and shall not cross Covered Species' habitat outside of or en route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 20 miles per hour to avoid Covered Species on or traversing the roads, except when traveling on paved roads under current traffic conditions. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.

5.12. Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area unless provided for as described in Condition of Approval 5.11 of this ITP.

5.13. Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.

5.14. CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project, and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.

5.15. Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.

5.16. Prevention of Spread of Invasive Species. Permittee shall conduct Project activities in a manner that prevents the introduction, transfer, and spread of invasive species, including plants, animals, and microbes (e.g., algae, fungi, parasites, bacteria, etc.), from one Project site and/or waterbody to another. Prevention Best Management Practices (BMPs) and guidelines for invasive plants can be found on the California Invasive Plant Council's (Cal-IPC) website at: https://www.cal-ipc.org/solutions/prevention/ and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: https://stopaquatichitchhikers.org/.

6. Notification, Monitoring, and Reporting Provisions:

6.1. Geographic Information Systems Data Files. Before starting Covered Activities, the Permittee shall provide CDFW with separate Geographic Information Systems (GIS) data files for the permanent habitat impact areas authorized under this ITP for each Covered Species. If more than one Covered Species occurs in the same area, the Permittee shall provide one set of GIS data files for each species. The Permittee shall provide any additional GIS data files for the Project or related Covered Species features within 30 days of CDFW's request. All GIS data files shall be provided in a format acceptable to CDFW.

6.2. Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.

6.3. Notification of Non-compliance. The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.

6.4. Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. The Designated

Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP. The Designated Biologist shall conduct compliance inspections a minimum of once per week during periods of inactivity.

6.5. Reporting of Habitat Impacts. Permittee shall monitor, calculate, and record in an electronic ledger the total amount of permanent impacts to Covered Species habitat and shall at a minimum account for these impacts based upon grassland and wetland habitat types.

6.6. Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2092 and emailing Melanie.Day@wildlife.ca.gov. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.

If the Covered Species is found recently deceased, a 0.5-inch portion of the tail tip shall be removed and placed in a labeled tissue tube with 95 percent ethanol. The remaining carcass shall be immediately bagged, labeled, and preserved in a freezer. The label shall include time and date, GPS location, circumstances surrounding death (if known), and ITP tracking number. Tail specimens shall be delivered to CDFW Bay Delta Region, Attention: Marcia Grefsrud, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534. The remaining carcasses shall be delivered to the CDFW Wildlife Investigations Lab, Attention: Deana Clifford, 1701 Nimbus Road Suite D, Rancho Cordova, CA 95670 within two calendar days of the discovery.

6.7. Notification of Non-Native Salamanders or Hybrids. The Designated Biologist shall immediately notify CDFW if a suspected barred tiger salamander (*Ambystoma tigrinum mavortium*) or California tiger salamander x non-native salamander hybrid is found within the Project Area within 24 hours by calling the Regional Office at (707) 428-2002. CDFW and Permittee shall consult to determine measures to address non-native or hybrid populations.

6.8. Quarterly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Conditions of Approval 6.3 and 6.4 into a Quarterly Compliance Report and submit it to CDFW

along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Quarterly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is Melanie Day, Senior Environmental Scientist (Specialist) (Melanie.Day@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.

6.9. Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports for that year identified in Condition of Approval 6.8; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.

6.10. CNDDB Observations. The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Quarterly Compliance Report or ASR, whichever is submitted first relative to the observation.

6.11. Final Mitigation Report. No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species;

(7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.

7. Take Minimization Measures: The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

7.1 Dry Season Work Restriction. Permittee shall ensure that initial ground disturbing activities involving construction and heavy equipment use within Covered Species habitat (such as excavation, grading, and contouring) are limited to the period from June 15 to October 15 (Dry Season). Once initial ground disturbing activities have been completed in an area, additional ground disturbing activities such as excavation may occur in the same area in conformance with Condition of Approval 7.2.

7.2 Wet Weather Work Restriction. Permittee or the Designated Biologist shall consult the 72-hour weather forecast from the National Weather Service (NWS) prior to the start of ground disturbing activities. Ground disturbing activities shall not begin unless a no precipitation forecast is obtained covering the entire Project Area and necessary erosion control measures are implemented. The Designated Biologist shall keep precipitation records on-site, and these records shall be subject to CDFW inspection.

- If a 40 percent or greater chance of rain is forecasted, then ground-disturbing activities shall cease 24 hours prior to the forecasted rain, unless otherwise approved in writing by CDFW.

- If ground-disturbing activities are approved by CDFW as described above, the Designated Biologist shall survey the work area before construction begins each day rain is forecast. If rain exceeds 0.25 inches during a 24-hour period, ground-disturbing activities shall cease.

- Twenty-four hours after the rain ceases and once there is no precipitation in the 24-hour forecast, ground disturbing activities may continue.

7.3 Time of Day Work Restriction. Permittee shall terminate all Covered Activities 30 minutes before sunset and shall not resume Covered Activities until 30 minutes after sunrise during the Covered Species migration/active season from October 16 to June 14, unless otherwise approved in writing by CDFW. The Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for determining when Covered Activities shall terminate and resume.

7.4 Covered Species Temporary Barrier. Permittee shall provide a Covered Species Temporary Barrier Plan a minimum of 30 days prior to commencing Covered Activities for approval in writing by CDFW. Prior to any ground-disturbing Covered Activities and under the direct supervision of the Designated Biologist, Permittee shall install a temporary barrier to prevent the Covered Species from dispersing into the Project Area. The barrier shall be designed to allow Covered Species to leave the Project Area using a one-way funnel at 100-foot intervals along the barrier or other method approved in writing by CDFW. The barrier shall remain in place until Covered Activities are completed, including during periods of inactivity. The Permittee shall maintain and repair the barrier immediately to ensure that it is functional and without defects. Permittee shall provide refuge opportunities, such as coverboards (2-foot x 2-foot plywood), along both sides at 100-foot intervals on each side, and a climbing barrier at the top of the temporary barrier, unless otherwise approved by CDFW in writing. The Designated Biologist shall check Covered Species temporary barriers and refuge areas daily during Covered Activities and before, during, and following storm events, and weekly during periods of inactivity. Animals found within the interior of the barrier shall be relocated outside of the barrier as described in the Covered Species Relocation Plan (see Condition of Approval 7.5).

7.5 Covered Species Relocation Plan. Permittee shall submit a Covered Species Relocation Plan (Relocation Plan) using Attachment 2 as a reference, a minimum of 30 days prior to the commencement of Covered Activities for approval in writing by CDFW. The Designated Biologist shall follow this Relocation Plan to install the Covered Species temporary barrier and cover boards (see Condition of Approval 7.4); check any cover boards according to the rainfall-dependent schedule; and relocate captured Covered Species adults, juveniles, and larva to a suitable site.

7.6 Atypical Dens and Burrows. Permittee shall ensure that all construction pipes, culverts, or similar structures that are stored in the Project Area for one or more overnight periods are either securely capped prior to storage or thoroughly inspected by the Designated Biologist before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is discovered inside a pipe by the Designated Biologist or anyone else, the Designated Biologist shall move the animal to a safe nearby location per the Covered Species Relocation Plan described in Condition of Approval 7.5.

7.7 Covered Species Handling and Injury. The Covered Species shall be handled and assessed according to the Restraint and Handling of Live Amphibians USGS, National Wildlife Health Center (Attachment 2). If an injured Covered Species is found during the Project term, the individual shall be evaluated by the Designated Biologist who shall then immediately contact the CDFW Regional Representative, via email and telephone, to discuss the next steps pursuant to Condition of Approval 6.6.

If the CDFW Regional Representative cannot be contacted immediately, the injured salamander shall be placed in a shaded container and kept moist. If the CDFW Regional Representative is not available or has not responded within 2 hours of initial attempts, then the following steps shall be taken by the Designated Biologist:

7.7.1 If the injury is minor or healing and the salamander is likely to survive, the salamander shall be released immediately in accordance with the Condition of Approval 7.5.

7.7.2 If it is determined that the Covered Species has major or serious injuries as a result of Project-related activities the Designated Biologist shall immediately take it to a CDFW approved wildlife rehabilitation or veterinary facility. If taken into captivity the individual shall remain in captivity and not be released into the wild unless it has been kept in quarantine and the release is authorized by the CDFW and U.S. Fish and Wildlife Service. Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. The circumstances of the injury, the procedure followed, and the final disposition of the injured animal shall be documented in a written incident report as described in Condition of Approval 6.6.

7.8 Personnel Restriction. Permittee shall ensure that all construction activities and personnel, including subcontractors, are restricted to the active construction area surrounded by the Covered Species temporary barrier and public roads.

7.9 Pre-Construction Surveys. The Designated Biologist shall complete walking surveys of the Project Area prior to any initial ground disturbing activity and shall follow earthmoving equipment to look for Covered Species during initial site grading and other ground disturbing activities. Areas to be surveyed shall include suitable habitat features for the Covered Species such as aquatic and upland areas as well as under woody or other debris. Pre-construction surveys shall be conducted in conjunction with Covered Species temporary barrier installation. If a Covered Species is discovered, the Designated Biologist shall move the animal to a safe nearby location (e.g. mouth of small mammal burrow outside of the construction area) and monitor it until it is determined that the animal is not imperiled by predators or other dangers (see Condition of Approval 7.5).

7.10 Trench Escape and Inspection. The Designated Biologist shall inspect all open holes, sumps, and trenches within the Project Area at the beginning of each working day for trapped animals. To prevent inadvertent entrapment of Covered Species, the Designated Biologist shall oversee the covering of all trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between

the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning prior to beginning Covered Activities and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist shall thoroughly inspect them for Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. Permittee shall cease all Covered Activities in the vicinity and notify the Designated Biologist immediately if any worker discovers that Covered Species have become trapped. If at any time a trapped Covered Species is discovered by the Designated Biologist or anyone else, the Designated Biologist shall capture and relocate the animal to a safe nearby location per the Covered Species Relocation Plan described in Condition of Approval 7.5.

7.10.1 If the open holes, sumps, trenches, or excavations cannot be covered, then a Covered Species temporary barrier shall be installed around any trenches, holes, sumps, or other excavations to prevent Covered Species from becoming trapped. Refuge opportunities, such as coverboards shall be provided on the outside perimeter of the barrier.

7.11 Burrow Protection. The Designated Biologist shall mark for avoidance all small mammal burrows with flagging at the limits of access areas, including vehicle routes, and staging areas.

7.12 Spoil Pile Stabilization. Permittee shall stabilize active and non-active spoil piles located within undeveloped lands with native grass hydro-seed, erosion control fabric, straw, or other biodegradable material by October 15 of each year of the Project. Plastic and other synthetic materials shall not be used. Fiber rolls and a Covered Species temporary barrier shall be placed around the perimeter of non-active spoil piles, and slope breaks shall be utilized on the slopes of non-active spoil piles. Active spoil piles shall be covered/stabilized adequately when rainy conditions are evident (see Condition of Approval 7.2) or at any time when spoil material could enter Covered Species terrestrial or aquatic habitat.

7.13 Pesticides Prohibited. Permittee shall ensure that rodenticides or other poisons used in the control of fossorial (burrow-dwelling) mammals, and herbicides, are not used within the Project Area during the term of this ITP unless otherwise approved in writing by CDFW.

8. Habitat Management Land Acquisition: CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project

Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall purchase 2.01 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank (Condition of Approval 8.2) OR shall provide for both the permanent protection and management of 2.01 acres of Habitat Management (HM) lands pursuant to Condition of Approval 8.3 below and the calculation and deposit of the management funds pursuant to Condition of Approval 8.4 below. Permanent protection and funding for perpetual management of compensatory habitat must be complete before starting Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition of Approval 9 below for all uncompleted obligations.

8.1 Cost Estimates. CDFW has estimated the cost of the purchase of credits at a conservation or mitigation bank identified in Condition of Approval 8.2 OR acquisition, protection, and perpetual management of the HM lands identified in Condition of Approval 8.3 at $220,000 per acre; therefore, for 2.01 acres the estimated cost is **$442,200**.

8.2 Covered Species Credits. Permittee shall: 1) purchase 2.01 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank, 2) obtain written confirmation from CDFW that the aforementioned bank is in good standing prior to purchasing the credits, unless otherwise approved in writing by CDFW, 3) provide copies of executed Bill(s) of Sale and Payment Receipt(s) to CDFW, and 4) obtain CDFW's written acceptance of the credits.

OR:

8.3 Habitat Acquisition and Protection. To provide for the acquisition and perpetual protection and management of the HM lands, the Permittee shall:

8.3.1 Fee Title/Conservation Easement. Transfer fee title to the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW does not hold the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. The Permittee

shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e);

8.3.2 HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal Proposed Lands for Acquisition Form (see Attachment 3B) identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;

8.3.3 HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 3A). All documents conveying the HM lands and all conditions of title are subject to the approval of CDFW, and if applicable, the Wildlife Conservation Board and the Department of General Services;

8.3.4 Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified.

8.3.5 Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing and implementing a Development and Restoration Plan approved by CDFW in writing; (2) preparing an Interim Management Plan approved by CDFW in writing; (3) preparing a Long-Term Management Plan approved by CDFW in writing: (see https://www.wildlife.ca.gov/Conservation/Planning/Banking/Templates) (4) conducting a baseline biological assessment and land survey report within four months of recording or transfer; (5) developing and transferring Geographic Information Systems (GIS) data if applicable; (6) establishing initial fencing; (7) conducting litter removal; (8) conducting initial habitat restoration or enhancement, if applicable; and (9) installing signage;

8.3.6 Contingency. Provide for any necessary remedial action and guarantee that the performance measures as described in the development and restoration plan and interim management plan described in Condition 8.3.5 have been achieved;

8.3.7 Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final Interim Management Plan and conservation easement approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. The interim management period may be longer than three years to meet success criteria identified in the Interim Management Plan. Interim management period activities described in the Interim Management Plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either: (1) provide a security to CDFW for the minimum of three years of interim management that the land owner, Permittee, or land manager agrees to manage and pay for at their own expense, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.

8.4 Endowment Fund. The Permittee will permanently protect and perpetually manage compensatory habitat as described in Condition of Approval 8.3. The Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. After obtaining CDFW approval of the HM lands, Permittee shall provide long-term management funding for the perpetual management of the HM lands by establishing a long-term management fund (Endowment). The Endowment is a sum of money, held in a CDFW-approved fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition of Approval 8.3.5. Endowment as used in this ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon. The Endowment shall be governed by this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.

After the interim management period, Permittee shall ensure that the designated long-term land manager implements the management and monitoring of the HM lands according to the final Long-Term Management Plan. The long-term land manager shall be obligated to manage and monitor the HM lands in perpetuity to preserve their conservation values in accordance with this ITP, the conservation easement, and the final management plan. Such activities shall be funded through the Endowment.

8.4.1 Identify an Endowment Manager. The Endowment shall be held by the Endowment Manager, which shall be either CDFW or another entity qualified pursuant to Government Code sections 65965-65968, as amended. Permittee shall submit to CDFW a written proposal that includes: (i) the name of the proposed Endowment Manager; (ii) whether the proposed Endowment Manager is a governmental entity, special district, nonprofit organization, community foundation, or congressionally chartered foundation; (iii) whether the proposed Endowment Manager holds the property or an interest in the property for conservation purposes as required by Government Code section 65968(b)(1) or, in the alternative, the basis for finding that the Project qualifies for an exception pursuant to Government Code section 65968(b)(2); and (iv) a copy of the proposed Endowment Manager's certification pursuant to Government Code section 65968(e). Within thirty days of CDFW's receipt of Permittee's written proposal, CDFW shall inform Permittee in writing if it determines the proposal does not satisfy the requirements of Fish and Game Code section 2081(b)(4) and, if so, shall provide Permittee with a written explanation of the reasons for its determination. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(4).;

8.4.2 Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare a Property Analysis Record (PAR) or PAR-equivalent analysis (hereinafter "PAR") to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to CDFW for review and approval the results of the PAR before transferring funds to the Endowment Manager.

8.4.2.1 Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.

8.4.2.2 Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment:

8.4.2.2.1 10 Percent Contingency. A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.

8.4.2.2.2 Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.

8.4.2.2.3 Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Manager and CDFW.

8.4.3 Transfer Long-term Endowment Funds. Permittee shall transfer the long-term endowment funds to the Endowment Manager upon CDFW approval of the Endowment Deposit Amount identified above. The approved Endowment Manager may pool the Endowment with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment. The Endowment Manager shall, at all times, hold and manage the Endowment in compliance with this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.

8.5 Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable expenses incurred by CDFW such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW.

9. Performance Security: The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 8 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

9.1. Security Amount. The Security shall be in the amount of **$442,200**. This amount is based on the cost estimates identified in Condition of Approval 8.1 above.

9.2. Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 4) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.

9.3. Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.

9.4. Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.

9.5. Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 5) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.

9.6. Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.

9.7. Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:

- Receipt of executed copies of Bill(s) of Sale; and
- Receipt of executed copies of Payment Receipt(s).

OR

- Written documentation of the acquisition of the HM lands;
- Copies of all executed and recorded conservation easements;
- Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and
- Timely submission of all required reports.

Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 18 months from the effective date of this ITP. CDFW may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

Amendment:

This ITP may be amended as provided by California Code of Regulations, title 14, section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the concurrence of the Permittee as required by law, including if CDFW determines that continued implementation of the Project as authorized under this ITP would jeopardize the continued existence of the Covered Species or where Project changes or changed biological conditions necessitate an ITP amendment to ensure that all Project-related impacts of the taking to the Covered Species are minimized and fully mitigated.

Stop-Work Order:

CDFW may issue Permittee a written stop-work order requiring Permittee to suspend any Covered Activity for an initial period of up to 25 days to prevent or remedy a violation of this ITP, including but not limited to the failure to comply with reporting or monitoring obligations, or to prevent the unauthorized take of any CESA endangered, threatened, or candidate

species. Permittee shall stop work immediately as directed by CDFW upon receipt of any such stop-work order. Upon written notice to Permittee, CDFW may extend any stop-work order issued to Permittee for a period not to exceed 25 additional days. Suspension and revocation of this ITP shall be governed by California Code of Regulations, title 14, section 783.7, and any other applicable law. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:

This ITP sets forth CDFW's requirements for the Permittee to implement the Project pursuant to CESA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable federal, state, and local law.

Notices:

The Permittee shall deliver a fully executed duplicate original ITP by registered first class mail or overnight delivery to the following address:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

Alternatively, the Permittee shall email the digitally signed ITP to CESA@wildlife.ca.gov. Digital signatures shall comply with Government Code section 16.5.

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2020-050-03) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Stacy Sherman, Acting Regional Manager
California Department of Fish and Wildlife – Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
R3CESA@wildlife.ca.gov

and a copy to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090
CESA@wildlife.ca.gov

Unless Permittee is notified otherwise, CDFW's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

Melanie Day, Senior Environmental Scientist (Supervisory)
California Department of Fish and Wildlife – Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
Telephone: (707) 210-4415
Melanie.Day@wildlife.ca.gov

Compliance with CEQA:

CDFW's issuance of this ITP is subject to CEQA. CDFW is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of the Project by the lead agency, City of Santa Rosa. (See generally Pub. Resources Code, §§ 21067, 21069.) The lead agency's prior environmental review of the Project is set forth in the Fulton Road Widening Improvement Project Mitigated Negative Declaration (SCH No.: 2017062057) dated June 21, 2017 that the City of Santa Rosa adopted for the Fulton Road Widening Improvement Project on October 24, 2017. At the time the lead agency adopted the Mitigated Negative Declaration and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's Mitigated Negative Declaration for the Project and the environmental effects related to issuance of this ITP (CEQA Guidelines, § 15096, subd. (f)). CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, CDFW finds adherence to and implementation of the Conditions of Project Approval adopted by the lead agency, and that adherence to and implementation of the Conditions of Approval imposed by CDFW through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. CDFW consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

Findings Pursuant to CESA:

These findings are intended to document CDFW's compliance with the specific findings requirements set forth in CESA and related regulations. [Fish and Game Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subds, (a)-(b), 783.5, subd. (c)(2)].

CDFW finds based on substantial evidence in the ITP application, the Fulton Road Widening Improvement Project Mitigated Negative Declaration, the results of site visits and consultations, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

(1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;

(2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP. Measures include: (1) permanent habitat protection; (2) establishment of avoidance zones; (3) worker education; and (4) Quarterly Compliance Reports. CDFW evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation. Based on this evaluation, CDFW determined that the protection and management in perpetuity of 2.01 acres of compensatory habitat that is contiguous with other protected Covered Species habitat and/or is of higher quality than the habitat being destroyed by the Project, along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;

(3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;

(4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;

(5) All required measures are capable of successful implementation;

(6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;

(7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and

(8) Issuance of this ITP will not jeopardize the continued existence of the Covered

Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

FIGURE 1	Project Location Map
FIGURE 2	Project Area Map
ATTACHMENT 1	Mitigation Monitoring and Reporting Program
ATTACHMENT 2	Covered Species Handling
ATTACHMENT 3A, 3B	Habitat Management Lands Checklist; Proposed Lands for Acquisition Form
ATTACHMENT 4	Letter of Credit Form
ATTACHMENT 5	Mitigation Payment Transmittal Form

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 7/23/2021**.**

DocuSigned by:
Stacy Sherman
602D021D81CA4F7...

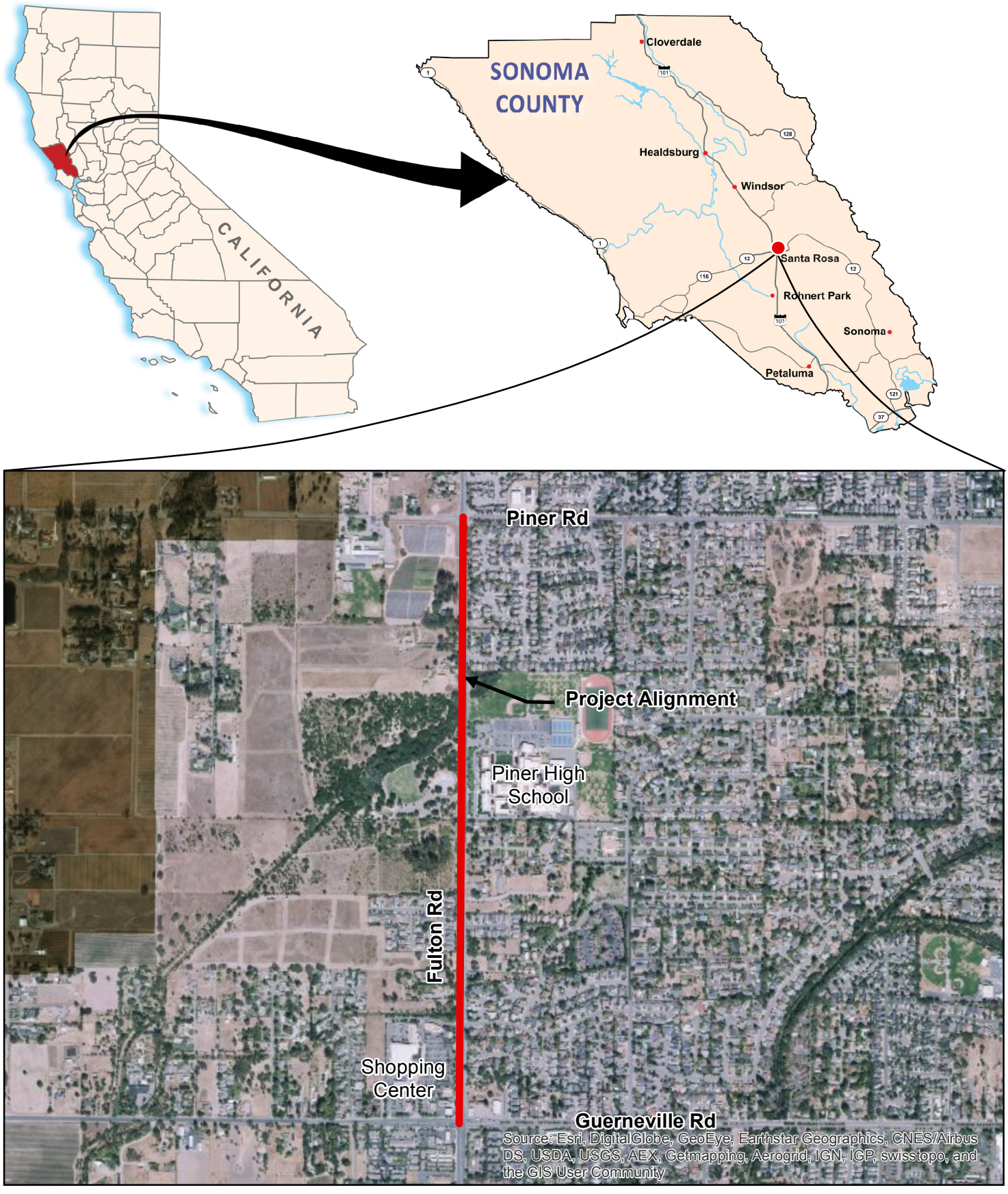
Stacy Sherman, Acting Regional Manager
Bay Delta Region

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of the Permittee to comply with all terms and conditions.

DocuSigned by:
By: _____ Date: 7/28/2021
D91E684DE96A4B6...

Printed Name: Jason Nutt Title: Assistant City Manager



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GHD

Fulton Road Widening Improvement Project

Job Number 11110674
Revision
Date 03 May 2017

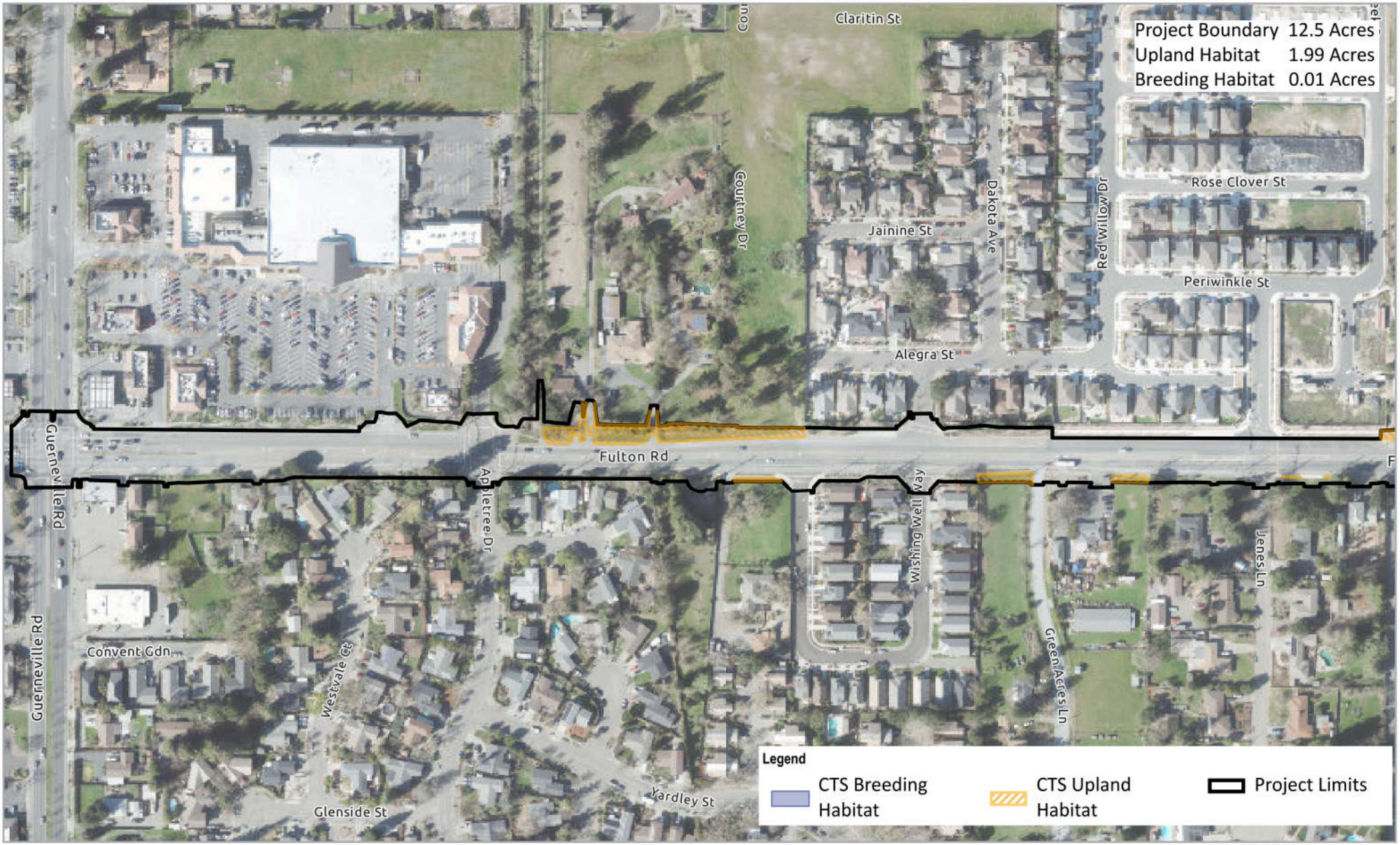
Vicinity Map

Figure 1

2235 Mercury Way Suite 150 Santa Rosa CA 95407 USA T 707 523 1010 F 707 527 8679 E santarosa@ghd.com W www.ghd.com

G:\111\11110674 SR Fulton Road Widening\08-GIS\Maps\Deliverables\Vicinity Map.mxd

Data source: GHD, State and County Mapping, 2016, ESRI Basemaps Sept. 2016 Created by:rmremillard



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Map Projection: Lambert Conformal Conic
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GHD

City of Santa Rosa
Fulton Road
Widening Project

Project No. **11110674**
Revision No. **-**
Date **5/24/2021**

CTS Mitigation and Breeding Habitat

Figure 2

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Print date: 24 May 2021 - 12:23

Data source: City of Santa Rosa, Maxar, Microsoft
Road Names: Esri Community Maps Contributors, City of Santa Rosa, Sonoma County, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA. Created by: ethompson3

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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

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City of Santa Rosa
Fulton Road
Widening Project

Project No. 11110674
Revision No. -
Date 5/24/2021

CTS Mitigation and Breeding Habitat

Figure 2

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Print date: 24 May 2021 - 12:25

Data source: City of Santa Rosa, Maxar, Microsoft
Road Names: Esri Community Maps Contributors, City of Santa Rosa, Sonoma County, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA. Created by: ethompson3

Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)
CALIFORNIA ENDANGERED SPECIES ACT
INCIDENTAL TAKE PERMIT NO. 2081-2020-050-03

PERMITTEE: **City of Santa Rosa**

PROJECT: **Fulton Road Widening Improvement Project**

PURPOSE OF THIS MMRP

The purpose of this MMRP is to ensure that the impact minimization and mitigation measures required by the California Department of Fish and Wildlife (CDFW) for the above-referenced Project are properly implemented, and thereby to ensure compliance with Section 2081, subdivision (b) of the Fish and Game Code and Section 21081.6 of the Public Resources Code. A table summarizing the mitigation measures required by CDFW is attached. This table is a tool for use in monitoring and reporting on implementation of mitigation measures, but the descriptions in the table do not supersede the mitigation measures set forth in the California Incidental Take Permit (ITP) and in attachments to the ITP, and the omission of a permit requirement from the attached table does not relieve the Permittee of the obligation to ensure the requirement is performed.

OBLIGATIONS OF PERMITTEE

Mitigation measures must be implemented within the time periods indicated in the table that appears below. Permittee has the primary responsibility for monitoring compliance with all mitigation measures and for reporting to CDFW on the progress in implementing those measures. These monitoring and reporting requirements are set forth in the ITP itself and are summarized at the front of the attached table.

VERIFICATION OF COMPLIANCE, EFFECTIVENESS

CDFW may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measure.

TABLE OF MITIGATION MEASURES

The following items are identified for each mitigation measure: Mitigation Measure, Source, Implementation Schedule, Responsible Party, and Status/Date/Initials. The Mitigation Measure column summarizes the mitigation requirements of the ITP. The Source column identifies the ITP condition that sets forth the mitigation measure. The Implementation Schedule column shows the date or phase when each mitigation measure will be implemented. The Responsible Party column identifies the person or agency that is primarily responsible for implementing the mitigation measure. The Status/Date/Initials column shall be completed by the Permittee during preparation of each Status Report and the Final Mitigation Report, and must identify the implementation status of each mitigation measure, the date that status was determined, and the initials of the person determining the status.

BEFORE DISTURBING SOIL OR VEGETATION

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
1.	Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.	ITP Condition # 5.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
2.	Designated Biologist. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, and collecting and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed.	ITP Condition # 5.2	30 days before commencing ground- or vegetation-disturbing activities	Permittee	
3.	Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.	ITP Condition # 5.4	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee and Designated Biologist	
4.	Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.	ITP Condition # 5.6	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
5.	Delineation of Property Boundaries. Before starting Covered Activities, Permittee shall clearly delineate the boundaries of the Project Area with fencing, stakes, or flags. Permittee shall restrict all Covered Activities to within the fenced, staked, or flagged areas. Permittee shall maintain all fencing, stakes, and flags until the completion of Covered Activities in that area.	ITP Condition # 5.9	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
6.	Delineation of Habitat. Permittee shall clearly delineate habitat of the Covered Species within the Project Area with posted signs, posting stakes, flags, and/or rope or cord, and place fencing as necessary to minimize the disturbance of Covered Species' habitat.	ITP Condition # 5.10	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
7.	CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project and mitigation lands under Permittee control, and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.	ITP Condition # 5.14	Before commencing ground- or vegetation-disturbing activities/	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
			Entire Project/ Post-Project		
8.	Geographic Information Systems Data Files. Before starting Covered Activities, the Permittee shall provide CDFW with separate Geographic Information Systems (GIS) data files for the temporary and permanent habitat impact areas authorized under this ITP for each Covered Species. If more than one Covered Species occurs in the same area, the Permittee shall provide one set of GIS data files for each species. If habitat for a Covered Species will be both temporarily and permanently impacted, the Permittee shall provide one set of GIS data files for each impact type. The Permittee shall provide any additional GIS data files for the Project or related Covered Species features within 30 days of CDFW's request. All GIS data files shall be provided in a format acceptable to CDFW.	ITP Condition # 6.1	Before commencing ground- or vegetation-disturbing activities	Permittee	
9.	Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.	ITP Condition # 6.2	14 days before commencing ground- or vegetation-disturbing activities	Designated Representative	
10.	Dry Season Work Restriction. Permittee shall ensure that initial ground disturbing activities involving construction and heavy equipment use within Covered Species habitat (such as excavation, grading, and contouring) are limited to the period from June 15 to October 15 (Dry Season). Once initial ground disturbing activities have been completed in an area, additional ground disturbing activities such as excavation may occur in the same area in conformance with Condition of Approval 7.2.	ITP Condition # 7.1	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee	
11.	Wet Weather Work Restriction. Permittee or the Designated Biologist shall consult the 72-hour weather forecast from the National Weather Service (NWS) prior to the start of ground disturbing activities. Ground disturbing activities shall not begin unless a no precipitation forecast is obtained covering the entire Project Area and necessary erosion control measures are implemented. The Designated Biologist shall keep precipitation records on-site, and these records shall be subject to CDFW inspection. If a 40 percent or greater chance of rain is forecasted, then ground-disturbing activities shall cease 24 hours prior to the forecasted rain, unless otherwise approved in writing by CDFW. If ground-disturbing activities are approved by CDFW as described above, the Designated Biologist shall survey the work area before construction begins each day rain is forecast. If rain exceeds 0.25 inches during a 24-hour period, ground-disturbing activities shall cease. Twenty-four hours after the rain ceases and once there is no precipitation in the 24-hour forecast, ground disturbing activities may continue.	ITP Condition # 7.2	Before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee or Designated Biologist	
12.	Covered Species Temporary Barrier. Permittee shall provide a Covered Species Temporary Barrier Plan a minimum of 30 days prior to commencing Covered Activities for approval in writing by CDFW. Prior to any ground-disturbing Covered Activities and under the direct supervision of the Designated Biologist, Permittee shall install a temporary barrier to prevent the Covered Species from dispersing into the Project Area. The barrier shall be designed to allow Covered Species to leave the Project Area using a one-way funnel at 100-foot intervals along the barrier or other method approved in writing by CDFW. The barrier shall remain in place until Covered Activities are completed, including during periods of inactivity. The Permittee shall maintain and repair the barrier immediately to ensure that it is functional and without defects. Permittee shall provide refuge opportunities, such as coverboards (2-foot x 2-foot plywood), along both sides at 100-foot intervals on each side, and a climbing barrier at the top of the temporary barrier. The Designated Biologist shall check Covered Species temporary barriers	ITP Condition # 7.4	30 Days before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee and Designated Biologist	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
	and refuge areas daily during Covered Activities and before, during, and following storm events, and weekly during periods of inactivity. Animals found within the interior of the barrier shall be relocated outside of the barrier as described in the Covered Species Relocation Plan (see Condition of Approval 7.5).				
13.	Covered Species Relocation Plan. Permittee shall submit a Covered Species Relocation Plan (Relocation Plan) using Attachment 2 as a reference, a minimum of 30 days prior to the commencement of Covered Activities for approval in writing by CDFW. The Designated Biologist shall follow this Relocation Plan to install the Covered Species temporary barrier and cover boards (see Condition of Approval 7.4); check any cover boards according to the rainfall-dependent schedule; and relocate captured Covered Species adults, juveniles, and larva to a suitable site.	ITP Condition # 7.5	30 Days before commencing ground- or vegetation-disturbing activities/ Entire Project	Permittee and Designated Biologist	
14.	Pre-Construction Surveys. The Designated Biologist shall complete walking surveys of the Project Area prior to any initial ground disturbing activity and shall follow earthmoving equipment to look for Covered Species during initial site grading and other ground disturbing activities. Areas to be surveyed shall include suitable habitat features for the Covered Species such as aquatic and upland areas as well as under woody or other debris. Pre-construction surveys shall be conducted in conjunction with Covered Species temporary barrier installation. If a Covered Species is discovered, the Designated Biologist shall move the animal to a safe nearby location (e.g. mouth of small mammal burrow outside of the construction area) and monitor it until it is determined that the animal is not imperiled by predators or other dangers (see Condition of Approval 7.5).	ITP Condition # 7.9	Before commencing ground- or vegetation-disturbing activities	Designated Biologist	
15.	Burrow Protection. The Designated Biologist shall mark for avoidance all small mammal burrows with flagging at the limits of access areas, including vehicle routes, and staging areas.	ITP Condition # 7.11	Before commencing ground- or vegetation-disturbing activities	Designated Biologist	
16.	Cost Estimates. CDFW has estimated the cost of the purchase of credits at a conservation or mitigation bank identified in Condition of Approval 8.2 OR acquisition, protection, and perpetual management of the HM lands identified in Condition of Approval 8.3 at $220,000 per acre; therefore, for 2.01 acres the estimated cost is $442,200.	ITP Condition # 8.1	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
17.	Covered Species Credits. Permittee shall: 1) purchase 2.01 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank, 2) obtain written confirmation from CDFW that the aforementioned bank is in good standing prior to purchasing the credits, unless otherwise approved in writing by CDFW, 3) provide copies of executed Bill(s) of Sale and Payment Receipt(s) to CDFW, and 4) obtain CDFW's written acceptance of the credits. OR	ITP Condition # 8.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
18.	Habitat Acquisition and Protection. To provide for the acquisition and perpetual protection and management of the HM lands, the Permittee shall: Fee Title/Conservation Easement. Transfer fee title to the HM lands to CDFW pursuant to terms approved in writing by CDFW. Alternatively, CDFW, in its sole discretion, may authorize a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended. If CDFW does not hold fee title to the HM lands, CDFW shall act as grantee for a conservation easement over the HM lands or shall, in its sole discretion, approve a non-profit entity, public	ITP Condition # 8.3, 8.3.1	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
	agency, or Native American tribe to act as grantee for a conservation easement over the HM lands provided that the entity, agency, or tribe meets the requirements of Civil Code section 815.3. If CDFW does not hold the conservation easement, CDFW shall be expressly named in the conservation easement as a third-party beneficiary. The Permittee shall obtain CDFW written approval of any conservation easement before its execution or recordation. No conservation easement shall be approved by CDFW unless it complies with Government Code sections 65965-65968, as amended and includes provisions expressly addressing Government Code sections 65966(j) and 65967(e);				
19.	HM Lands Approval. Obtain CDFW written approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal Proposed Lands for Acquisition Form (see Attachment 3B) identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;	ITP Condition # 8.3.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
20.	HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 3A). All documents conveying the HM lands and all conditions of title are subject to the approval of CDFW, and if applicable, the Wildlife Conservation Board and the Department of General Services;	ITP Condition # 8.3.3	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
21.	Land Manager. Designate both an interim and long-term land manager approved by CDFW. The interim and long-term land managers may, but need not, be the same. The interim and/or long-term land managers may be the landowner or another party. Documents related to land management shall identify both the interim and long-term land managers. Permittee shall notify CDFW of any subsequent changes in the land manager within 30 days of the change. If CDFW will hold fee title to the mitigation land, CDFW will also act as both the interim and long-term land manager unless otherwise specified.	ITP Conditions # 8.3.4	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
22.	Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by CDFW. Start-up activities include, at a minimum: (1) preparing and implementing a Development and Restoration Plan approved by CDFW in writing; (2) preparing an Interim Management Plan approved by CDFW in writing; (3) preparing a Long-Term Management Plan approved by CDFW in writing: (see https://www.wildlife.ca.gov/Conservation/Planning/Banking/Templates) (4) conducting a baseline biological assessment and land survey report within four months of recording or transfer; (5) developing and transferring Geographic Information Systems (GIS) data if applicable; (6) establishing initial fencing; (7) conducting litter removal; (8) conducting initial habitat restoration or enhancement, if applicable; and (9) installing signage;	ITP Conditions # 8.3.5	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
23.	Contingency. Provide for any necessary remedial action and guarantee that the performance measures as described in the development and restoration plan and interim management plan described in Condition 8.3.5 have been achieved;	ITP Conditions # 8.3.6	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
24.	Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The Permittee shall ensure that the interim land manager implements the interim management of the HM lands as described in the final Interim Management Plan and conservation easement	ITP Conditions # 8.3.7	Before commencing ground- or vegetation-disturbing activities (or	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
	approved by CDFW. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected management following start-up activities. The interim management period may be longer than three years to meet success criteria identified in the Interim Management Plan. Interim management period activities described in the Interim Management Plan shall include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either: (1) provide a security to CDFW for the minimum of three years of interim management that the land owner, Permittee, or land manager agrees to manage and pay for at their own expense, (2) establish an escrow account with written instructions approved in advance in writing by CDFW to pay the land manager annually in advance, or (3) establish a short-term enhancement account with CDFW or a CDFW-approved entity for payment to the land manager.		within 18 months of issuance of the ITP if Security is provided)		
25.	Endowment Fund. The Permittee will permanently protect and perpetually manage compensatory habitat as described in Condition of Approval 8.3. The Permittee shall ensure that the HM lands are perpetually managed, maintained, and monitored by the long-term land manager as described in this ITP, the conservation easement, and the final management plan approved by CDFW. After obtaining CDFW approval of the HM lands, Permittee shall provide long-term management funding for the perpetual management of the HM lands by establishing a long-term management fund (Endowment). The Endowment is a sum of money, held in a CDFW-approved fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition of Approval 8.3.5. Endowment as used in this ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon. The Endowment shall be governed by this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended. After the interim management period, Permittee shall ensure that the designated long-term land manager implements the management and monitoring of the HM lands according to the final Long-Term Management Plan. The long-term land manager shall be obligated to manage and monitor the HM lands in perpetuity to preserve their conservation values in accordance with this ITP, the conservation easement, and the final management plan. Such activities shall be funded through the Endowment.	ITP Conditions # 8.4	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
26.	Identify an Endowment Manager. The Endowment shall be held by the Endowment Manager, which shall be either CDFW or another entity qualified pursuant to Government Code sections 65965-65968, as amended. Permittee shall submit to CDFW a written proposal that includes: (i) the name of the proposed Endowment Manager; (ii) whether the proposed Endowment Manager is a governmental entity, special district, nonprofit organization, community foundation, or congressionally chartered foundation; (iii) whether the proposed Endowment Manager holds the property or an interest in the property for conservation purposes as required by Government Code section 65968(b)(1) or, in the alternative, the basis for finding that the Project qualifies for an exception pursuant to Government Code section 65968(b)(2); and (iv) a copy of the proposed Endowment Manager's certification pursuant to Government Code section 65968(e). Within thirty days of CDFW's receipt of Permittee's written proposal, CDFW shall inform Permittee in writing if it determines the proposal does not satisfy the requirements of Fish and Game Code section 2081(b)(4) and, if so, shall provide Permittee with a written explanation of the reasons for its determination. If CDFW does not provide Permittee with a written determination within the thirty-day period, the proposal shall be deemed consistent with Section 2081(b)(4).;	ITP Conditions # 8.4.1	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
27.	Calculate the Endowment Funds Deposit. After obtaining CDFW written approval of the HM lands, long-term management plan, and Endowment Manager, Permittee shall prepare a Property Analysis Record (PAR) or PAR-equivalent analysis (hereinafter "PAR") to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to CDFW for review and approval the results of the PAR before transferring funds to the Endowment Manager. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees. Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment: 10 Percent Contingency. A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding. Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Manager and CDFW.	ITP Conditions # 8.4.2	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
28.	Transfer Long-term Endowment Funds. Permittee shall transfer the long-term endowment funds to the Endowment Manager upon CDFW approval of the Endowment Deposit Amount identified above. The approved Endowment Manager may pool the Endowment with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment. The Endowment Manager shall, at all times, hold and manage the Endowment in compliance with this ITP, Government Code sections 65965-65968, as amended, and Probate Code sections 18501-18510, as amended.	ITP Condition # 8.4.3	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	
29.	Reimburse CDFW. Permittee shall reimburse CDFW for all reasonable expenses incurred by CDFW such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM lands to CDFW.	ITP Condition # 8.5	Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided)	Permittee	

DURING CONSTRUCTION

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
30.	Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.	ITP Condition # 5.3	Entire Project	Permittee, Designated Biologist	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
31.	Construction Monitoring Binder. The Designated Biologist shall maintain a construction-monitoring binder on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring binder is available for review at the Project site upon request by CDFW.	ITP Condition # 5.5	Entire Project	Designated Biologist	
32.	Dust Control. Permittee shall implement dust control measures during Covered Activities to facilitate visibility for monitoring of the Covered Species by the Designated Biologist. Permittee shall keep the amount of water used to the minimum amount needed, and shall not allow water to form puddles.	ITP Condition # 5.7	Entire Project	Permittee	
33.	Erosion Control Materials. Permittee shall prohibit use of erosion control materials potentially harmful to Covered Species and other species, such as monofilament netting (erosion control matting) or similar material, in potential Covered Species' habitat.	ITP Condition # 5.8	Entire Project	Permittee	
34.	Project Access. Project-related personnel shall access the Project Area using existing routes and shall not cross Covered Species' habitat outside of or en route to the Project Area. Permittee shall restrict Project-related vehicle traffic to established roads, staging, and parking areas. Permittee shall ensure that vehicle speeds do not exceed 20 miles per hour to avoid Covered Species on or traversing the roads, except when traveling on paved roads under current traffic conditions. If Permittee determines construction of routes for travel are necessary outside of the Project Area, the Designated Representative shall contact CDFW for written approval before carrying out such an activity. CDFW may require an amendment to this ITP, among other reasons, if additional take of Covered Species will occur as a result of the Project modification.	ITP Condition # 5.11	Entire Project	Permittee	
35.	Staging Areas. Permittee shall confine all Project-related parking, storage areas, laydown sites, equipment storage, and any other surface-disturbing activities to the Project Area using, to the extent possible, previously disturbed areas. Additionally, Permittee shall not use or cross Covered Species' habitat outside of the marked Project Area unless provided for as described in Condition of Approval 5.11 of this ITP.	ITP Condition # 5.12	Entire Project	Permittee	
36.	Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.	ITP Condition # 5.13	Entire Project	Permittee	
37.	Prevention of Spread of Invasive Species. Permittee shall conduct Project activities in a manner that prevents the introduction, transfer, and spread of invasive species, including plants, animals, and microbes (e.g., algae, fungi, parasites, bacteria, etc.), from one Project site and/or waterbody to another. Prevention Best Management Practices (BMPs) and guidelines for invasive plants can be found on the California Invasive Plant Council's (Cal-IPC) website at: https://www.cal-ipc.org/solutions/prevention/ and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website: https://stopaquatichitchhikers.org/.	ITP Condition # 5.16	Entire Project	Permittee	
38.	Notification of Non-compliance. The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.	ITP Condition # 6.3	Entire Project	Designated Representative	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
39.	Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP. The Designated Biologist shall conduct compliance inspections a minimum of once per week during periods of inactivity.	ITP Condition # 6.4	Entire Project	Designated Biologist	
40.	Reporting of Habitat Impacts. Permittee shall monitor, calculate, and record in an electronic ledger the total amount of permanent impacts to Covered Species habitat and shall at a minimum account for these impacts based upon grassland and wetland habitat types.	ITP Condition # 6.5	Entire Project	Permittee	
41.	Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2092 and emailing Melanie.Day@wildlife.ca.gov. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information. If the Covered Species is found recently deceased, a 0.5-inch portion of the tail tip shall be removed and placed in a labeled tissue tube with 95 percent ethanol. The remaining carcass shall be immediately bagged, labeled, and preserved in a freezer. The label shall include time and date, GPS location, circumstances surrounding death (if known), and ITP tracking number. Tail specimens shall be delivered to CDFW Bay Delta Region, Attention: Marcia Grefsrud, 2825 Cordelia Road, Suite 100, Fairfield, CA 94534. The remaining carcasses shall be delivered to the CDFW Wildlife Investigations Lab, Attention: Deana Clifford, 1701 Nimbus Road Suite D, Rancho Cordova, CA 95670 within two calendar days of the discovery	ITP Condition #6.6	Entire Project	Permittee, Designated Biologist	
42.	Notification of Non-Native Salamanders or Hybrids. The Designated Biologist shall immediately notify CDFW if a suspected barred tiger salamander (*Ambystoma tigrinum mavortium*) or California tiger salamander x non-native salamander hybrid is found within the Project Area within 24 hours by calling the Regional Office at (707) 428-2002. CDFW and Permittee shall consult to determine measures to address non-native or hybrid populations.	ITP Condition # 6.7	Entire Project	Designated Biologist	
43.	Quarterly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Conditions of Approval 6.3 and 6.4 into a Quarterly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Quarterly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is Melanie Day, Senior Environmental Scientist (Specialist) (Melanie.Day@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the	ITP Condition # 6.8	Quarterly	Designated Representative or Designated Biologist	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
	results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.				
44.	Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports for that year identified in Condition of Approval 6.8; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.	ITP Condition # 6.9	Annually	Permittee	
45.	CNDDB Observations. The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Quarterly Compliance Report or ASR, whichever is submitted first relative to the observation.	ITP Condition # 6.10	Entire Project	Designated Biologist	
46.	Time of Day Work Restriction. Permittee shall terminate all Covered Activities 30 minutes before sunset and shall not resume Covered Activities until 30 minutes after sunrise during the Covered Species migration/active season from October 16 to June 14, unless otherwise approved in writing by CDFW. The Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for determining when Covered Activities shall terminate and resume.	ITP Condition # 7.3	Entire Project	Permittee	
47.	Atypical Dens and Burrows. Permittee shall ensure that all construction pipes, culverts, or similar structures that are stored in the Project Area for one or more overnight periods are either securely capped prior to storage or thoroughly inspected by the Designated Biologist before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a Covered Species is discovered inside a pipe by the Designated Biologist or anyone else, the Designated Biologist shall move the animal to a safe nearby location per the Covered Species Relocation Plan described in Condition of Approval 7.5.	ITP Condition # 7.6	Entire Project	Permittee, Designated Biologist	
48.	Covered Species Handling and Injury. The Covered Species shall be handled and assessed according to the Restraint and Handling of Live Amphibians USGS, National Wildlife Health Center (Attachment 2). If an injured Covered Species is found during the Project term, the individual shall be evaluated by the Designated Biologist who shall then immediately contact the CDFW Regional Representative, via email and telephone, to discuss the next steps pursuant to Condition of Approval 6.6. If the CDFW Regional Representative cannot be contacted immediately, the injured salamander shall be placed in a shaded container and kept moist. If the CDFW Regional Representative is not available or has not responded within 2 hours of initial attempts, then the following steps shall be taken by the Designated Biologist: If the injury is minor or healing and the salamander is likely to survive, the salamander shall be released immediately in accordance with the Condition of Approval 7.5. If it is determined that the Covered Species has major or serious injuries as a result of Project-	ITP Condition # 7.7, 7.7.1, 7.7.2	Entire Project	Designated Biologist	

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
	related activities the Designated Biologist shall immediately take it to a CDFW approved wildlife rehabilitation or veterinary facility. If taken into captivity the individual shall remain in captivity and not be released into the wild unless it has been kept in quarantine and the release is authorized by the CDFW and U.S. Fish and Wildlife Service. Permittee shall bear any costs associated with the care or treatment of such injured Covered Species. The circumstances of the injury, the procedure followed, and the final disposition of the injured animal shall be documented in a written incident report as described in Condition of Approval 6.6.				
49.	Personnel Restriction. Permittee shall ensure that all construction activities and personnel, including subcontractors, are restricted to the active construction area surrounded by the Covered Species temporary barrier and public roads.	ITP Condition # 7.8	Entire Project	Permittee	
50.	Trench Escape and Inspection. The Designated Biologist shall inspect all open holes, sumps, and trenches within the Project Area at the beginning of each working day for trapped animals. To prevent inadvertent entrapment of Covered Species, the Designated Biologist shall oversee the covering of all trenches, holes, sumps, or other excavations with a greater than 1:1 (45 degree) slope of any depth with barrier material at the close of each working day such that Covered Species are unable to dig or squeeze under the barrier and become entrapped. The outer two feet of excavation cover shall conform to solid ground so that gaps do not occur between the cover and the ground and secured with soil staples or similar means to prevent gaps. Each morning prior to beginning Covered Activities and immediately before trenches, holes, sumps, or other excavations are back-filled, the Designated Biologist shall thoroughly inspect them for Covered Species. Trenches, holes, sumps, or other excavations that are covered long-term shall be inspected at the beginning of each working day to ensure inadvertent entrapment has not occurred. Permittee shall cease all Covered Activities in the vicinity and notify the Designated Biologist immediately if any worker discovers that Covered Species have become trapped. If at any time a trapped Covered Species is discovered by the Designated Biologist or anyone else, the Designated Biologist shall capture and relocate the animal to a safe nearby location per the Covered Species Relocation Plan described in Condition of Approval 7.5. If the open holes, sumps, trenches, or excavations cannot be covered, then a Covered Species temporary barrier shall be installed around any trenches, holes, sumps, or other excavations to prevent Covered Species from becoming trapped. Refuge opportunities, such as coverboards shall be provided on the outside perimeter of the barrier.	ITP Condition # 7.10, 7.10.1	Entire Project	Designated Biologist	
51.	Spoil Pile Stabilization. Permittee shall stabilize active and non-active spoil piles located within undeveloped lands with native grass hydro-seed, erosion control fabric, straw, or other biodegradable material by October 15 of each year of the Project. Plastic and other synthetic materials shall not be used. Fiber rolls and a Covered Species temporary barrier shall be placed around the perimeter of non-active spoil piles, and slope breaks shall be utilized on the slopes of non-active spoil piles. Active spoil piles shall be covered/stabilized adequately when rainy conditions are evident (see Condition of Approval 7.2) or at any time when spoil material could enter Covered Species terrestrial or aquatic habitat.	ITP Condition # 7.12	Entire Project	Permittee	
52.	Pesticides Prohibited. Permittee shall ensure that rodenticides or other poisons used in the control of fossorial (burrow-dwelling) mammals, and herbicides, are not used within the Project Area during the term of this ITP unless otherwise approved in writing by CDFW.	ITP Condition # 7.13	Entire Project	Permittee	

POST- CONSTRUCTION

	Mitigation Measure	Source	Implementation Schedule	Responsible Party	Status / Date / Initials
53.	Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all temporary fill and construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes.	ITP Condition # 5.15	Post-construction	Permittee	
54.	Final Mitigation Report. No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Quarterly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.	ITP Condition # 6.11	Post-construction and no later than 45 days after completion of mitigation measures	Permittee	

Attachment 2

http://www.nwhc.usgs.gov/publications/amphibian_research_procedures/handling_and_restraint.jsp

Restraint and Handling of Live Amphibians

STANDARD OPERATING PROCEDURE
ARMI SOP No. 100
Revised, 16 February 2001

I. PURPOSE: Provide guidelines for humane handling of amphibians so that injury and distress to the amphibian are minimized.

II. SCOPE: These guidelines apply to larvae and tadpoles, as well as adult frogs, toads, salamanders and neotenes. Because of their anatomically different and very delicate skin, tadpoles and larvae must be handled differently than post-metamorphic amphibians.

III. EQUIPMENT and SUPPLIES.

A. Standard capture equipment (seine nets, dip nets, minnow traps)

B. Clear plastic bags (half liter or full liter size)

IV. BACKGROUND: There are three main hazards associated with handling live amphibians: two to the amphibian and one to the handler. To amphibians, the main dangers of being handled are skin damage that could result in secondary skin infections, and bone and muscle injuries caused by struggling when being held. For the handler, the main danger comes from toxic skin secretions produced by some amphibians (in the USA, this is mostly newts and the introduced giant/marine toad). Tadpoles and larvae have thin delicate skin that is very easily damaged by the slightest handling. The skin of larvae lacks keratin and has fewer cell layers than adult amphibian skin. Therefore, direct contact handling of tadpoles and larvae is to be avoided; instead, these amphibian stages are examined through clear flexible plastic bags containing water. Although the skin of adult (post-metamorphic) amphibians has keratin and is less delicate than larval skin, their skin is still much more delicate than the skin of reptiles, birds and mammals. Rough handling of adult amphibians can easily result in skin abrasions, small tears, punctures, erosions and ulcers; normally, minor skin wounds heal quickly, but if contaminants, sewage or high levels of microorganisms are present in the pond or other environment, then wound infections are possible.
Frogs and Toads. All amphibians can be expected to struggle following capture. For anurans, there is a danger that vigorous kicking with the hindlimbs can cause joint dislocations or a broken (fractured) back; broken backs are a well-documented and major problem in another species that moves by hopping---rabbits. Therefore, proper

restraint of anurans, first and foremost involves inhibiting their ability to kick. Salamanders. For salamanders, there are three major dangers associated with handling: 1) loss (automizing) of the tail, 2) damage to the very delicate external gills (in neotenes), and 3) back injury during whip-like thrashing movements.

V. METHODS OF PHYSICAL RESTRAINT:

A. Anurans. Medium and large size frogs and toads (those about 5 grams and larger) should be grasped around the waist with the hindlimbs fully extended. The animal should not be allowed to bend (flex) its hip and knee joints, since this would allow it to kick.

B. Caudates. Medium and large size salamanders (those about 5 grams and larger) should be grasped in the middle of the body between the forelimbs and hindlimbs. Larval and neotenic salamanders should never be grasped around the head or neck, because the gills can be easily damaged. Under no circumstances should salamanders be grasped by the tail or picked up by the tail.

C. Larvae. All larvae (including tadpoles) should be handled with nets or scoops. For examinations, the larvae should be placed in a clear plastic bag with a mild amount of water. Alternatively, larvae may be sedated with an anesthetic and examined in a dish or bowl of water. As much as possible, larvae should be examined only while they are in water. Larvae should not be grasped with bare hands.

VI. MISHAPS.

A. Skin wounds: If an amphibian suffers a skin wound during handling, it is recommended that the wound be sprayed with the over-the-counter product, Bactine® (See the SOP on Toe Clipping of Frogs and Toads, NWHC ACUC Protocol 2001-004). All other topical antiseptics and disinfectants (sprays and ointments) are CONTRAINDICATED in amphibians. If possible, the animal should then be released on land rather than into water, since the antiseptic spray would be quickly washed off in water.

B. Broken back: If a frog or toads suffers a broken back during capture or handling, it should be promptly euthanized. It would be inhumane to release such a crippled animal. An animal with a broken back will have serious damage to the spinal cord and should show almost immediate paralysis of the hindlimbs and tail. Recommended methods of humane euthanasia include (see NWHC ACUC Protocol 1999-009, Methods of Euthanasia):

1. Pithing
2. Overdosing in anesthetic solutions of MS222 or benzocaine

3. Application of a benzocaine-based topical ointment (as used by humans to relieve tooth-aches) to the top or the head and dorsum of the body.

C. Broken leg: If a major bone of a limb is broken during capture or handling, the animal should be euthanized or taken to a wildlife rehabilitation center or veterinarian for treatment. A broken leg bone typically is recognized as an abnormal bend in the leg where there is no joint; other signs of a broken leg bone are protrusion of a bone fragment through the skin, inability of the animal to move a limb or position a leg in its normal resting posture. After treatment, amphibians with broken bones might be given to a zoo or placed in a captive breeding program. Only if the injured amphibian is kept isolated from all other fish, amphibians and reptiles (eg, in a separate cage) during treatment, can it later be considered for release at the point of capture. Injuries to digits (toes and fingers) generally are not life-threatening; if the skin of the injured toe also is wounded, then treatment with Bactine® prior to immediate release is acceptable. If a toe bone is broken and protruding through the skin, the affected toe may be amputated just proximal to the site of the fracture, the stump should be sprayed with Bactine®, and the animal may be released.

D. Automized tail: If a salamander automizes (detaches) its tail during capture or handling, the stump should be treated (sprayed) with Bactine®; the salamander can then be promptly released.

E. Crushing injuries to head and body. Amphibians that have serious injuries to skin, muscles and bones should be promptly euthanized. Crushing injuries that are limited to a limb or tail will require treatment at a wildlife rehabilitation center or a veterinary clinic; alternatively, the animal may be euthanized, but it would be inhumane to release a seriously injured amphibian.

F. Snout abrasions. Amphibians that are held in glass or clear plastic containers may jump head-first into the glass, or may rub their snout against the container in attempts to burrow out. If amphibians are held for more than an hour in a clear container (bottle, aquarium, etc), they should be examined for evidence of skin injury at the tip of the snout and elsewhere around the head prior to release. If abrasions are detected, they should be sprayed with Bactine® prior to release.

G. Toxic skin secretions. All amphibians have glands in their skin that secrete a vast number of chemicals; some of which are merely noxious and repellant-like, while others may cause skin or eye irritation, and some may actually kill. The poison-dart frogs of Central America are an example of a frog with toxic secretions that can kill a human. Among the native amphibians of the United

States, the two amphibians of greatest concern are giant toads (also called cane toads, marine toads, aga toads; Bufo marinus) and western newts of the genus, Taricha.

Giant toads secrete a potent white mucoid substance from their parotid glands (large warts just behind the eyes) that affects the heart, but it is not absorbed through the intact human skin; however, the toxin is readily absorbed through the eyes and mouth. Hence, the best way to prevent poisoning is to carefully avoid rubbing the eyes or putting fingers in the mouth after handling a giant toad. If skin secretions of giant toads contact the eye or mouth, then flush promptly with generous amounts of clean fresh water or contact lens wetting solution, and then seek emergency care at a clinic or hospital if stinging or numbness of the eye or mouth develops.

Newts of the genus, Taricha, also secrete toxins from their skin; it is presumed that the entire body of these newts secretes toxins (newts and other salamanders do not have parotid glands). Their skin secretions are very irritating to the eyes and mouth. Temporary blindness (lasting about 24 hrs) has been reported by field biologists that handled newts and then rubbed their eyes. If sensations of blurred vision,or burning or stinging of the eyes occur after handling any genus or species of newt, wash the eyes with copious amounts of fresh clean water (or contact lens wetting solutions) and promptly seek medical care. Persons with newt skin secretions in their eyes are advised not to drive a vehicle or operate other dangerous or heavy equipment.

Finally, it is possible that other amphibian species in the USA besides giant toads and newts, could produce skin secretions that are irritants to the eyes. Furthermore, amphibians may carry some bacteria in their intestines and feces that are human pathogens, such as the bacteria, Salmonella and Leptospira. Hence, it is always best to practice good personal hygiene after handling any amphibian (namely, thoroughly wash your hands with soap and water).

VII. CITED LITERATURE:

1. MARTIN, D., and H. HONG. 1991. The use of Bactine® in the treatment of open wounds and other lesions in captive anurans. Herpetol Rev 22: 21.

ATTACHMENT 3A

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

HABITAT MANAGEMENT LAND ACQUISITION PACKAGE CHECKLIST FOR PROJECT APPLICANTS

The following checklist is provided to inform you of what documents are necessary to expedite the California Department of Fish and Wildlife (CDFW) processing of your Habitat Management Land acquisition proposal. Any land acquisition processing requests which are incomplete when received, will be returned. The Region contact will review and approve the document package and forward it to the Habitat Conservation Planning Branch Senior Land Agent with a request to process the land acquisition for formal acceptance.

To: _____
Regional Manager, Region Name

From: _____
Project Applicant

Phone: _____

Tracking #: _____
CDFW assigned permit or agreement #

Project Name: _____

Enclosed is the complete package for the ☐ Conservation Easement OR ☐ Grant Deed

Documents in this package include:

- ☐ Fully executed, approved as to form Conservation Easement Deed or Grant Deed.
  Date executed: _____
- ☐ Proposed Lands for Acquisition Form (PLFAF)
- ☐ Phase I Environmental Site Assessment Report Date on report: _____
  (An existing report may be used, but it must be less than two years old.)
- ☐ Preliminary Title Report(s) for subject property is enclosed and has been reviewed for encumbrances and other easements. The title report must be less than six months old when final processing is conducted.
  Included are additional documents:
  - ☐ document(s) to support title exceptions
  - ☐ document(s) to explain title encumbrances
  - ☐ a plot or map of easements/encumbrances on the property
- ☐ Policy of Title Insurance (an existing title policy is not acceptable)
- ☐ County Assessor Parcel Map(s) for subject property
- ☐ Site Location Map (Site location with property boundaries outline on a USGS 1:24,000 scale topo)
- ☐ Final Permit or Agreement (or other appropriate instrument)
  Type of agreement: ☐ Bank Agreement ☐ Mitigation Agreement
  ☐ Permit _____ Other: _____
  (write in type of permit)
- ☐ Final Management Plan (if required prior to finalizing permit or agreement or if this package is
  for a Grant Deed)
- ☐ Biological Resources Report
- ☐ Draft Summary of Transactions ☐ hard copy ☐ electronic copy (both are required)

PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF")

Date: _____

TO: Regional Representative
_____
_____
_____
Facsimile:

FROM:_____
_____
_____
_____

Applicant proposes that the following parcel of land be considered for approval by the CDFW as suitable for purposes of habitat management lands to replace the adverse environmental impacts of the Project:

Section	Township Range Number of Acres
_____	_____ _____ _____

Current Legal Owner(s), include Parcel Number(s):
_____
_____
_____

Location of Parcel:
_____
_____
_____
_____

APPROVED ___ By:_____ DATE:_____
REJECTED ___ _____
Region

Explanation:_____
_____
_____
_____

IRREVOCABLE STANDBY LETTER OF CREDIT
NO. [***Number issued by financial institution***]

Issue Date: [***date***]

Beneficiary:

California Department of Fish and Wildlife
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
Attn: HCPB Mitigation Account Coordinator

Amount: U.S. $[***dollar number***] [(***dollar amount***)]

Expiry: [***Date***] at our counters

Dear Sirs:

1. At the request and on the instruction of our customer, [***name of applicant***] ("Applicant"), we, [**Name of f*inancial institution***] ("Issuer"), hereby establish in favor of the beneficiary, the California Department of Fish and Wildlife("CDFW"), this irrevocable standby letter of credit ("Credit") in the principal sum of U.S. $[***dollar number***] [(***dollar amount***)] ("Principal Sum").

2. We are informed this Credit is and has been established for the benefit of the CDFW pursuant to the terms of the incidental take permit for the [***name of project***] issued by the CDFW to the Applicant on [***date***] (No. [***number***]) ("Permit").

3. We are further informed that pursuant to the Permit, the Applicant has agreed to complete certain mitigation requirements, as set forth in Conditions [***numbers***] in the Permit ("Mitigation Requirements").

4. We are finally informed that this Credit is intended by the CDFW and the Applicant to serve as a security device for the performance by the Applicant of the Mitigation Requirements.

5. The CDFW shall be entitled to draw upon this Credit only by presentation of a duly executed Certificate for Drawing ("Certificate") in the same form as Attachment A, which is attached hereto, at our office located at [***name and address of financial institution***].

6. The Certificate shall be completed and signed by an "Authorized Representative" of the CDFW as defined in paragraph 12 below. Presentation by the CDFW of a completed Certificate may be made in person or by registered mail, return receipt requested, or by overnight courier.

7. Upon presentation of a duly executed Certificate as above provided, payment shall be made to the CDFW, or to the account of the CDFW, in immediately available funds, as the CDFW shall specify.

8. If a demand for payment does not conform to the terms and conditions of this Credit, we shall give the CDFW prompt notice that the demand for payment was not effected in accordance with the terms and conditions of this Credit, state the reasons therefore, and await further instruction.

9. Upon being notified that the demand for payment was not effected in conformity with the Credit, the CDFW may correct any such non-conforming demand for payment under the terms and conditions stated herein.

10. All drawings under this Credit shall be paid with our funds. Each drawing honored by us hereunder shall reduce, *pro tanto*, the Principal Sum. By paying to the CDFW an amount demanded in accordance herewith, we make no representations as to the correctness of the amount demanded.

11. This Credit will be cancelled upon receipt by us of Certificate of Cancellation, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of the CDFW, as defined in paragraph 12 below.

12. An "Authorized Representative" shall mean either the Director of the Department of Fish and Wildlife, the General Counsel of the Department of Fish and Wildlife, or a Regional Manager of the Department of Fish and Wildlife.

13. This Credit shall be automatically extended without amendment for additional periods of one year from the present or any future expiration date hereof, unless at least sixty (60) days prior to any such date, we notify the CDFW in writing by registered mail, return receipt requested, or by overnight courier that we elect not to consider this Credit extended for any such period.

14. Communications with respect to this Credit shall be in writing and addressed to us at [**name and address of *financial institution***], specifically referring upon such writing to this credit by number. The address for notices with respect to this Credit shall be: (i) for the CDFW: Department of Fish and Wildlife, Habitat Conservation Planning Branch, 1416 Ninth Street, 12th Floor, Sacramento, California 95814-2090 Attn: HCPB Mitigation Account Coordinator; and (ii) for the Applicant: [***name and address of applicant***].

15. This Credit may not be transferred.

16. This Credit is subject to the International Standby Practices 1998 ("ISP 98"). As to matters not covered by the ISP 98 and to the extent not inconsistent with the ISP 98, this credit shall be governed by and construed in accordance with the Uniform Commercial Code, Article 5 of the State of California.

17. This Credit shall, if not canceled, expire on [***expiration date***], or any extended expiration date.

18. We hereby agree with the CDFW that documents presented in compliance with the terms of this Credit will be duly honored upon presentation, as specified herein.

19. This Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Credit is referred to or to which this Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

[***Name of financial institution****]*

By: _____
Name: _____
Title: _____

ATTACHMENT A

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [***Number issued by financial institution***]
CERTIFICATE FOR DRAWING

To:

[***Name and address of financial institution]***

Re: Incidental Take Permit No. [***permit number***]

The undersigned, a duly Authorized Representative of the California Department of Fish and Wildlife("CDFW"), as defined in paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [***Insert one of the following statements:*** "In the opinion of the CDFW, the Applicant has failed to complete the Mitigation Requirements referenced in paragraph 3 of the Credit." ***or*** "As set forth in paragraph 13, the Issuer has informed the CDFW that the Credit will not be extended and the Applicant has not provided the CDFW with an equivalent security approved by the CDFW to replace the Credit."]

2. The undersigned is authorized under the terms of the Credit to present this Certificate as the sole means of demanding payment on the Credit.

3. The CDFW is therefore making a drawing under the Credit in amount of U.S. $_____.

4. The amount demanded does not exceed the Principal Sum of the Credit.

Therefore, the CDFW has executed and delivered this Certificate as of the ___day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____
[Insert one of the following: "DIRECTOR" ***or*** "GENERAL COUNSEL" ***or*** "REGIONAL MANAGER, [***NAME OF REGIONAL OFFICE***]"]

ATTACHMENT B

IRREVOCABLE LETTER OF CREDIT NO. [***Number issued by financial institution***]
CERTIFICATE FOR CANCELLATION

To:

[***Name of financial institution and address***]

Re: Incidental Take Permit No. [***permit number***]

The undersigned, a duly Authorized Representative of the California Department of Fish and Wildlife("CDFW"), as defined in the paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [***Insert one of the following statements:*** "The Applicant has presented documentary evidence of full compliance with the Mitigation Requirements referenced in paragraph 3 of the Credit." ***or*** "The natural expiration of this Credit has occurred."]

2. The CDFW therefore requests the cancellation of the Credit.

Therefore, the CDFW has executed and delivered this Certificate for Cancellation as of the ____ day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____
[Insert one of the following: "DIRECTOR" ***or*** "GENERAL COUNSEL" ***or*** "REGIONAL MANAGER, [***NAME OF REGIONAL OFFICE***]"]

California Department of Fish and Wildlife

Mitigation Payment Transmittal Form

Project Applicant Instructions: Please fill out and attach this form to payment. For conservation banks, also attach the Bill(s) of Sale for credits sold. One form may be used for multiple transactions, **BUT YOU MUST USE A SEPARATE FORM FOR EACH CHECK YOU TRANSMIT**. Make sure to include Project Name, Project Tracking Number, and FASB Mitigation Tracking Number (if available) on the attached payment type.

(1) **DATE:** _____

TO: _____
[CDFW Regional Manager]

_____
[CDFW Regional Office Address]

(2) **FROM:** _____
Name

_____
Mailing Address

_____
City, State, Zip

_____
Telephone Number/FAX Number

(3) **RE:** _____
[Project Name as appears on permit/agreement]

(4) **AGREEMENT/ACCOUNT INFORMATION:**
(Check the applicable type)

☐ 2081 Permit ☐ Conservation Bank ☐ 1802 Agreement

☐ 2835 NCCP ☐ Other _____

_____
[Project Tracking Number]

_____
[FASB Mitigation Tracking Number (if available)]

Index _____ PCA _____

(5) PAYMENT TYPE (One check per form only): The following funds are being remitted in connection with the above referenced project:

Check information:

Total $_____ Check No. _____

Account No._____ Bank Routing No. _____

a. Endowment: for Long-Term Management Subtotal $_____

b. Habitat Enhancement Subtotal $_____

c. Security:

1. Cash Refundable Security Deposit Subtotal $_____
2. Letter of Credit Subtotal $_____

1. Financial Institution: _____
2. Letter of Credit Number: _____
3. Date of Expiration: _____

November 4, 2021

In the Matter of Water Quality Certification for the Fulton Road Widening Project

APPLICANT:	City of Santa Rosa
RECEIVING WATER:	Peterson Creek and Forestview Creeks and wetlands
HYDROLOGIC UNIT:	Middle Russian River 114.22
COUNTY:	Sonoma
FILE NAME:	Fulton Road Widening Project; ECM PIN CW-869577 WDID 1B20197WNSO

FINDINGS BY THE EXECUTIVE OFFICER:

1. On October 6, 2020, Brian Bacciarini of GHD on behalf of Jason Nutt of the City of Santa Rosa (applicant) filed a draft copy of an application for water quality certification (certification) under section 401 of the Clean Water Act (33 U.S.C. § 1341) with the North Coast Regional Water Quality Control Board (Regional Water Board) for activities associated with the Fulton Road Widening Project (project) and requested a pre-filing meeting. The draft application was deemed complete on October 5, 2021. In accordance with the 2020 Certification Rule, the applicant filed a formal request for certification action within a reasonable time period and a complete application on October 6, 2021. The project is located on Fulton Road between Guerneville Road and Piner Road.

2. **Public Notice:** The Regional Water Board provided public notice of the application pursuant to Title 23, California Code of Regulations, Section 3858 on March 23, 2021, and posted information describing the project on the Regional Water Board's website. No comments were received.

3. **Receiving Waters:** The proposed project will cause disturbances to seasonal wetlands, a roadside wetland channel, Peterson Creek, Forestview Creek, and roadside non-wetland ditches tributary to Santa Rosa Creek in the Middle Russian River Hydrologic sub-area (114.22).

4. **Project Description:** The purpose is to reconstruct and rehabilitate Fulton Road between Guerneville Road and Piner Road to a four-lane regional/arterial street as envisioned in the Santa Rosa General Plan. The project will increase the safety of cyclists and resolve congestion on one of the city's main corridors. The project will increase the number of travel lanes, add a bicycle lane, and sidewalks to both sides of Fulton Road. Approximately 0.88 acre of new impervious area will result from the widening and improvements along the entire length of the project.

   The project will involve demolition, clearing, excavation, grading, trenching, paving, and roadway construction. The construction area for the project is approximately 12.5 acres. The majority of the widening will occur along the west side of Fulton Road.

   Existing storm drainpipes that discharge to Forestview Creek will be reconstructed. Two existing 41-inch by 72-inch corrugated metal oval storm drainpipes will be replaced with a box culvert system. An existing 42-inch storm drain and a 30-inch storm drain will connect to the box culvert on either side. Rock slope protection will be placed in the channel to approximately 10-feet beyond the end of the pipes.

   The project will extend two existing 60-inch diameter stormwater culverts in Peterson Creek by approximately 5-10 feet and replace a roadside ditch draining to Peterson Creek with a new 36-inch storm drainpipe. Rock slope protection would be placed within the Peterson Creek channel to approximately 15 feet beyond the end of the pipes. Stormwater improvements also include installation of additional short segments of pipe along certain sections of the corridor and new and reconstructed storm drain catch basins, drop inlets, and manholes.

5. **Construction Timing:** Construction is anticipated to occur between 2021 and 2023 and take approximately 24 months to complete.

6. **Project Impacts:** Permanent impacts to seasonal wetlands and jurisdictional ditches totals 0.17 acre. Permanent impacts to streams total 0.04 acre. Temporary impacts to streams total 0.03 acre.

7. **Mitigation for Project Impacts:** Compensatory mitigation for impacts to seasonal wetlands and wetland ditches has been provided by the purchase of 0.2 acre of wetland creation credits from Hazel Mitigation Bank. Compensatory mitigation for impacts to streams includes 0.32 acre of enhancement of 705 linear feet of Peterson Creek riparian habitat. Approximately 89 trees and 120 shrubs will be planted per the Riparian Habitat Mitigation Plan prepared by Jane Valerius Environmental Consulting.

8. **Project Tracking:** It has been determined through regional, state, and national studies that tracking of mitigation and restoration projects must be improved to better assess their performance. In addition, to effectively carry out the state's Wetlands Conservation Policy of no net loss to wetlands, the state needs to closely track both

aquatic habitat losses and the success of mitigation and restoration projects. Therefore, this certification requires the Applicant to upload impact totals and mitigation measures to a web-based project tracking system called "EcoAtlas" using the "Project Tracker" form, which can be found here: http://ptrack.ecoatlas.org. Instructions and how to request a username and password are on the Project Tracker website. More information about EcoAtlas is available at: www.ecoatlas.org.

9. **Disturbed Soil Area:** This Order does not provide coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ; NPDES No. CAS000002) (Construction General Permit).

10. **Stormwater Control and Treatment:** Project implementation will create or reconstruct approximately 11.26 acres of impervious surface. Stormwater control requirements cannot be met on-site because LID feature placement is constrained by existing conditions including street improvements, utilities, and drainage infrastructure. Additionally, some existing and proposed runoff in the project area will drain off-site and cannot be directed to LID features.

    The Applicant will install a bioretention basin at the city's corporation yard at 55 Stony Point Road to control stormwater runoff from 89,830 square feet of impervious tributary area that is not being controlled on-site. Final design of the off-site bioretention basin will be reviewed and approved as a condition of this certification.

11. **Other Agency Actions:** The Applicant has applied to the United States Army Corps of Engineers for Nationwide Permit 14, *Linear Transportation Projects*, pursuant to section 404 of the Clean Water Act. The applicant has also submitted a section 1600 Notification of Lake or Streambed Alteration to the California Department of Fish and Wildlife.

12. This Order does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Wildlife Code, sections 2050-2097) or the federal Endangered Species Act (16 U.S.C. sections 1531-1544). If a "take" will result from any act authorized under this Order held by the discharger, the discharger must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The discharger is responsible for meeting all requirements of the applicable endangered species act for the Project authorized under this Order.

13. **CEQA Compliance:** As lead agency, the City of Santa Rosa certified a Mitigated Negative Declaration (SCH 2017062057) on October 27, 2017, pursuant to the requirements of the California Environmental Quality Act (CEQA).

14. **Antidegradation Policy:** The federal antidegradation policy requires that state water quality standards include an antidegradation policy consistent with the federal policy.

The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing high-quality waters be maintained unless degradation is justified under specific provisions. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. This Certification is consistent with applicable federal and state antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater and does not otherwise authorize degradation of the waters affected by this project.

15. Notwithstanding any determinations by the U.S. Army Corps or other federal agency made pursuant to 40 C.F.R. section 121.9, dischargers must comply with the entirety of this certification because this discharge is also regulated under State Water Resources Control Board Order 2003-0017-DWQ, *General Waste Discharge Requirements for Dredge and Fill Discharges that have Received State Water Quality Certification*, which requires compliance with all conditions of this water quality certification. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf

Permanent Impacts:	0.21 acre
Temporary Impacts:	0.03 acre
Latitude/Longitude:	38.462967° N/ 122.769703° W
Certification Expiration:	November 4, 2026

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Fulton Road Widening Project (WDID 1B20197WNSO), as described in the application, will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the applicant complies with the following terms and conditions:

All conditions of this Certification apply to the applicant (and all their employees) and all contractors (and their employees), sub-contractors (and their employees), and any other entity or agency that performs activities or work on the project as related to this water quality certification.

Project-Specific Conditions

1. The Applicant shall implement the *Riparian Habitat Mitigation Plan for the Fulton Road Widening Improvement Project*, dated December 2020, prepared by Jane Valerius Environmental Consulting (CCR Title 23 section 3013, section 3861(d), Dredge or Fill Procedures section IV. A.2(d) & B.4).

2. Mitigation success shall be subject to the review and acceptance by Regional Water Board staff and shall not be considered successful until a minimum of five years of monitoring has occurred. Plants shall not be considered successful until irrigation has been terminated for a minimum of two years (CCR Title 23 section 3013).

3. Within 30 days of issuance of this Order, the Applicant shall upload Project information to EcoAtlas using the "Project Tracker" form found at the following website: http://ptrack.ecoatlas.org/. Required information includes a Project map that may either be uploaded to EcoAtlas or created within EcoAtlas by using the "draw polygon" tool (CA Water Code section 13267).

4. The Applicant shall implement the final stormwater low impact development plan (SWLID) with no significant deviation from the draft SWLID prepared by GHD submitted with the 401 application (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), CA Water Code section 13369, CCR section 3861(d)(2)).

5. The mitigation measures detailed in the Mitigated Negative Declaration (SCH 2017062057) are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, the applicant shall comply with all mitigation measures identified in the Mitigated Negative Declaration that are within the Regional Water Board's jurisdiction (CA Water Code section 13369, CCR section 3861(d)(2)).

Project Specific Conditions Requiring Reports

6. The applicant shall report on the success of the compensatory mitigation for a minimum of five years. Reports shall document the success of plantings and development of shade and riparian vegetative function. The applicant shall send reports to the Regional Water Board by January 31 annually (CA Water Code section 13267, CCR Title 23 section 3013).

7. Regional Water Board staff shall be notified in writing at least five working days prior to the commencement of ground disturbing activities, with details regarding the construction schedule, in order to allow staff to be present onsite during construction, and to answer any public inquiries that may arise regarding the project (CA Water Code section 13267).

8. A Preliminary Stormwater Low Impact Development (SWLID) Report consistent with the requirements of the Phase I municipal general stormwater permit (Phase I MS4 permit in the North Coast Region, Order No. R1-2015-0030) was submitted on October 28, 2021. The Final City of Santa Rosa-approved SWLID Report and modifications thereof shall be submitted to the Regional Water Board no later than two weeks from the lead agency approval date. A letter describing any revision or deviation from the Preliminary/Initial or Final SWLID shall accompany the submittal (CA Water Code section 13267).

9. The City shall install a bioretention basin at 55 Stony Point Road to control stormwater runoff from no less than 89,830 square feet of impervious area. The proposed final design of the bioretention basin shall be submitted for review and approval by Regional Water Board staff prior to project construction (CA Water Code section 13267).

Standard Conditions

10. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.

11. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

12. The validity of this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the applicant.

13. A complete fee of $4,517, (Category A, Fill & Excavation Discharges), was received on October 12, 2020. This Certification will be subject to annual billing while the project is constructed and monitored, per the fee schedule that is current at the time of annual billing. Currently the annual fee is $1,736; the annual fee is expected to increase every year. The fee calculator may be found at: https://www.waterboards.ca.gov/resources/fees/water_quality/docs/dredgefillcalculator.xlsm

    Annual fees will be automatically invoiced to the Applicant. **The applicant must notify the Regional Water Board at project and/or mitigation completion with a final report in order to request to terminate annual billing. Notification should be sent to the staff listed at the bottom of this Order and to** Northcoast@waterboards.ca.gov**.** Regional Water Board staff will verify conditions of the Certification have been met and may request a site visit at that time to confirm status of Project and compliance with this Certification (CCR Title 23, sections 3833(b)(3) and 2200(a)(3), CA Water Code section 13267(c)).

14. This certification does not authorize drafting of surface waters. Any drafting of surface waters shall be in compliance with state water rights law and diversion requirements overseen by the State Water Resources Control Board's Division of Water Rights (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), CA Water Code section 13369, CCR section 3861(d)(2)).

15. Only wildlife-friendly, 100 percent biodegradable erosion and sediment control products that will not entrap or harm wildlife shall be used. Erosion and sediment control products shall not contain synthetic (e.g., plastic or nylon) netting. Photodegradable synthetic products are not considered biodegradable. The applicant shall request approval from the Regional Water Board if an exception from this requirement is needed for a specific location (Water Quality Control Plan for the North Coast Region, Section 4.2.1, State Board Resolution No. 68-16).

16. Only 100 percent biodegradable geotextiles shall be used for permanent applications within waters of the state unless explicitly approved for specific purposes in the project design (CCR Title 23 section 3861(d), Water Quality Control Plan for the North Coast Region, Section 4.2.1, State Board Resolution No. 68-16).

17. Best management practices (BMPs) shall be implemented according to the submitted application and the conditions in this certification. BMPs for erosion, sediment, and turbidity control shall be implemented and in place at commencement of, during, and after any ground clearing activities or any other project activities that could result in erosion or sediment discharges to surface water. BMPs shall be immediately available for deployment at all times to prevent discharges to waters of the state (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), CA Water Code section 13369, CCR section 3861(d)(2)).

18. The applicant is prohibited from discharging waste to waters of the state, unless explicitly authorized by this certification. For example, no debris, soil, silt, sand, bark, slash, sawdust, cement or concrete washings, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, other than that authorized by this Certification, shall be allowed to enter into or be placed where it may be washed by rainfall into waters of the state. When operations are completed, any excess material or debris shall be removed from the work area (Water Quality Control Plan for the North Coast Region, section 4.2.1).

19. The Applicant is liable and responsible for the proper disposal, reuse, and/or recycling of all Project-generated waste in compliance with applicable state and federal laws and regulations (CA Water Code sections 13271 and 13369, CCR section 3861(d)(2)).

20. The applicant shall provide Regional Water Board staff access to the project site to document compliance with this certification (CA Water Code section 13267(c)).

21. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), Water Code section 13369, Water Quality Control Plan for the North Coast Region, section 3.3.16).

22. If, at any time, an unauthorized discharge to surface water (including wetlands, lakes, rivers, or streams) occurs, or any water quality problem arises, the associated

project activities shall cease immediately until adequate BMPs are implemented including stopping work. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises (CA Water Code sections 13385, 13267).

23. All project activities shall be implemented as described in the submitted certification application package and the findings and conditions of this certification. Subsequent project changes that could significantly impact water quality shall first be submitted to Regional Water Board staff for prior review, consideration, and written concurrence. If the Regional Water Board is not notified of a significant alteration to the project, it will be considered a violation of this certification, and the applicant may be subject to Regional Water Board enforcement actions (CA Water Code section 13264).

24. Prior to implementing any change to the project that may be a material change as defined in California Water Code section 13260(c) as a proposed change in character, location, or volume of the discharge, the applicant shall obtain prior written approval of the Regional Water Board Executive Officer. If the Regional Water Board is not notified of the material change to the discharge, it will be considered a violation of this certification, and the applicant may be subject to Regional Water Board enforcement action(s) (CA Water Code section 13264).

25. The applicant shall provide a copy of this Certification and State Water Board Order 2003-0017-DWQ to any contractor(s), subcontractor(s), and utility company(ies) conducting work on the project and shall require that copies remain in their possession at the work site. The applicant shall be responsible for ensuring that all work conducted by its contractor(s), subcontractor(s), and utility companies is performed in accordance with the information provided by the applicant to the Regional Water Board (CA Water Code sections 13170 or 13245).

26. Disturbance or removal of existing vegetation as detailed within the application shall not exceed the minimum necessary to complete the project (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), Water Code sections 13264 and 13369).

27. Fueling, lubrication, maintenance, storage, and staging of vehicles and equipment shall not result in a discharge or threatened discharge to any waters of the state including dry portions of creeks or wetlands. At no time shall the applicant or its contractors allow use of any vehicle or equipment that leaks any substance that may impact water quality (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), Water Code section 13369, Water Quality Control Plan for the North Coast Region, section 3.3.16).

28. The Applicant shall not use leaking vehicles or equipment within state waters or riparian areas. Vehicles and equipment used within state waters shall be checked for leaks at the beginning of each work day (State Board Resolution No. 68-16, 40 CFR Part 131.12 (a)(1), Water Code section 13369, Water Quality Control Plan for the North Coast Region, section 3.3.16).

29. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401 (d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification. In response to a suspected violation of any condition of this certification, the Regional Water Board may require the holder of any federal permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the Regional Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Certification, the Regional Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance pursuant to Section 13267 of the Porter-Cologne Water Quality Control Act (CA Water Code sections 13385, 13267).

30. The Regional Water Board may add to or modify the conditions of this Certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted and approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act (CA Water Code section 13330, and CCR title 23 chapter 28, Article 6 commencing with section 3867).

31. In the event of any change in control of ownership of land presently owned or controlled by the applicant, the applicant shall notify the successor-in-interest of the existence of this certification by letter and shall email a copy of the letter to the Regional Water Board (CA Water Code section 13264) at the following email address: NorthCoast@waterboards.ca.gov.

    The successor-in-interest shall email the Regional Water Board Executive Officer at: NorthCoast@waterboards.ca.gov to request authorization to discharge dredged or fill material under this certification. The request must contain the following:

    i) Effective date of ownership change;
    ii) Requesting entity's full legal name;
    iii) The state of incorporation, if a corporation;
    iv) The address and phone number of contact person; and
    v) A description of any changes to the Project or confirmation that the successor-in-interest intends to implement the project as described in this certification.

32. Except as may be modified by any preceding conditions, all certification actions are contingent on:

i) the discharge being limited to and all proposed mitigation being completed in strict compliance with the applicant's Project description (CA Water Code section 13264), and

ii) compliance with all applicable requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan).

33. The authorization of this certification for any dredge and fill activities expires on November 4, 2026. Conditions and monitoring requirements outlined in this Certification are not subject to the expiration date outlined above and remain in full effect and are enforceable to ensure compliance with water quality objectives adopted or approved under Sections 13170 or 13245 of the CA Water Code.

Conditions 6 - 9 are requirements for information and reports. Any requirement for a report made as a condition to this certification is a formal requirement pursuant to California Water Code section 13267, and failure or refusal to provide, or falsification of such required report is subject to civil liability as described in California Water Code, section 13268.

If you have any questions or comments, please contact Kaete King of my staff, at (707) 576-2848, or via e-mail at Kaete.King@waterboards.ca.gov.

_____

Matthias St. John
Executive Officer

211104_KRK_dp_Fulton_Road_401

Original to: City of Santa Rosa, Attn: Jason Nutt, Assistant City Manager, 69 Stony Circle, Santa Rosa, CA 95401, jnutt@srcity.org

cc: State Water Resources Control Board, Stateboard401@waterboards.ca.gov
EPA Region 9, R9cwa401@epa.gov
North Branch Chief, ACOE, CESPN-Regulatory-Info@usace.army.mil
Jayme Ohlhaver, ACOE, Jayme.A.Ohlhaver@usace.army.mil
James Hansen, CDFW, James.Hansen@Wildlife.ca.gov
Brian Bacciarini, GHD, Brian.Bacciarini@GHD.com
Haley Cahill, GHD, Haley.Cahill@ghd.com

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

December 22, 2021

Regulatory Division

Subject: File Number SPN-2017-00465

Ms. Haley Cahill
GHD
655 Montgomery Street, Suite 1010
San Francisco, CA, 94111
haley.cahill@ghd.com

Dear Ms. Cahill:

This correspondence is in reference to your submittal of October 20, 2020, on behalf of the City of Santa Rosa, concerning Department of the Army (DA) authorization to reconstruct, rehabilitate, and widen Fulton Road to a four-lane street, located along an approximately one mile stretch of Fulton Road between Guerneville Road to the south and Piner Road to the north, in the City of Santa Rosa, Sonoma County, California (Lat/Long: 38.462967, -122.76970).

Work within U.S. Army Corps of Engineers' (Corps) jurisdiction will include contouring and paving to widen 1 mile of the west side of Fulton Road, box culvert improvements in Peterson Creek, reconfiguration of the current storm drain system, and box culvert improvements and removal of 93 square feet of existing retaining wall fill in Forestview Creek. Work will result in temporary impacts from construction to 0.013 acre of other waters of the U.S. (0.008 acre of Peterson Creek and 0.005 acre of Forestview Creek). Proposed work will also result in a discharge of 199.5 cubic yards (CY) of permanent fill in 0.14 acres of wetland waters of the U.S and 99.8 CY of permanent fill in 0.044 acre of other waters of the U.S. All work would be completed in accordance with the plans and drawings titled "USACE File #: USACE FILE # SPN-2017-00465 Fulton Road Widening Project," consisting of 47 sheets, dated November 6, 2021 provided as enclosure 1.

Section 404 of the Clean Water Act (CWA) generally regulates the discharge of dredged or fill material below the plane of ordinary high water in non-tidal waters of the United States, below the high tide line in tidal waters of the United States, and within the lateral extent of wetlands adjacent to these waters. Section 10 of the Rivers and Harbors Act (RHA) generally regulates construction of structures and work, including excavation, dredging, and discharges of dredged or fill material occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States. Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

Based on a review of the information in your submittal, the project qualifies for authorization under Department of the Army Nationwide Permit (NWP) 14 for Linear Transportation Projects (82 Fed. Reg. 1860, January 6, 2017), pursuant to Section 404 of the CWA of 1972, as amended (33 U.S.C. § 1344 *et seq*.). The project must be in compliance with the terms of the NWP cited on our website (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_14.pdf), the general conditions of the Nationwide Permit Program (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_GC.pdf), and the San Francisco District regional conditions (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_RC.pdf). You must also be in compliance with any special conditions specified in this letter for the NWP authorization to remain valid. Non-compliance with any term or condition could result in the revocation of the NWP authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This NWP authorization does not obviate the need to obtain other State or local approvals required by law.

This verification will remain valid until March 18, 2022, unless the NWP authorization is modified, suspended, or revoked. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon a NWP will remain authorized provided the activity is completed within 12 months of the date of a NWP's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 C.F.R. § 330.4(e) and 33 C.F.R. § 330.5(c) or (d). This verification will remain valid if, during the time period between now and March 18, 2022, the activity complies with any subsequent modification of the NWP authorization. The Chief of Engineers will periodically review NWPs and their conditions and will decide to modify, reissue, or revoke the permits. If a NWP is not modified or reissued within five years of its effective date, it automatically expires and becomes null and void. It is incumbent upon you to remain informed of any changes to the NWPs. Changes to the NWPs would be announced by Public Notice posted on our website (www.spn.usace.army.mil/Missions/Regulatory/Public-Notices.aspx). Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, enclosure 2, verifying that you have complied with the terms and conditions of the permit.

You shall comply with all terms and conditions set forth by the "In the Matter of Water Quality Certification for the Fulton Road Widening Project," issued by the North Coast Regional Water Quality Control Board on November 4, 2021 (enclosure 3). You shall consider such conditions to be an integral part of the NWP authorization for your project.

General Condition 18 stipulates that project authorization under a NWP does not allow for the incidental take of any federally-listed species in the absence of a biological opinion (BO) with incidental take provisions. As the principal federal lead agency for this project, the Corps initiated consultation with the United States Fish and Wildlife Service (USFWS) to address project related impacts to listed species, pursuant to Section 7(a) of the Endangered Species Act of 1973, as amended,16 U.S.C. § 1531 *et seq*. By letter of May 3, 2021, USFWS issued a BO (08ESMF00-2021-F-1199), cited in enclosure 4, with an incidental take statement for Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and California tiger salamander (*Ambystoma californiense*).

In order to ensure compliance with this NWP authorization, the following special conditions shall be implemented:

1. To mitigate for permanent impacts to 0.14 acre of jurisdictional wetlands, you shall purchase at least 0.2 acre of wetland mitigation credits from the Hazel Mitigation Bank. A copy of the bank receipt must be submitted to and acknowledged by the Corps in writing prior to the commencement of any work impacting wetlands or other waters of the U.S. Failure to purchase mitigation credits or provide the Corps with a copy of the bank receipt shall constitute permit non-compliance.

2. To remain exempt from the prohibitions of Section 9 of the Endangered Species Act, the non-discretionary Terms and Conditions for incidental take of federally-listed Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and California tiger salamander (*Ambystoma californiense*) shall be fully implemented as stipulated in the Biological Opinion(s) titled "Formal Consultation on the Fulton Road Widening Project, Sonoma County) Coprs File #: SPN-2017-00465)" (page 6), dated May 3, 2021 (enclosure 4). Project authorization under the NWP is conditional upon compliance with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a take of a federally-listed species occurs, would constitute an unauthorized take and non-compliance with the NWP authorization for your project. The USFWS is, however, the authoritative federal agency for determining compliance with the incidental take statement and for initiating appropriate enforcement actions or penalties under the Endangered Species Act.

3. To minimize potential impacts to cultural resources, the applicant shall contact the Federated Indians of Graton Rancheria and work with the Tribe to establish a Tribal Monitoring Agreement. A copy of this agreement, signed by both the applicant and the Tribe, shall be mailed to the Army Corps of Engineers prior to the start of any

ground-disturbing activities. The applicant shall comply with all conditions of the Tribal Monitoring Agreement, and the agreement shall be incorporated by reference into this permit (Corps File #: SPN-2017-00465).

Should any buried archaeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archaeological indicators include: obsidian and chert flakes, and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars, and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps, and old trails. The Corps and the Tribal Historic Preservation Officer of the Federated Indians of Graton Rancheria shall be notified of the discovery and a professional archaeologist shall be retained by the permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Corps for approval, and project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Corps.

You may refer any questions on this matter to Jayme Ohlhaver of the Regulatory staff by telephone at (415)-503-6843 or by e-mail at jayme.a.ohlhaver@usace.army.mil. All correspondence should be addressed to the Regulatory Division, North Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: http://www.spn.usace.army.mil/Missions/Regulatory.aspx

Sincerely,

L. Kasey Sirkin

L. Kasey Sirkin
Lead Biologist, Regulatory Division

Enclosures

Copy Furnished (w/ encls):

City of Santa Rosa, Jason Nutt, jnutt@srcity.org
RWQCB, Kaete King, kaete.king@waterboards.ca.gov
USFWS, Vincent Griego, vincent_griego@fws.gov

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
EPA-1: Geotechnical Design As part of the project design process, a California-registered Geotechnical Engineer was engaged to conduct a design-level geotechnical study for the project. The project will be designed and constructed in compliance with the site-specific recommendations made in the project's geotechnical report. This will include design in accordance with recommendations for site preparation, grading, stripping, excavations, fill quality and placement, pavement sections, asphalt overlay, compactions, moisture barriers, and other factors. The geotechnical recommendations will be incorporated into the final plans and specifications for the project, and will be implemented during construction.	Incorporate recommendations into final plans and specifications.	City of Santa Rosa	Verify all geotechnical study design recommendations are incorporated into 90% plan set.	
EPA-2: Implement Air Quality Control Measures during Construction To limit dust, criteria pollutants, and precursor emissions associated with the construction activity, the following Bay Area Air Quality Management District (BAAQMD) recommended Basic Construction Measures will be included in construction contract specifications and required during implementation of the project: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day; • All haul trucks transporting soil, sand, or other loose material off-site shall be covered or shall have at least two feet of freeboard; • All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited; • All vehicle speeds on unpaved areas shall be limited to 15 miles per hour; • All paving shall be completed as soon as possible after trenching work is finished; • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points; • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation; • A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in 90% specifications. Check daily jobsite compliance as necessary.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
EPA-3: Implement Climate Action Plan Measures To ensure that the project is consistent with the Santa Rosa Climate Action Plan, the following measures shall be incorporated into the project design and/or be implemented during construction. • Cool paving materials shall be used for new sidewalks and crosswalks associated with the project. • Construction vehicle idling times shall be minimized by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage shall be provided to remind contractors of idling restrictions. • Construction equipment shall be maintained in accordance with manufacturer's specifications. • The contractor shall be required to implement one of the following measures, as feasible and appropriate to the construction project: o Substitute electrified equipment for diesel- and gasoline-powered equipment where practical. o Use alternative fuels for construction equipment onsite, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel. o Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in 90% specifications. Check daily jobsite compliance as necessary.	
AES-1: Minimize Temporary Visual Impacts The City shall avoid or substantially lessen impacts by reducing construction disturbance. Measures shall include: • The size of construction zones and staging areas shall be the minimum operable size. The location of such zones shall be adjusted to minimize the visual impacts. • To the extent feasible, alignments and locations of facilities shall be adjusted to avoid visually sensitive features and conditions that would result in major landform alteration or mature landscape removal. • During construction, temporary fencing with green fabric screen or similar screening shall be placed around primary staging areas to limit the prominence of views of construction equipment and associated construction materials. • The City shall restore or revegetate staging areas disturbed or scarred by construction activities, including restoring pre-project topographic features and reseeding with species comparable to those removed or disturbed during construction.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in 90% specifications. Check daily jobsite compliance as necessary. Verify success of replacement vegetation annually for three years after project completion.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
AES-2: Avoid Glare and Light Trespass from Nighttime Construction Lighting The City shall require the contractor to prepare and implement a Nighttime Construction Lighting Plan for any nighttime work so as to avoid glare that would be a hazard to vehicles and to avoid light trespass onto adjacent residential uses. The lighting plan shall be developed to guide the use of lighting during project construction in such a way as to effectively light the work area while limiting light spill onto adjoining property. The Plan shall adequately describe the work including, but not be limited to, the layout of lighting equipment necessary for all work to be completed at night and descriptions of hardware, including hoods, louvers, shields or other means to be used to control glare and light trespass onto adjoining property. Lighting systems with flood, spot, or stadium type luminaires shall be aimed downward at the work.	Incorporate into final plans and specifications. Prepare Nighttime Construction Lighting Plan	City of Santa Rosa	Verify in 90% specifications. Verify compliance with Nighttime Construction Lighting Plan prior to any work that requires lighting.	
AES-3: Minimize Glare from LED Street Lights The City shall minimize glare from LED street light designs along the roadway. This may include, but not necessarily be limited to, the following: • Control blue-rich lighting by using the lowest emission of blue light possible to reduce glare, with a color temperature of no greater than 3000 Kelvin (K). • Utilization of shielding to minimize glare; • Utilization of LED lighting with the ability to be dimmed for off-peak time periods.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in 90% specifications.	
BIO-1: Avoid Loss of Sensitive Plant Species The City shall retain a qualified biologist to complete focused surveys for Sonoma sunshine, Burke's goldfields, and Sebastopol meadowfoam in accordance with USFWS protocols developed for the Santa Rosa Plain. This includes two years of focused spring plant surveys in March, April, and May. In accordance with the established guidelines and procedures for mitigating impacts to the three listed vernal pool plants and their habitat, if no listed plants are found during plant surveys then the mitigation ratio shall be 1.5:1 for loss of potential habitat (i.e., seasonal wetland). If listed species are found within the project area and will be impacted, the mitigation ratio shall be 3:1. The City shall purchase credits in an approved mitigation bank within the Santa Rosa Plain.	Conduct floristic surveys for Santa Rosa Plain botanical species. Purchase necessary credits dependent on results of surveys.	City of Santa Rosa	Verify surveys are conducted according to USFWS protocols. Calculate and purchase credits prior to construction in areas with potential habitat.	
BIO-2: Protect California Tiger Salamander Mitigation for impacts to California Tiger Salamander (CTS) habitat shall be as stipulated in the Santa Rosa Plain Conservation Strategy (USFWS 2005) or any subsequent guidance adopted by USFWS. To prevent loss of CTS habitat within the Santa Rosa Plain, the (United States Fish and Wildlife Service) USFWS and California Department of Fish and Wildlife (CDFW) require that mitigation lands be purchased for the acreage that is being impacted, or that land be conserved in accordance with the USFWS Santa Rosa Plain Conservation Strategy.	Quantify and map the acreage of CTS habitat that the project would impact. Purchase mitigation credits prior to construction, or	City of Santa Rosa	Calculate and purchase credits prior to construction in areas with potential habitat. Verify minimization measures in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
Prior to project construction, a qualified biologist shall quantify and map the acreage of CTS habitat that the project would impact. Because the project is located more than 2,200 feet but within 1.3 miles of a known breeding site, the City shall compensate for loss of CTS habitat by purchasing mitigation credits at a ratio of 1:1 or as required by USFWS and CDFW. The mitigation shall be purchased from a mitigation bank that is within the Critical Habitat for the species. Alternatively, the City may conserve land in accordance with the USFWS Santa Rosa Plain Conservation Strategy. Initial ground disturbing construction activities in habitat shall be limited to the dry season (June through October) when salamanders are not moving between terrestrial habitat and aquatic breeding habitat. Minimization measures contained in Section 5.2 (Minimization Measures) of the Santa Rosa Plain Conservation Strategy (USFWS 2005) or any subsequent guidance adopted by the USFWS shall be implemented during work within areas where California tiger salamanders may occur. These include: • A USFWS-approved biological monitor will be on site each day during initial site grading. • The biological monitor will conduct a training session for all construction workers before work begins on the project. • Before the start of work each morning, the biological monitor will check for CTS under any equipment such as vehicles and stored pipes. The biological monitor will check all excavated steep-walled holes or trenches greater than one foot deep for any CTS. Any CTS found will be removed by the biological monitor and translocated under approval by the USFWS. • An erosion and sediment control plan will be implemented to prevent impacts of wetland restoration and construction on habitat outside the work areas. • Access routes and number and size of staging and work areas will be limited to the minimum necessary to achieve the project goals. Routes and boundaries of the roadwork will be clearly marked prior to initiating construction/grading. • All foods and food-related trash items will be enclosed in sealed trash containers at the end of each day, and removed completely from the site once every three days. • No pets will be allowed anywhere in the project site during construction. • A speed limit of 15 mph on dirt roads will be maintained, if applicable. • All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents. • Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All	conserve land in accordance with SRP Conservation Strategy. Incorporate minimization measures and recommendations into specifications. Retain a qualified biological monitor for the duration of project construction. Develop an erosion and sediment control plan as noted.		Conduct surveys / assessments as noted. Verify success of replacement vegetation annually for three years after project completion.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
fueling and maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any aquatic habitat. • Grading and clearing will typically be conducted between April 15 and October 15, of any given year, depending on the level of rainfall and/or site conditions. • Project areas temporarily disturbed by construction activities will be revegetated. • If CTS are found, the City shall coordinate with the USFWS and CDFW to prevent take of individuals and mitigate for loss of habitat.				
BIO-3: Protect Western Pond Turtle Where work occurs within a creek, or where construction activities are located within 250 feet of a water body, the City shall ensure that preconstruction surveys for the western pond turtle are conducted by a qualified biologist. If western pond turtles are found during preconstruction surveys, CDFW shall be notified and individuals shall be captured by a qualified biologist and relocated to suitable areas. If preconstruction surveys identify active nests, a qualified biologist shall establish a no-disturbance buffer zone around the nest using temporary orange exclusion fencing. The radius of the buffer zone and the duration of the exclusion shall be determined in consultation with CDFW. The buffer zone and fencing shall remain in place until the young have left the nest, as determined by the biologist.	Conduct preconstruction surveys. Implement protection measures as necessary.	City of Santa Rosa	Verify surveys are conducted prior to construction. Verify that turtle relocation and exclusion fencing requirements are in 90% specifications.	
BIO-4: Prevent Disturbance to Nesting Birds The City shall implement the following measures to prevent impacts to nesting birds: • Grading or removal of any vegetation shall be conducted outside the nesting season, which occurs between approximately February 1 and August 31. (No survey is required for work conducted outside this period). • If grading or vegetation removal between August 31 and February 1 is infeasible and work must occur within the breeding season, a pre-construction nesting bird (both passerine and raptor) survey of the landscaped areas and trees shall be performed by a qualified biologist within 7 days of ground breaking. If no nesting birds are observed, no further action is required and work shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey. • If bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist. • The radius of the required buffer zone can vary depending on the species, (i.e., 75 to 100 feet for passerines and 200 to 300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with California Department of Fish and Wildlife (CDFW).	Incorporate recommendations into specifications. Conduct preconstruction nesting surveys if grading or vegetation removal occurs during nesting season. Implement recommended protection measures as necessary.	City of Santa Rosa	Verify that surveys are conducted prior to grading or disturbing during nesting season. Verify that disturbance buffers and fencing requirements are in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
• To delineate the buffer zone around a nesting tree, orange construction fencing shall be placed at the specified radius from the base of the tree within which no machinery or workers shall intrude. • After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones.				
BIO-5: Prevent Disturbance of Roosting Bats Prior to construction, the City shall have a Bat Habitat Assessment conducted for the trees and culverts to be removed. The Habitat Assessment shall be completed by a qualified biologist (e.g., a biologist holding a California Department of Fish and Wildlife collection permit and a Memorandum of Understanding with the California Department of Fish and Wildlife allowing the biologist to handle and collect bats). The Habitat Assessment shall evaluate the trees for suitable entry points and roost features, and shall provide focused daytime surveys for day-roosting bats. If a special-status bat species is found, or if suspected day roosts for special-status bats are identified, then the Habitat Assessment shall identify suitable performance measures for avoiding impacts to roosts, which may include, but would not be limited to: • Consultation with the California Department of Fish and Wildlife to determine appropriate measures for protecting bats with young if present, and for implementing measures to exclude non-breeding bat colonies during construction process. • Phased removal of trees where selected limbs and branches not containing cavities are removed using chainsaws on the first day, with the remainder of the tree removed using chainsaws or other equipment on the second day. Based on the daytime habitat assessment, and if culvert and site conditions warrant further surveys, additional surveys may be required, e.g. a night emergence survey, or radio-controlled remote vehicle with infrared camera system to determine presence of absence of bats further inside the culverts. If no bats are present during the day, the culverts may be partially blocked with appropriate mesh or netting to prevent subsequent occupation. If bats are present during the day, additional exclusion and eviction efforts would be required based on specific recommendations of a qualified bat biologist in consultation with the California Department of Fish and Wildlife.	Conduct Bat Habitat Assessment. Implement suitable performance measures as necessary.	City of Santa Rosa	Verify Bat Habitat Assessment is conducted prior to construction. Verify that bat performance measures are in 90% specifications.	
BIO-6: Compensate for Loss of Riparian and Oak Woodland Vegetation The City shall retain a licensed landscape architect or qualified biologist to develop a riparian and oak woodland revegetation plan for the project. The revegetation plan shall include replanting locally native tree species, riparian vegetation and oak trees (either on-site or off-site but in the local watershed and woodland areas) at a minimum of 1:1 ratio for loss of non-native trees and at a ratio of 3:1 for oak and non-oak native trees, or as required by CDFW during permitting.	Quantify tree replacement and oak woodland acreage to be restored.	City of Santa Rosa	Calculate impacts to be mitigated. Verify riparian and oak woodland revegetation requirements are in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
This may include removing non-native invasive species from riparian corridors and adjacent areas and revegetating riparian corridors with native species to enhance aquatic and terrestrial habitat. Native, locally available and genetically appropriate riparian plant materials shall be selected for planting. Oak regeneration shall be prioritized to occur within existing oak woodland areas near the project site, with valley oak woodland restored at a 3:1 ratio based on acreage impacted, or as required by CDFW during permitting. The goal of such a plan shall be to ensure no net loss of functional value of riparian and oak woodland habitat. The plan shall include planting requirements, monitoring requirements, and an adaptive management strategy, and the City shall implement the plan's provisions. Riparian restoration plantings and oak plantings shall be monitored annually for a minimum of 5 years after project completion to ensure that the replacement plantings have developed and survive.	Develop a riparian and oak woodland revegetation plan. Incorporate requirements into specifications.		Verify success of replacement vegetation annually for five years after project completion.	
BIO-7: Compensate for Loss of Wetlands and Waters The City shall avoid fill of seasonal wetlands and waters, to the extent feasible. If fill cannot be avoided, the City shall compensate for the loss of seasonal wetland habitat through the purchase of wetland credits in an approved mitigation bank within the Santa Rosa Plain so that there is no net loss in wetlands. The City shall also compensate for impacts to creeks and other waters, including: • Removal of sediments and foreign materials deposited by construction activities from jurisdictional waters. • Restoration of disturbed waters or stream gradients to original contour and hydrologic condition, to the extent feasible. • Bank stabilization prior to the onset of winter using erosion and sediment control best management practices. • Required permits from the U.S. Army Corp of Engineers, the North Coast Regional Water Quality Control Board, the California Department of Fish and Game, and the Sonoma County Water Agency shall be received prior to the start of any on-site construction activity. The City shall ensure any additional measures outlined in the permits are implemented.	Quantify and map wetland impacts. Purchase mitigation credits prior to construction.	City of Santa Rosa	Calculate and purchase credits prior to construction. Verify minimization measures and permit requirements are in 90% specifications.	
BIO-8: Comply with City and County Tree Ordinance The City shall replace any heritage, landmark, or other protected trees in accordance with tree replanting requirements indicated in Santa Rosa Municipal Code Chapter 17-24 and Sonoma County Code Chapter 26D. Replacement trees shall be planted within the project area; however, if the project area is inadequate in size to accommodate the replacement trees, the trees shall be planted on public property with the approval of the Director of the City's Planning and Economic Development Department, the Sonoma County Planning Department, or through payment of in-lieu fees.	Quantify tree replacement requirements. Replant trees or pay in-lieu fees. Incorporate tree replacement	City of Santa Rosa	Verify tree replacement requirements are calculated. Verify that requirements are in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
	requirements into specifications.			
Mitigation Measure CR-1: Protect Archaeological Resources during Construction Activities In the event that any subsurface archaeological features or deposits, including locally darkened midden soil, are discovered during construction-related earth-moving activities, all ground-disturbing activity in the vicinity of the resource shall be halted, a qualified professional archaeologist shall be retained to evaluate the find, and the appropriate tribal representative(s) shall be notified. If the find qualifies as a historical resource or unique archaeological resource as defined by CEQA, the archaeologist shall develop appropriate measures to protect the integrity of the resource and ensure that no additional resources are affected.	Incorporate into specifications.	City of Santa Rosa	Verify requirements are in 90% specifications.	
Mitigation Measure CR-2: Protect Paleontological Resources during Construction Activities In the event that fossils are encountered during construction (i.e., bones, teeth, or unusually abundant and well-preserved invertebrates or plants), construction activities shall be diverted away from the discovery within 50 feet of the find, and a professional paleontologist shall be notified to document the discovery as needed, to evaluate the potential resource, and to assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the material, if it is determined that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. Any fossils collected from the area shall then be deposited in an accredited and permanent scientific institution where they will be properly curated and preserved.	Incorporate into specifications.	City of Santa Rosa	Verify requirements are in 90% specifications.	
Mitigation Measure CR-3: Protect Human Remains if Encountered during Construction If human remains, associated grave goods, or items of cultural patrimony are encountered during construction, work shall halt in the vicinity of the find and the County Coroner shall be notified immediately. The following procedures shall be followed as required by Public Resources Code § 5097.9 and Health and Safety Code § 7050.5. If the human remains are determined to be of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of the determination. The Native American Heritage Commission shall then notify the Most Likely Descendant (MLD), who has 48 hours to make recommendations to the landowner for the disposition of the remains. A qualified archaeologist, the City and the MLD shall make all reasonable efforts to develop	Incorporate into specifications.	City of Santa Rosa	Verify requirements are in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects. The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects.				
Mitigation Measure HAZ-1: Handling and Disposal of Hazardous Wastes The City and its contractor shall prepare and implement a Soil and Groundwater Management Plan for excavation and dewatering activities in the vicinity of the Fulton Road/Guerneville Road intersection (between approximately STA 12+00 and 15+00 on the project plans). Elements of the Soil and Groundwater Management Plan shall include, but would not necessarily be limited to, the following: • Measures to address hazardous materials and other worker health and safety issues during construction, including the specific level of protection required for construction workers. This shall include preparation of a site-specific health and safety plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal-OSHA regulations (8 CCR Title 8, Section 5192) to address worker health and safety issues during construction. • Monitoring of excavation activities for soil and groundwater contamination. Monitoring shall include, at minimum, visual and organic vapor monitoring by personnel with appropriate hazardous materials training, including 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training. If visual or organic vapor monitoring indicates signs of suspected contaminated soil, then soil and groundwater samples shall be collected and analyzed to characterize soil and water quality. • Groundwater brought to the surface as a result of construction dewatering shall be handled in a manner appropriate to construction-related permits for dewatering. If contamination is suspected or noted during the construction phase, then the groundwater shall be containerized and analyzed for contamination by a laboratory, certified by the California Environmental Protection Agency (CalEPA) Environmental Laboratory Accreditation Program (ELAP), using United States Environmental Protection Agency (USEPA)-approved analytical methods. If contaminated groundwater is encountered, precautions shall be taken to assure that the installation of piping or other construction activities do not further disperse contamination. • All potentially contaminated materials encountered during project construction activities shall be evaluated in the context of applicable local, state and federal regulations and/or guidelines governing hazardous waste. All materials deemed to be hazardous shall be remediated and/or disposed of following applicable regulatory agency regulations and/or guidelines. Disposal sites for both remediated and non-remediated soils shall be identified prior to beginning construction. Management of	Develop Soil and Groundwater Management Plan. Incorporate Soil and Groundwater Plan measures into specifications.	City of Santa Rosa	Verify soil and groundwater handling requirements are in 90% specifications.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
these sites shall be documented in a Material Management Plan acceptable to applicable agencies. All evaluation, remediation, treatment, and/or disposal of hazardous waste shall be supervised and documented by qualified hazardous waste personnel.				
HWQ-1: Seasonal Work Restrictions Construction activities within Forestview Creek and Peterson Creek shall be conducted during the dry season, May 15 through October 15, when the creeks are completely or almost without standing water.	Incorporate into specifications.	City of Santa Rosa	Verify restrictions are in 90% specifications.	
HWQ-2: Stormwater Control Measures during Construction The City shall obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. The City and/or its contractor shall submit permit registration documents (notice of intent, risk assessment, site maps, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and certifications) to the State Water Resources Control Board. The SWPPP shall address pollutant sources, non-storm water discharges, best management practices, and other requirements specified in the above-mentioned Order. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, dust generation by construction equipment, management of concrete slurry, asphalt, pavement cutting, and other street and road activities to avoid discharge to storm drains from such work. A Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee implementation of the Plan, including visual inspections, sampling and analysis, and ensuring overall compliance.	Incorporate into specifications. Prepare SWPPP and permit registration documents prior to construction. Retain a Qualified Storm Water Pollution Prevention Plan Practitioner to oversee SWPPP implementation.	City of Santa Rosa	Verify requirements are in 90% specifications. Confirm that SWPPP meets State Board requirements and is implemented during construction.	
HWQ-3: Manage Drinking Water System Discharges If construction dewatering is required, the City and its contractor shall evaluate reasonable options for dewatering management that would avoid discharging to a local surface water or storm drain. The following management options shall be considered: • Reuse the water on-site for dust control, compaction, or irrigation. • Retain the water on-site in a grassy or porous area to allow infiltration/evaporation. • Discharge (by permit) to a sanitary sewer. If discharging to the sanitary sewer, the City shall comply with a one-time discharge permit or other type of approval requiring, as necessary, measures for characterizing the discharge and ensuring filtering methods and monitoring to verify that the discharge is compliant with the City's local wastewater discharge requirements. If discharging to a local surface water or storm drain, the City shall obtain coverage under Order No. R1-2009-0045, Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region. The City shall submit permit registration	Incorporate requirements into specifications. If discharging to local surface water or storm drain, prepare Best Management Practices / Pollution Prevention Plan and obtain required permit prior to construction.	City of Santa Rosa	Verify requirements are in 90% plan set. Verify obtainment of permit and that requirements are implemented during construction.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
documents to the North Coast Regional Water Quality Control Board, including development of a Best Management Practices/Pollution Prevention Plan to characterize the discharge and to identify specific measures to control the discharge, such as sediment controls to ensure that excessive sediment is not discharged, and flow controls to prevent erosion and flooding downstream of the discharge. The City shall ensure that the contractor oversees implementation of the Best Management Practices/Pollution Prevention Plan during construction dewatering activities, including visual inspections and ensuring overall compliance.	Implement applicable measures in permit.			
NOI-1: Reduce Vibration Levels The City shall prohibit the use of heavy vibration-generating construction equipment, such as vibratory rollers or the dropping of heavy objects, within 20 feet of a residence.	Incorporate requirement into specifications.	City of Santa Rosa	Verify requirements are in 90% specifications. Monitor weekly during primary phases of construction.	
NOI-2: Reduce Construction Noise Levels The City shall require the contractor to adhere to the following Construction Best Management Practices to reduce construction noise levels emanating from construction activities and minimize disruption and annoyance at existing noise-sensitive receptors in the project vicinity. • Limit construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, and to between 9:00 a.m. to 5:00 p.m. on Saturdays, where feasible. • Limit nighttime usage of noisy equipment, and avoid scheduling multiple noisy pieces of equipment simultaneously to minimize noise. • Minimize nighttime deliveries to the degree feasible. • Implement a construction noise monitoring plan, which includes a provision for noise monitoring at the nearby receptors to confirm that nighttime construction noise levels meet nighttime noise level thresholds at the single- and multi-family residential land uses. Construction monitoring shall occur for the initial three days of construction at each intersection to show that the nighttime construction activities are compliant with the construction noise level thresholds (50 dBA Leq exterior noise level). • Sensitive residential receptors identified by the noise monitoring with the potential to be exposed to nighttime construction noise levels of 50 dBA Leq or greater, shall be provided with vouchers for alternate accommodations for the duration of the nighttime construction phase. • Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and	Incorporate requirements and Construction Best Management Practices into specifications. Develop and implement construction noise monitoring plan. Notify adjacent sensitive receptors	City of Santa Rosa	Verify requirements are in 90% specifications. Monitor weekly during primary phases of construction.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps. • Construction equipment should be well-maintained and used judiciously to be as quiet as possible. The contractor should use equipment with efficient noise-suppression devices, where feasible. • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • Unnecessary idling of internal combustion engines should be strictly prohibited. • All jackhammers, chainsaws, and pavement breakers used on the construction site shall be enclosed with shields, acoustical barrier enclosures, or noise barriers • Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors. • Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically- or electrically-powered equipment and avoid pneumatically-powered equipment, where feasible. • Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors. • Control noise from construction workers’ radios to a point where they are not audible at existing residences bordering the project site. • The contractor shall prepare a detailed construction schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance. • Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.				
TR-1: Traffic Controls The City shall require the project contractor to develop and implement a temporary Traffic Control Plan outlining work zones, activities, and time needed to complete the work in each zone. As stated in the “Traffic Standards” section of the City’s Design and Construction Standards, no work shall be completed in the public right-of-way during peak hours, unless permitted by the City Traffic Engineer. The project shall keep at least one lane open in	Develop and implement a Traffic Control Plan. Incorporate into specifications.	City of Santa Rosa	Verify requirements are in 90% specifications. Verify Plan prepared prior to construction.	

Mitigation Measures and Environmental Protection Actions (EPAs)	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
each direction of travel on Fulton Road at all times during the construction process. Work performed on the segment adjacent to Piner High School shall be scheduled to occur during the summer months when school is in recess to minimize impacts to school operations, or outside of normal drop-off and pick-up hours.			Monitor weekly during primary phases of construction.	
TR-2: Maintain Emergency Access and Notify Emergency Responders The City shall require contractors to provide adequate emergency access to all properties along the corridor during the construction process. At locations where the access to a nearby property is temporarily blocked, the contractor shall be required to have ready the means necessary to accommodate access by emergency vehicles to such properties, such as plating over excavations. As construction progresses, emergency providers shall be notified in advance of the timing, location, and duration of construction activities and the locations and durations of any temporary lane closures.	Incorporate into specifications. Notify emergency responders and property owners and occupants whose driveways may be blocked.	City of Santa Rosa	Verify requirements are in 90% specifications. Verify requirements are implemented during construction.	
TR-3: Reduce Construction Impacts on Transit, Bicycle, and Pedestrian Facilities The City shall ensure that pedestrian and bicycle access and circulation shall be maintained during project construction where safe to do so. Where it is unsafe to maintain pedestrian and bicycle facilities at their current location, temporary signage will be used to guide users to alternate temporary paths. Temporary signage and other traffic control measures necessary to inform users of construction conditions shall be utilized. Any transit stops impacted by construction shall be temporarily relocated (with proper signage) within the temporary construction zone, if necessary, to maintain the existing transit service throughout the segment.	Incorporate into specifications.	City of Santa Rosa	Verify in 90% specifications. Monitor weekly during primary phases of construction.	
TCR-1: Protect Tribal Cultural Resources during Construction Activities The City shall retain a Native American monitor from the Federated Indians of the Graton Rancheria to monitor construction related earth-moving activities of the project in the vicinity of Youth Community Park and the Fox Hollow Subdivision sites. In the event that any subsurface features or deposits are discovered during such monitoring that the Native American monitor identifies as potential tribal cultural resources, all ground-disturbing activity in the vicinity of the resource shall be halted. If the find qualifies as a tribal cultural resource as defined by CEQA, the City shall ensure that appropriate actions to protect the resource are taken and that no additional resources are affected.	Coordinate construction monitoring with Federated Indians of the Graton Rancheria during construction near Youth Community Park and the Fox Hollow Subdivision site.	City of Santa Rosa	Verify monitoring requirements in 90% specifications. Verify that construction monitoring occurs.	

City of Santa Rosa
WATER

ONE-TIME DISCHARGE PERMIT
SR-1X09431

Issued To:

Christopher Catbagan
City of Santa Rosa Public Works
69 Stony Circle
Santa Rosa, CA 95401

Located At:

Fulton Road
Santa Rosa, CA 95403

EFFECTIVE DATE: 08/23/2021

EXPIRATION DATE: Notice of Completion Date

CIP Project Name: Fulton Rd Widening - Guerneville Rd to Piner Rd

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

PERMITTEE SHALL COMPLY WITH ALL ITEMS BELOW:

1. Sediment must be removed prior to any discharge to the sanitary sewer.
2. Any wastewater not meeting local limits shall either be disposed through a licensed hazardous waste treatment, storage, and disposal or recycling facility or alternatively be treated on-site to meet the local limits prior to being discharged to the sanitary sewer.
3. The permittee shall be responsible for all liability imposed by law for personal injury or property damage caused by work done by permittee under this permit, including work beyond the scope of this permit. If any claim of such liability is made against the City, its officers or employees, permittee shall defend, indemnify and hold them, and each of them, harmless from such claim and liability insofar as permitted by law.
4. The discharge rate to the sanitary sewer shall be at a discharge rate that will not result in any spillage or surcharging of the sewer system.

5. Perchloroethylene/tetrachloroethylene is prohibited from being discharged to the sanitary sewer.

Environmental Compliance Supervisor: Matt J. McGuire

Date: 8-18-2021

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

B - SUBMITTALS AND WORKING DRAWINGS

You will provide submittals and working drawings, including shop drawings, manufacturer's specifications for all electrical equipment and other items as required per these Special Provisions.

You will prepare or secure and submit five copies of each submittal for review by the Engineer. All submittals will be approved by the Engineer prior to purchase, manufacture, fabrication, or shipment.

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

C I T Y O F S A N T A R O S A

STATE OF CALIFORNIA

FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANES

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
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	TEMPORARY TRAFFIC CONTROL	1	LS	$_____	$_____
2	ENVIRONMENTAL MITIGATION	1	LS	$_____	$_____
3	MOBILE STORAGE TANK / MONTH - 21,000 GALLONS	3	EA	$_____	$_____
4	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	1	LS	$_____	$_____
5	TREE PROTECTION FENCING	936	LF	$_____	$_____
6	REMOVE AND RESET MAILBOX	11	EA	$_____	$_____
7	REMOVE CATCH BASIN	4	EA	$_____	$_____
8	REMOVE MANHOLE	5	EA	$_____	$_____
9	REMOVE DROP INLET	3	EA	$_____	$_____
10	REMOVE AND RESET CITY MONUMENT	12	EA	$_____	$_____
11	REMOVE / RELOCATE BOULDERS	3	EA	$_____	$_____
12	REMOVE FENCE	2,833	LF	$_____	$_____
13	ABANDON SEWER FORCE MAIN	954	LF	$_____	$_____
14	ABANDON SEWER MAIN / PLUG AT MANHOLE	2	EA	$_____	$_____
15	RELOCATE BUS BENCH	1	EA	$_____	$_____
16	REMOVE PAVEMENT MARKERS	1	LS	$_____	$_____
17	REMOVE STORM DRAIN / CULVERT	1,206	LF	$_____	$_____
18	REMOVE SANITARY SEWER LINE / PLUG	36	LF	$_____	$_____
19	REMOVE INTERIM DIVIDER (PARKING CURBS)	1	LS	$_____	$_____
20	REMOVE CATCH BASIN TOP	10	EA	$_____	$_____
21	ABANDON STORM DRAIN	77	LF	$_____	$_____
22	REMOVE AND SALVAGE TRANSIT SHELTER	2	EA	$_____	$_____
23	ABANDON IRRIGATION SERVICE / REMOVE METER BOX	2	EA	$_____	$_____
24	REMOVE ASPHALT CONCRETE DIKE	1,100	LF	$_____	$_____
25	REMOVE AND SALVAGE EXISTING FIRE HYDRANT	1	EA	$_____	$_____
26	REMOVE WALL / SIGN	4	EA	$_____	$_____
27	RELOCATE EXISTING IRRIGATION / WATER SYSTEM	5	EA	$_____	$_____
28	REMOVE AC PATHWAY / DRIVEWAY	1,610	SY	$_____	$_____
29	REMOVE CURB AND GUTTER	5,970	LF	$_____	$_____
30	REMOVE CONCRETE	3,940	SY	$_____	$_____
31	REMOVE AND RESET GATE AND POST	2	EA	$_____	$_____
32	UTILITY CLEARANCES	1	LS	$_____	$_____

NAME OF BIDDER:

CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units	Unit Price	Total Price
33	INSTALL TEMPORARY FENCE	1,613	LF	$_____	$_____
34	REMOVE JUNCTION STRUCTURE	1	EA	$_____	$_____
35	REMOVE TREE	177	EA	$_____	$_____
36	REMOVE OBJECT MARKERS	4	EA	$_____	$_____
37	REMOVE AND RESET BOLLARDS	5	EA	$_____	$_____
38	EXISTING SHED TO BE DEMOLISHED	1	EA	$_____	$_____
39	REMOVE ABANDONED GAS MAIN	470	LF	$_____	$_____
40	SUBGRADE STABILIZATION/DIG-OUT	3,630	SF	$_____	$_____
41	HMA STABILIZATION / DIGOUT	500	SF	$_____	$_____
42	ROADWAY EXCAVATION (F)	11,250	CY	$_____	$_____
43	CLASS 4 AGGREGATE SUBBASE	2,600	CY	$_____	$_____
44	CLEARING AND GRUBBING	3	AC	$_____	$_____
45	ADJUST DROP INLET / CATCH BASIN TO GRADE	7	EA	$_____	$_____
46	ADJUST STORM DRAIN MANHOLE TO GRADE (IN ROADWAY)	13	EA	$_____	$_____
47	ADJUST SANITARY SEWER MANHOLE TO GRADE (IN ROADWAY)	20	EA	$_____	$_____
48	ADJUST MANHOLE TO GRADE (OUTSIDE OF ROADWAY)	5	EA	$_____	$_____
49	ADJUST SEWER CLEANOUT TO GRADE	1	EA	$_____	$_____
50	ADJUST VALVE BOX TO GRADE	54	EA	$_____	$_____
51	ADJUST FIRE HYDRANT TO GRADE	4	EA	$_____	$_____
52	ADJUST AT&T MANHOLE TO GRADE	1	EA	$_____	$_____
53	TYPE II CATCH BASIN (36" BASE)	15	EA	$_____	$_____
54	TYPE II CATCH BASIN (48" BASE)	6	EA	$_____	$_____
55	STORMDRAIN DRAIN INLET WITH SIDE OPENING (36" BASE)	12	EA	$_____	$_____
56	STORMDRAIN DRAIN INLET WITH STD GATE (36" BASE)	9	EA	$_____	$_____
57	48" STORM DRAIN MANHOLE	6	EA	$_____	$_____
58	72" STORM DRAIN MANHOLE	10	EA	$_____	$_____
59	RAISE / LOWER WATER MAIN	8	EA	$_____	$_____
60	48" SANITARY SEWER MANHOLE	1	EA	$_____	$_____
61	6" SANITARY SEWER MAIN - PVC	65	LF	$_____	$_____
62	12" SANITARY SEWER MAIN - DIP	163	LF	$_____	$_____
63	FIRE HYDRANT (INCLUDES CUT-IN TEE, VALVES AND LATERAL)	16	EA	$_____	$_____
64	RELOCATE / ADJUST BACKFLOW PREVENTER	8	EA	$_____	$_____

NAME OF BIDDER:

CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units	Unit Price	Total Price
65	ADJUST WATER METER TO GRADE	5	EA	$_____	$_____
66	DUAL WATER METER AND SERVICE	3	EA	$_____	$_____
67	10" STORM DRAIN HDPE	85	LF	$_____	$_____
68	12" STORM DRAIN - RCP	124	LF	$_____	$_____
69	15" STORM DRAIN - RCP	941	LF	$_____	$_____
70	18" STORM DRAIN - RCP	438	LF	$_____	$_____
71	24" STORM DRAIN - RCP	92	LF	$_____	$_____
72	30" STORM DRAIN - RCP	609	LF	$_____	$_____
73	42" STORM DRAIN - RCP	1,526	LF	$_____	$_____
74	72" STORM DRAIN - RCP	20	LF	$_____	$_____
75	ROCK SLOPE PROTECTION	120	SY	$_____	$_____
76	BIORETENTION AREA	26,970	SF	$_____	$_____
77	6" PERFORATED PIPE -PVC	26	EA	$_____	$_____
78	PCC CURB AND GUTTER	7,280	LF	$_____	$_____
79	PCC CURB AND GUTTER WITH RETAINER WALL	2,360	LF	$_____	$_____
80	PERVIOUS GUTTER	530	LF	$_____	$_____
81	PCC CURB (AT PERVIOUS GUTTER)	530	LF	$_____	$_____
82	TYPE A MEDIAN CURB	5,350	LF	$_____	$_____
83	MEDIAN STAMPED CONCRETE	8,500	SF	$_____	$_____
84	COBBLE PAVING	250	SF	$_____	$_____
85	SIDEWALK	62,210	SF	$_____	$_____
86	RETAINER CURB ADJACENT TO SIDEWALK	2,900	LF	$_____	$_____
87	CURB RAMP	42	EA	$_____	$_____
88	CONCRETE DRIVEWAY	3,820	SF	$_____	$_____
89	CONCRETE VALLEY GUTTER	155	LF	$_____	$_____
90	CONCRETE BUS PAD	5,300	SF	$_____	$_____
91	ROLLER COMPACTED CONCRETE(RCC) PAVEMENT (F)	8,930	CY	$_____	$_____
92	CLASS 2 AGGREGATE BASE	1,885	CY	$_____	$_____
93	GRIND CONCRETE PAVEMENT	38,200	SY	$_____	$_____
94	2" GRIND - VARIABLE THICKNESS HMA OVERLAY	2,440	SY	$_____	$_____
95	4" GRIND - HMA INLAY	1,200	SY	$_____	$_____
96	CONFORM GRIND HMA PAVEMENT	830	SY	$_____	$_____

NAME OF BIDDER:

CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units	Unit Price	Total Price
97	ROADWAY HMA PAVING (TYPE A - 1/2" MIX) (F)	800	TN	$_____	$_____
98	DRIVEWAY HMA PAVING (F)	140	TN	$_____	$_____
99	RETAINING WALL 1	1	LS	$_____	$_____
100	RETAINING WALL 2	1	LS	$_____	$_____
101	RETAINING WALL 3	1	LS	$_____	$_____
102	RETAINING WALL 4	1	LS	$_____	$_____
103	BOX CULVERT AND TRANSITION STRUCTURE	1	LS	$_____	$_____
104	DETAIL 9 (LANELINES FOR MULTILANE HIGHWAYS)	9,527	LF	$_____	$_____
105	DETAIL 10 (LANELINES FOR MULTILANE HIGHWAYS)	144	LF	$_____	$_____
106	DETAIL 22 (NO PASSING ZONES - TWO DIRECTION)	538	LF	$_____	$_____
107	DETAIL 23 (NO PASSING ZONES - TWO DIRECTION)	83	LF	$_____	$_____
108	DETAIL 25A (LEFT EDGELINES FOR DIVIDED HIGHWAYS)	50	LF	$_____	$_____
109	DETAIL 27B (RIGHT EDGELINES)	265	LF	$_____	$_____
110	DETAIL 29 (MEDIAN ISLANDS)	226	LF	$_____	$_____
111	DETAIL 32 (TWO-WAY LEFT TURN LANES)	1,463	LF	$_____	$_____
112	DETAIL 38 (CHANNELIZING LINE)	1,645	LF	$_____	$_____
113	DETAIL 39 (BIKE LANE LINE)	7,880	LF	$_____	$_____
114	DETAIL 39A (BIKE LANE)	1,450	LF	$_____	$_____
115	DETAIL 40 (LANE EXTENSIONS THROUGH INTERSECTIONS)	160	LF	$_____	$_____
116	12" WHITE LINE	2,126	LF	$_____	$_____
117	12" YELLOW LINE	768	LF	$_____	$_____
118	TYPE IV ARROW (A=15 SF)	720	SF	$_____	$_____
119	"BIKE LANE" LEGEND W/ARROW (A=10.5 SF)	260	SF	$_____	$_____
120	BIKE LOOP DETECTOR SYMBOL (A=2 SF)	68	SF	$_____	$_____
121	MEDIAN NOSE TREATMENT	16	EA	$_____	$_____
122	FURNISH AND INSTALL NEW POST	32	EA	$_____	$_____
123	FURNISH AND INSTALL NEW SIGN	57	EA	$_____	$_____
124	RELOCATE SIGN	25	EA	$_____	$_____
125	REMOVE & DISPOSE SIGN & POST	62	EA	$_____	$_____
126	STREET LIGHT	29	EA	$_____	$_____
127	PULL BOXES	31	EA	$_____	$_____
128	TRAFFIC SIGNAL MODIFICATIONS - FULTON/GUERNEVILLE	1	LS	$_____	$_____

NAME OF BIDDER:

CITY OF SANTA ROSA
UNIT PRICE SCHEDULE
C01178 - FULTON RD FROM GUERNEVILLE RD TO PINER RD - WIDEN TO FOUR LANES

Item No.	Description	Quantity	Units	Unit Price	Total Price
129	TRAFFIC SIGNAL MODIFICATIONS - FULTON/APPLETREE	1	LS	$_____	$_____
130	TRAFFIC SIGNAL INSTALLATION - FULTON/PINER HS	1	LS	$_____	$_____
131	RELOCATE TYPE 17 STANDARD	1	LS	$_____	$_____
132	HAWK BEACON INSTALLATION	1	LS	$_____	$_____
133	SIGNAL INTERCONNECT	5,300	LF	$_____	$_____
134	SOIL IMPORT	783	CY	$_____	$_____
135	SOIL EXPORT	200	CY	$_____	$_____
136	SOIL AMENDMENT	55,540	SF	$_____	$_____
137	24" BOX TREES	142	EA	$_____	$_____
138	1 GALLON PLANTS	3,328	EA	$_____	$_____
139	MULCH	450	CY	$_____	$_____
140	TREE ROOT BARRIER	2,930	LF	$_____	$_____
141	IRRIGATION SYSTEM	1	LS	$_____	$_____
142	FENCING - 4' BLACK VINYL CL	530	LF	$_____	$_____
143	FENCING - 6' CL	440	LF	$_____	$_____
144	FENCING - SPLIT RAIL	1	LS	$_____	$_____
145	TUBULAR HAND RAILING	120	LF	$_____	$_____
146	4' REMOVABLE BOLLARD	5	EA	$_____	$_____
147	INSTALL TRANSIT SHELTER	4	EA	$_____	$_____
148	PLANT ESTABLISHMENT	1	LS	$_____	$_____
149	TREE TRIMMING	32	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 8-1.04.

LIST OF SUBCONTRACTORS

NAME OF BIDDER: _____

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

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

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

LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER: _____

NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

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

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

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

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

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

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

_____

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

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

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

The undersigned in registered with the Department of Industrial Relations, Registration No. _____.

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

Secretary of State Business Entity Number: _____.

_____

_____

_____

_____

Business Address

_____

Telephone Number

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

BIDDER'S SIGNATURE: _____

TITLE: _____

DATE: _____

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

CONTRACT NO. C01178
FULTON RD FROM GUERNEVILLE RD TO PINER RD – WIDEN TO FOUR LANEs

This Contract is made and entered into as of _____ at Santa Rosa, California, between the City of Santa Rosa (“City") and _____ of _____ ("Contractor").

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

The work to be performed is further shown upon a plan consisting of 160 sheets entitled, Fulton Rd from Guerneville Rd to Piner Rd – Widen to Four Lanes, File Number 2019-0008, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

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

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			$ _____	$ _____

TOTAL BASE BID (SUM OF "TOTAL" COLUMN) $ _____

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

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

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

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

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

City:	**Contractor:**
City of Santa Rosa, a Municipal corporation	Name of Contractor, Type of entity
By: _____	By: _____
Title: _____	Name: _____
ATTEST: By: _____	Title: _____
Title: _____	By: _____
Approved as to form:	Name: _____
By: _____ Office of City Attorney	Title: _____